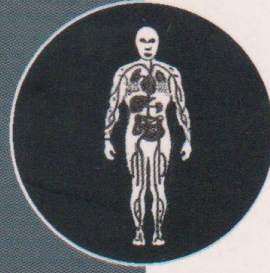


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āryavaidyan

लाभानां श्रेय आरोग्यम्

*Of all the gifts,
the most precious is health*



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Quarterly journal of Arya Vaidya Sala

सतताध्ययनं, वादः परतन्त्रावलोकनम् ।
तद्विद्याचार्यसेवा च बुद्धिमेधाकरो गणः ॥

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FROM THE PAGES OF VAGBHATA - LXV

N.V.K. Varier

Abstract: This chapter explains the signs and symptoms of foreign substances affecting the various parts of the body and their method of extraction with different kinds of instruments.

अथातः शल्याहरणविधिमध्येयं व्याख्यस्यामः ।
इति ह स्माहुरात्रेयादयो महर्षयः ।

(Athāta: śalyāharaṇavidhi-
madhyāyaṁ vyākhyasyāma: ।
iti ha smāhurātrēyādayō maharṣaya: ।)

Now we are going to explain the chapter titled *Salyaharanavidhi* (extraction of foreign bodies); thus said the sages Atreya and others.

वक्रर्जुतिर्यगूर्ध्वाधः शल्यानां पञ्चधा गतिः ।
(Vakrarjutiryagūrdhvādha:
śalyānām pañcadhā gati: ।)

The *gati* (course or path in which anything moves) of *salyas* is of five types: *vakra* (curved), *riju* (straight), *tiryak* (transverse), *urdhva* (upward) and *adha* (downward). *Sangraha* says that the *gati* of *salyas* is basically of three types - upward, downward and transverse; they can be classified again as straight and curved.

ध्यामं शोफरुजावन्तं स्रवन्तं शोणितं मुहुः ॥ १ ॥
अभ्युद्गतं बुद्बुदवत्पिटिकोपचितं व्रणम् ।
मृदुमांसं च जानीयादन्तःशल्यं समासतः ॥ २ ॥

(dhyāmaṁ śōpharujāvantaṁ

sravantaṁ śōṇitaṁ muhu: ॥1 ॥
Abhyudgataṁ budbudavat-
piṭikōpacitaṁ vraṇam ।
mṛdumāṁsaṁ ca jānīyā-
danta:śalyaṁ samāsata: ॥2 ॥)

A wound with dull black color, swelling, pain and continuous bleeding, elevated with bubble, with eruptions and tender flesh, can be diagnosed as containing foreign body.

विशेषात्त्वग्गते शल्ये विवर्णः कठिनायतः ।
शोफो भवति, मांसस्थे चोषः शोफो विवर्द्धते ॥ ३ ॥
पीडनाक्षमता पाकः शल्यमार्गो न रोहति ।
पेश्यन्तरगते मांसप्राप्तवच्छ्रुयथुं विना ॥ ४ ॥

Viśēṣāttvaggatē śalyē
vivarṇa: kaṭhināyata: ।
śōphō bhavati, māṁsasthē
cōṣa: śōphō vivarddhatē ॥3 ॥
Piḍanākṣamatā pāka: śalya-
mārgō na rōhati ।
pēśyantaragatē māṁsa-
prāptavacchvyathuṁ vinā ॥4 ॥)

To speak particularly, if the foreign body is located in the skin, there appears discoloration and large and hard swelling; when it is in the

muscle, there would be swelling, the swelling increases with general burning sensation, pressing becomes intolerable, suppuration develops, and path of the *salya* does not heal; when it is between two muscles, the symptoms will be similar to the previous one, but there will not be swelling.

आक्षेपः स्नायुजालस्य संरम्भस्तम्भवेदनाः ।
 स्नायुगे दुर्हरं चैतत्, सिराध्मानं सिराश्रिते ॥ ५ ॥
 स्वकर्मगुणहानिः स्यात्स्रोतसां स्रोतसि स्थिते ।
 धमनीस्थेऽनिलो रक्तं फेनयुक्तमुदीरयेत् ॥ ६ ॥
 निर्याति शब्दवान् स्याच्च हृल्लासः साङ्गवेदनः ।
 सङ्घर्षो बलवानस्थिसन्धिप्राप्तेऽस्थिपूर्णता ॥ ७ ॥
 नैकरूपा रुजोऽस्थिस्थे शोफः, तद्वच्च सन्धिगे ।
 चेष्टानिवृत्तिश्च भवेत्, आटोपः कोष्ठसंश्रिते ॥ ८ ॥
 आनाहोऽन्नशकृन्मूत्रदर्शनं च व्रणानने ।
 विद्यान्मर्मगतं शल्यं मर्मविद्धोपलक्षणैः ॥ ९ ॥
 यथास्वं च परिस्रावैस्त्वगादिषु विभावयेत् ।

(Ākṣēpa: snāyujālasya
 samrambhastambhavēdanā: ।

snāyugē durharam caitat,
 sirādhmānam sirāśritē ॥ 5 ॥

Svakarmaguṇahāni: syāt-
 srōtasām srōtasi sthitē ।

dhamanīsthēSnilō raktam
 phēnayuktamudīrayēt ॥ 6 ॥

Niryāti śabdavān syācca
 hṛllāsa: sāṅgavēdana: ।

saṅgharṣō balavānasthi-
 sandhiprāptēSsthipūrṇatā ॥ 7 ॥

Naikarūpā rujōSsthisthē
 śōpha:, tadvacca sandhigē ।

cēṣṭānivṛttiśca bhavēt,
 āṭōpa: kōṣṭhasamśritē ॥ 8 ॥

ĀnāhōSnaśakṛnmūtra-
 darśanam ca vraṇānanē ।

vidyānmarmagatam śalyam
 marmaviddhōpalakṣaṇai: ॥ 9 ॥

Yathāsvaṁ ca parisrāvai-
 stvagādiṣu vibhāvayēt ।)

When the foreign body is located in the tendons, there will be spasm, stiffness and pain, and is very difficult to extract. If lodged in the vein, it gets distended. If in the body channels, their normal function is impaired; if inside the artery, the *vayu* expels the blood out with froth and comes out with a sound; if located in the joints of the bones, feels nausea and body-ache; there will be severe pain as if due to collision, and sensation of fullness of the bones when lodged in the bone, then pain of various types and swelling occur. When in the joints, the same troubles occur along with immobility. If lodged in the abdomen, there will be distention and sounds due to upset of *vata*, and appearance of food, faeces and urine at the opening of the wound. If the foreign body is located in a *marma* (vital point), the symptoms that can be seen in *marma* injuries appear. Besides these general symptoms, recognition of the specific spot where the *salya* is lodged, can be done by examining the discharges from the spot, as lymph from the skin, blood from the vein and so on.

रुह्यते शुद्धदेहानामनुलोमस्थितं तु तत् ॥ १० ॥
 दोषकोपाभिघातादिक्षोभाद्भूयोऽपि बाधते ।

(ruhyatē śuddhadēhānā-
 manulōmasthitam tu tat ॥ 10 ॥

dōṣakōpābhighātādi-
 kṣōbhādbhūyōSpi bādhatē ।)

If the *salya* is lodged in a person with a purified body, and in downward direction, the wound may get healed with the *salya* retained inside it. But it will produce serious troubles if aggravated by *doshas* or assaults.

त्वङ्नष्टे यत्र तत्र स्युरभ्यङ्गस्वेदमर्दनैः ॥ ११ ॥
 रागरुग्दाहसंरम्भा यत्र चाज्यं विलीयते ।
 आशु शुष्यति लेपो वा तत्स्थानं शल्यवद्वदेत् ॥ १२ ॥

(tvañnaṣṭē yatra tatra syu-
 rabhyaṅgasvēdamardanai: ॥11 ॥

Rāgarugdāhasaṁrambhā
 yatra cājyaṁ vilīyatē ।

Āśu śuṣyati lēpō vā
 tatsthānaṁ śalyavadvadēt ॥12 ॥

If the foreign body is concealed in the skin, it is recognized by the appearance of redness, pain, burning sensation and swelling; when anointed with oil, fomented and massaged. Solid ghee placed there seen melted. Any moist paste applied there seen dried quickly.

मांसप्रणष्टं संशुद्ध्या कर्शनाच्छ्लथतां गतम् ।
 क्षोभाद्रागादिभिः शल्यं लक्षयेत्

(Mānsapraṇaṣṭaṁ saṁśuddhyā
 karśanācchṛthatām gatam ।
 kṣōbhādrāgādibhi: śalyaṁ lakṣayēt)

When the foreign body is concealed in the muscle, it can be detected by rarefying and loosening the muscle by purificatory techniques, and then noting the appearance of redness and pain when provoked.

.....तद्देव च ॥ १३ ॥
 पेश्यस्थिसन्धिकोष्ठेषु नष्टम्, अस्थिषु लक्षयेत् ।
 अस्थनामभ्यञ्जनस्वेदबन्धपीडनमर्दनैः ॥ १४ ॥
 प्रसारणाकुञ्चनतः सन्धिनष्टं तथाऽस्थिवत् ।

(.....tadvadēva ca ॥13 ॥

Pēśyasthisandhikōṣṭhēṣu

naṣṭam, asthiṣu lakṣayēt ।

asthnāmabhyañjanasvēda-

bandhapīḍanamardanai: ॥14 ॥)

Prasāraṇākuñcanata:

sandhinaṣṭaṁ tathāṠsthiivat ।)

The same steps are to be taken when the foreign body is lodged in between the muscles, or the joints of the bones, or in the abdomen. The location of those hidden in the bones can be traced by noting redness and pain, when anointed with oil, fomented, bandaged or stroked. By techniques of contraction and extension, the spot of those hidden in the bony joints can be traced out, and also by the steps similar to those, which are taken when, lodged in bones.

नष्टे स्नायुसिरास्रोतोधमनीष्वसमे पथि ॥ १५ ॥
 अश्वयुक्तं रथं खण्डचक्रमारोप्य रोगिणम् ।
 शीघ्रं नयेत्ततस्तस्य संरम्भाच्छल्यमादिशेत् ॥ १६ ॥

(naṣṭē snāyusirāsrōtō-
 dhamaniṣvasamē pathi ॥15 ॥

Aśvayuktaṁ rathaṁ khaṇḍa-
 cakramārōpya rōgiṇam ।

śīghraṁ nayēttatastasya
 saṁrambhācchalyamādiśēt ॥16 ॥)

If the foreign body is concealed in the tendons, veins, channels or arteries, take the patient for a swift ride in a chariot with broken wheels, and then by the appearance of excruciating pain, the spot can be detected.

मर्मनष्टं पृथङ्नोक्तं तेषां मांसादिसंश्रयात् ।

(marmanaṣṭaṁ pṛthannōktaṁ

tēṣām māmsādisamśrayāt ।)

The symptoms of those lodged in *marmas* (vital points) are not presented here separately, since they are based on tissues as flesh, etc., features of which are described earlier.

सामान्येन सशल्यं तु क्षोभिण्या क्रियया सरूक् ॥ १७ ॥

(sāmānyēna saśalyaṁ tu

kṣōbhiṇyā kriyayā saruk ॥17 ॥)

In general, the site of the hidden foreign body is determined by noting pain when shaking actions are performed.

वृत्तं पृथु चतुष्कोणं त्रिपुटं च समासतः ।

अदृश्यशल्यसंस्थानं व्रणाकृत्या विभावयेत् ॥ १८ ॥

(Vṛttaṁ pṛthu catuṣkōṇaṁ

tripuṭaṁ ca samāsata: ।

adr̥śyaśalyasaṁsthānaṁ

vraṇākṛtyā vibhāvayēt ॥18 ॥)

The form of the invisible foreign body can be made out by the shape of the wound as circular, wide, square and with three edges.

तेषामाहरणोपायौ प्रतिलोमानुलोमकौ ।

अर्वाचीनपराचीने निहरेत्तद्विपर्ययात् ॥ १९ ॥

(Tēṣāmāharaṇōpāyau

pratilōmānulōmakau ।

arvācīnaparācīnē

nirharēttadviparyayāt ॥19 ॥)

The technique for their extraction is to be directed either upward or downward. Those that have entered the body from above are to be pulled out upward, and those entered from below are to be pulled out downwards.

सुखाहार्यं यतश्छित्त्वा ततस्तिर्यगतं हरेत् ।

(Sukhāhāryaṁ yataścchittvā

tatastiryaggataṁ harēt ।)

To extract a horizontally laid foreign body, make suitable opening through which it will be convenient to extract.

शल्यं न निर्घात्यमुरःकक्षावङ्गणपार्श्वगम् ॥ २० ॥

प्रतिलोममनुत्पुण्डं छेद्यं पृथुमुखं च यत् ।

नैवाहरेद्विशल्यघ्नं नष्टं वा निरुपद्रवम् ॥ २१ ॥

(śalyaṁ na nirghātyamura:

kakṣāvāṅkṣaṇapārśvagam ॥20 ॥

Pratilōmamanuttuṇḍaṁ

chēdyaṁ pṛthumukhaṁ ca yat ।

naivāharēdviśalyaghnaṁ

naṣṭaṁ vā nirupadravam ॥21 ॥)

The foreign bodies that are lodged in the chest, armpits, groin and flanks, and which are with upward points, whose tip is not visible, which can be cut, and which have broad face, are not to be extracted. Do not extract a foreign body, which may cause the patients death when removed (*visalyaghana*), and also that one which though concealed and lost to vision, does not cause any trouble.

अथाहरेत्करप्राप्यं करेणैव, इतरत्पुनः ।

दृश्यं सिंहाहिमकरवर्मिकर्कटकाननैः ॥२२ ॥

(Athāharētkarapāpyaṁ

karēṇaiva, itaratpuna: ।

dr̥śyaṁ śinhāhimakara-

varmikarkaṭakānanai: ॥22 ॥)

A foreign body which can be held with the hand is to be removed by the hand itself. Others, which are visible, should be held with instruments such as *simhamukha* (lion faced), *ahimukha* (serpent faced), *makaramukha* (crocodile faced), *varmimukha* (fish faced), *karkatamuka* (crab faced), etc.

अदृश्यं व्रणसंस्थानाद् ग्रहीतुं शक्यते यतः ।

कङ्कभृङ्गाहकुररशरारीवायसाननैः ॥ २३ ॥

(Adṛśyaṁ vṛaṇasaṁsthānād-
grahītum śakyatē yata: ।

kaṅkabhrīṅgāhvakurara-
śārārīvāyasānanai: ॥23 ॥)

That which is invisible, but can be made out by the shape of the wound, is to be handled by using instruments as *kankamukha* (heron faced), *bhringamukha* (black bee faced), *kuraramuka* (osprey faced), *sararimukha* (with the face like that of a bird) and *vayasamukha* (crow faced), etc.

सन्दंशाभ्यां त्वगादिस्थम्, तालाभ्यां सुषिरं हरेत् ।
सुषिरस्थं तु नळकैः, शेषं शेषैर्यथायथम् ॥ २४ ॥

(Sandamśābhyāṁ tvagādīstham,
tālābhyāṁ suṣiraṁ harēt ।

suṣirastham tu naḷakai,
śeṣam śeṣairiyathāyatham ॥24 ॥)

Foreign bodies lodged in skin, veins, tendons and flesh, are to be extracted with *sandamsas* (forceps). Those, which are hollow, are to be taken out with *talayantras* (instruments with flat disks). Those, which are lodged in hollow spaces, are to be removed by using *nalakayantras*, (*nadeeyantras*), and all remaining others by suitable instruments.

शस्त्रेण वा विशस्यादौ ततो निर्लोहितं व्रणम् ।
कृत्वा घृतेन संस्वेद्य बद्धाऽऽचारिकमादिशेत् ॥ २५ ॥

(Śastrēṇa vā viśasyādau
tatō nirlōhitam vṛaṇam ।

kṛtvā gṛtēna saṁsvēdya
baddhāṀscārikamādiśēt ॥25 ॥)

Those, which cannot be taken out by instruments, are to be removed by cutting open the site with sharp instruments. After clearing

the blood, the wound is fomented with warm ghee and then bandaged. Then follow the routine rules prescribed in surgical procedures.

सिरास्नायुविलग्नं तु चालयित्वा शलाकया ।

(Sirāsnāyuvilagnaṁ tu
cālayitvā śalākayā ।)

Those, which are entangled in veins and tendons are to be taken out after shaking them with *salaka* (a rod like instrument).

हृदये संस्थितं शल्यं त्रासितस्य हिमाम्बुना ॥ २६ ॥

ततः स्थानान्तरं प्राप्तमाहरेत्तद्यथायथम् ।

यथामार्गं दुराकर्षम्, अन्यतोऽप्येवमाहरेत् ॥ २७ ॥

(hṛdayē saṁsthitam śalyam
trāsitasya himāmbunā ॥26 ॥)

Tata: sthānāntaram prāpta-
māharēttadyathāyatham ।

yathāmārgam durākaraṣam,
anyatōṀspyēvamāharēt ॥27 ॥)

In the case of a foreign body lodged in the heart, first of all shudder the patient with a sudden sprinkle of very cold water, and thus having moved it, extract it with a suitable instrument. In the same way, even others, which are difficult to extract, can be removed through proper way out.

अस्थिदष्टे नरं पद्भ्यां पीडयित्वा विनिहीत् ।

इत्यशक्ये सुबलिभिः सुगृहीतस्य किङ्करैः ॥ २८ ॥

(Asthidaṣṭē naram padbhyāṁ
pīdayitvā vinirharēt ।

ityaśakyē subalibhi:
sugrhitasya kiṅkarai: ॥28 ॥)

If the foreign body is stuck up in the bone, the physician has to hold the patient firmly pressing with his feet, and then pull out. If it

is not possible, the patient is to be held in position by strong attendants, and then pulled out.

तथाऽप्यशक्ये वारङ्गं वक्रिकृत्य धनुर्ज्यया ।
 सुबद्धं वक्त्रकटके बध्नीयात्सुसमाहितः ॥ २९ ॥
 सुसंयतस्य पञ्चाङ्ग्या वाजिनः कशयाऽथ तम् ।
 ताडयेदिति मूर्धानं वेगेनोन्नमयन् यथा ॥ ३० ॥
 उद्धरेच्छल्यम्.....

(TathāSpyaśakyē vāraṅgam
 vakrikṛtya dhanurjyayā ।
 subaddham vaktrakatakē
 badhniyātsusamāhita: ॥29 ॥
 susaṁyatasya pañcāṅgyā
 vājina: kaśayāStha tam ।
 tāḍayēditi mūrdhānam
 vēgēnōnnamayan yathā ॥30 ॥
 uddharēcchalyam

If this method is not working, the handle of the stuck up arrow is to be bent and fastened tightly with a bowstring. The other end of the string is to be tied to the mouth belt of a horse, which is well controlled by *panchangee bandha* (a combat tie of four legs and face together). Then the horse is whipped strongly; when it raises its head suddenly, the arrow is plucked out.

.....एवं वा शाखायां कल्पयेत्तरोः ।
 (.....ēvaṁ vā śākhāyāṁ kalpayēttarō: ।)

The same technique can be performed using the branch of a tree. Bent the branch as much as possible. Tie the other end of the string on it, and then let it free suddenly. By the sudden pull, the arrow is plucked out.

बद्ध्वा दुर्बलवारङ्गं कुशाभिः शल्यमाहरेत् ॥ ३१ ॥

(baddhvā durbalavāraṅgam
 kuśābhi: śalyamāharēt ॥ 31 ॥)

If the handle of the arrow is weak and fragile, first bind it with *kusa* grass and then pull out.

श्वथुग्रस्तवारङ्गं शोफमुल्पीड्य युक्तितः ।
 मुद्राहतया नाड्या निर्घात्योत्तुण्डितं हरेत् ॥ ३२ ॥
 (Śvayathugrastavāraṅgam
 śōphamulpīḍya yuktita: ।

mudgarāhatayā nāḍyā
 nirghātyōttuṇḍitaṁ harēt ॥32 ॥)

If the handle is covered by swelling, then press the swelling suitably, and when it has come up visibly, then shake it slowly by tapping with a hammer and remove with the help of a *nadeeyantra*.

तैरेव चानयेन्मार्गममार्गोत्तुण्डितं तु यत् ।
 मृदित्वा कर्णिनां कर्णं नाड्यास्येन निगृह्य वा ॥ ३३ ॥
 (tairēva cānayēnmārga-

mamārgōttuṇḍitaṁ tu yat ।
 mṛditvā karṇināṁ karṇaṁ
 nāḍyāsyēna nigrhya vā ॥33 ॥)

If the handle is seen raised in a wrong way, bring it to the proper way by the same techniques. If the handle has ear-like projections (*karna*), they should be smoothened, or fixed inside the *nadeeyantra*.

अयस्कान्तेन निष्कर्णं विवृतास्यमृजुस्थितम् ।
 (Ayaskāntēna niṣkarṇaṁ
 vivṛtāsyamṛjusthitam ।)

If the *salya* is without projections and stuck up in a straight way, it can be drawn out by magnet, if the wound is with a wide opening.

पक्वाशयगतं शल्यं विरेकेण विनिहरेत् ॥ ३४ ॥

(pakvāśayagatam śalyam
virēkēṇa vinirharēt ॥ 34 ॥)

A *salya* lodged in *pakvasaya* (large intestine) can be removed by purgation.

दुष्टवातविषस्तन्यरक्ततोयादि चूषणैः ।

(Duṣṭavātaviṣastanya-
raktatōyādi cūṣaṇaiḥ ॥)

Vitiated air, poison, breast milk, blood, water, etc., which act as *salya*, are to be removed by suction techniques.

कण्ठस्रोतोगते शल्ये सूत्रं कण्ठे प्रवेशयेत् ॥ ३५ ॥
बिसेनात्ते ततः शल्ये बिसं सूत्रं समं हरेत् ।

(kaṇṭhasrōtōgatē śalyē
sūtram kaṇṭhē pravēśayēt ॥ 35 ॥)

Bisēnāttē tataḥ śalyē
bisam sūtram samam harēt ॥)

To remove the *salya* entered in the throat, insert a thread tied together with a lotus stalk, and when the foreign body is stuck up on the stalk, pull out the thread and stalk together evenly.

नाड्याऽग्नितापितां क्षिप्त्वा
शलाकामप्स्थिरीकृताम् ॥ ३६ ॥
आनयेज्जातुषं कण्ठात्, जतुदिग्धामजातुषम् ।

(nāḍyāḥgnitāpitām kṣiptvā
śalākāmapsthirikṛtām ॥ 36 ॥)

ānayējñātuṣam kaṇṭhāt,
jatudigdhāmajātuṣam ॥)

If a foreign body lodged in the throat is made of lac, insert a heated iron rod to the throat through a tubular instrument, and make it touch the lac to get it melted, and then pour some cold water through the tube to make the lac hard, and then extract it. If the foreign body is

not of lac, then smear some lac on the tip of the heated rod, insert it through the tubular instrument, and then pull out the attached foreign body as described above.

केशोन्दुकेन पीतेन द्रवैः कण्टकमाक्षिपेत् ॥ ३७ ॥
सहसा सूत्रबद्धेन वमतः, तेन चेतारत् ।

(kēśōndukēna pītēna
dravaiḥ kaṇṭakamākṣipēt ॥ 37 ॥)

Sahasā sūtrabaddhēna
vamataḥ, tēna cētarat ॥)

If the foreign body is like a thorn, then a tuft of hair tied with long thread, is swallowed with plenty of water which is boiled with emetic substances. When thread is drawn out suddenly, the patient vomits, and the foreign body stuck up to the hair tuft, is also expelled. In the same way, a tuft of hair also, which has got in accidentally, can be taken out with a thorn (hook) swallowed with liquid food.

अशक्यं मुखनासाभ्यामाहर्तुं परतो नुदेत् ॥ ३८ ॥
(aśakyam mukhanāsābhyā-
māharttum paratō nudēt ॥ 38 ॥)

A *salya*, lodged in mouth or nose, if cannot be brought out through those openings, then propel it to move to alimentary tract.

अप्पानस्कन्धघाताभ्यां ग्रासशल्यं प्रवेशयेत् ।
(Appānaskandhaghātābhyām
grāsaśalyam pravēśayēt ॥)

If a morsel of food is stuck up in the throat, then by drinking water, or striking at the shoulders move it to the stomach.

सूक्ष्माक्षिब्रणशल्यानि क्षौमवालजलैर्हरिन्त् ॥ ३९ ॥
(sūkṣmākṣivraṇaśalyāni
kṣaumavājalairharēt ॥ 39 ॥)

Minute foreign bodies in the eyes or wounds are to be removed by flax, hair or water as convenient.

अपां पूर्णं विधुनुयादवाक्शिरसमायतम् ।
वामयेच्चामुखं भस्मराशौ वा निखनेन्नरम् ॥ ४० ॥
(Apām pūrṇam vidhunuyā
davākśirasamāyatam ।
vāmayēccāmukhaṁ bhasma-
rāśau vā nikhanēnnaram ॥40 ॥)

A person, who has swallowed much water by drowning, should be held with his head down and legs up, and shaken by swinging to and fro. Then make him vomit, or he should be immersed in a heap of ash, up to the face.

कर्णेऽम्बुपूर्णे हस्तेन मथित्वा तैलवारिणी ।
क्षिपेदधोमुखं कर्णं हन्याद्वाऽऽचूषयेत वा ॥ ४१ ॥
(karṇēṣmbupūrṇē hastēna
mathitvā tailavāriṇī ।
kṣipēdadhōmukhaṁ karṇam
hanyādvāṣcūṣayēta vā ॥41 ॥)

When water has entered the ears then pour oil and water mixed together and stirred well with hand or turning the ear downward facing, strike on it, or do sucking with proper instruments.

कीटे स्रोतोगते कर्णं पूरयेल्लवणाम्बुना ।
सुक्तेन वा सुखोष्णेन मृते कळेदहरो विधिः ॥ ४२ ॥
(kīṭē srōtōgatē karṇam
pūrayēllavaṇāmbunā ।
suktēna vā sukhōṣṇēna
mṛtē klēdaharō vidhiḥ ॥42 ॥)

If any insect has entered into the ear, fill the ear with warm salt water or warm vinegar; when the insect is dead, dehydrating procedures are to be undertaken.

जातुषं हेमरूप्यादिधातुजं च चिरस्थितम् ।
ऊष्मणा प्रायशः शल्यं देहजेन विलीयते ॥ ४३ ॥

(Jātuṣaṁ hēmarūpyādi-
dhātujaṁ ca cirasthitam ।
uṣmaṇā prāyaśaḥ śalyaṁ
dēhajēna vilīyatē ॥43 ॥)

Foreign bodies of lac, or metals like gold, silver, etc., if remain inside the body for a long time, generally get dissolved by the heat of the body itself.

मृद्वेणुदारुशृङ्गास्थिदन्तवालोपलानि न ।
विषाणवेण्वयस्तालदारुशल्यं चिरादपि ॥ ४४ ॥
प्रायो निर्भुज्यते तद्धि पचत्याशु पलासृजी ।

(Mṛdvēṇudāruśṛṅgāsthī-
dantavālōpalāni na ।
viṣāṇavēṅvayastāla-
dāruśalyaṁ cirādapi ॥44 ॥)

Prāyō nirbhujyatē taddhi
pacatyāśu palāsṛjī ।)

But those of mud, bamboo, wood, horn, bone, tooth, hair and stone do not get dissolved. Horn, bamboo, iron, wood of palm tree and other woods, remaining in the body for a long time generally get distorted and create putrefaction of the flesh and blood.

शल्ये मांसावगाढे चेतस देशो न विदह्यते ॥ ४५ ॥
ततस्तं मर्दनस्वेदशुद्धिकर्षणबृंहणैः ।
तीक्ष्णोपनाहपानान्नघनशस्त्रपदाङ्कनैः ॥ ४३ ॥
पाचयित्वा हरेच्छल्यं पाटनैषणभेदनैः ।

(Śalyē māṁsāvagādhē cēt-
sa dēśō na vidahyatē ॥45 ॥

tatastaṁ mardanasvēda-
śuddhikarṣaṇabṛmhaṇaiḥ ।
tīkṣṇōpanāhapānānna-

ghanaśāstrapadānkanai: ॥46 ॥
 pācayitvā harēcchalyam
 pāṭanaīṣaṇabhēdanai: 1)
 If the foreign body is lodged deep in the flesh, it does not get decomposed. Then treat it by dissolving techniques such as pressing, fomenting, purificatory steps, reducing and stoutening therapies, application of acute (*teekshna*) poultices, intake of acute foods and drinks and creating deep incisions with sharp instruments. Thus having matured it, extract the *salya* by excision, probing or cutting.
 शल्यप्रदेशयन्त्राणामवेक्ष्य बहुरूपताम् ॥ ४७ ॥
 तैस्तरूपायैर्मतिमान् शल्यं विद्यात्तथाऽऽहरेत् । ४७ १/२ ॥
 (Śalyapradēśayantrāṇā-
 mavēkṣya bahurūpatām ॥47 ॥
 taistairupāyairmatimān
 śalyam vidyāttathāṢṢharēt ॥47½ ॥)

The form of the foreign bodies, the sites of their lodging and the shapes of the instruments are of various types. The wise physician has to be aware of these particulars, and then try to extract it by suitable techniques.

इति श्रीवैद्यपतिसिंहगुप्तसूनुश्रीमद्वाग्भटविरचितायामष्टाङ्ग-
 हृदयसंहितायां सूत्रस्थाने शल्याहरणविधिर्नामष्टाविंशोऽ-
 ध्यायः ॥

(Iti śrīvaidyapatīsimhaguptasūnuśrīmad-
 vāgbhaṭaviracitāyāmaṣṭāṅgahṛdayasam-
 hitāyām sūtrasthānē śalyāharaṇavidhir-
 nāmaṣṭāvīmśōṢṢdhyāya: ॥)

Thus ends the twenty eighth chapter of *Ashtangahridayasamhita* titled *Salyaharana-vidhi*, composed by Vaghbata, the son of Vaidyapati Simhagupta.

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AYURVEDIC MANAGEMENT OF ULCERATIVE COLITIS – CLINICAL OBSERVATION

Ajai Kumar Pandey, K.H.H. V.S.S. Narasimha Murthy and R.H. Singh*

Abstract: The time tested ayurvedic remedies do wonders if applied according to the fundamental principles. Here, the authors describe a successful case of ulcerative colitis, a condition where allopathic system failed.

Ulcerative colitis is a chronic inflammatory disorder of unknown etiology involving the gastro-intestinal tract. Familial, organic, infectious, immunological and psychological factors are suggested as areas of possible importance in the cause of this disease. The clinical course of ulcerative colitis is variable. Generally, most of the patients would suffer a relapse within one year of the first attack, showing the recurrent nature of this disease. In general the severity of the symptoms depend on the extent of colonic involvement and the intensity of the inflammation. The major symptoms are rectal bleeding with increase frequency of stool and tenesmus. In severe cases, the patient may have frequent liquid stool containing blood and pus, complaint of severe cramps and demonstrate symptoms and signs of dehydration, anaemia, fever and loss of weight. 83% of patients of ulcerative colitis usually suffer mild to moderate disease of an intermittent nature and can be managed without hospitalization. About 15% of patients the

disease becomes more fulminant, involves the entire colon and is seen with severe bloody diarrhea and systemic signs and symptoms. These patients are at risk, in developing toxic dilation and perforation of the colon and represent a medical emergency. From ayurvedic point of view we put this disease under *raktatisara / adhoga raktapitta* with predominantly involvement of *vata* and *pitta* and *dushyas* like - *rasa*, *rakta* and *mala*. In this regard we share our clinical experience of a 40 years old female who was suffering from ulcerative colitis since 3 years.

Mrs. Shakuntla Singh, a 40 year old house wife, was brought to us at the *Kayachikitsa* O.P., S.S. Hospital, IMS, BHU with the complaints of frequent liquid stools containing blood (15 to 20 time/day) and mild cramps in abdomen since three years; and itching around peri-anal region, general body-ache, reduced appetite, weakness and feverishness since two years.

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We carefully examined all the reports made available to us pertaining to the investigations and treatment done till date in this case. All the routine investigations were done. There was no place for diagnostic confusion as the clinical picture and the investigation reports were in favour of a diagnosis of ulcerative colitis. Since the onset of disease she was treated by allopathic doctors of S.S. Hospital, IMS, BHU. She got temporarily relief with the medication and upon the advice of someone she switched over to ayurvedic treatment in the hope of getting a permanent cure. The summarized form of medical case history of the patient was as follows:

General condition - Ill looking
Pulse rate - 80/min and feeble
Respiratory rate - 18/min
Blood Pressure - 110/70 mm of Hg
Temp. - Afebrile
Pallor - Present
Icterus - Not seen
Cyanosis - Not seen
Clubbing - Absent
Edema - Absent
Tongue - Pallor, moist and not spotted
Trachea - Centrally placed
Thyroid - Not enlarged
Jugular Venous Pressure - Not raised
Lymphadenopathy - Not noticeable
Local lesion - Absent

Systemic examination:

CVS - NAD
RS - NAD
GIS - Soft, tenderness present on flanks and bowel movement increased.
GUS - No urinary findings

Menstruation - Irregular
Menstrual Cycle - 15 to 20 days, lasting for 3 - 5 days
No abnormal vaginal bleeding and discharge
CNS - Higher function and orientation normal for time, place and person

Personal details:

Build - lean
Height - 5.2"
Weight - 42 kg

Investigation:

Blood:

TLC - 10500/ cu. mm
DLC - P 48%, L 44%, E 08%
Hb - 8.6 gm/dl
B.U. - 20 mg/dl
FBS - 84 mgm/dl

Urine: - Albumin in trace, rest normal

Stool

for ova/cyst - Absent
Ocult blood - Present
X-ray Chest - No abnormal findings
PA View
X-ray Ba meal F.T. - Feature S/O ulcerative colitis

Sigmoidoscopy examination reveals loss of mucosal vascularity, diffuse erythema, friability of mucosa and an exudates consisting of mucus blood and pus. Family history and past history is not relevant to the disease or other associated diseases.

Treatment history:- Sulfasalazine, corticosteroid, loperamide, diphenoxylate, stypitobid, vitamins and mineral.

After thorough physical and systemic examination, the patient was admitted in Female *Kayachikitsa* Ward (bed No. 23) and the following ayurvedic medicines and *picchavasti* were given for 15 days:

Picchavasti: - Dose 150 to 200 ml/day in the morning. The contents of *picchavasti* are - 1. *Kvathadravya* - *Panchavalkala yavakuta churna* 10g, *Kutajatvak yavakuta churna* 10g, *Mocharasa* 5g; 2. *Kalkadravya* - *Madana-phala churna* 5g, *Mocharasa churna* 5g, *Madhuyashti curna* 5g and *Satavari curna* 5g; 3. Other *dravyas* - 15g *madhu* (honey) + 30g *Tilataila* + 30 ml milk + 1 pinch *saindhva lavana* (rock salt).

Medicines prescribed orally: - 1. *Raktapitta kulakandana rasa* - 250 mg, *Pravala panchamrta* - 250 mg, *Laksa churna* - 500 mg, *Guduchi satva* - 300 mg in divided dose with honey; 2. *Kutajabilva panaka* - 20 ml in two divided doses after meal; 3. *Pilex* ointment locally (P/R) before and after defecation; 4. *Abhralauha* Tab - 1 TID after meal.

Diet: - Advised to avoid fried, spicy, heavy and oily food items and to use green vegetable and easily digestible food item as per daily dietetic schedule four times in a day.

The treatment response was assessed on the basis of clinical symptomatology after a course of *Picchavasti* and medicines for 15 days and 50% improvement found in the symptoms. The patient was then discharged and advised to continue the following medicine for 15 days and asked to report.

1. *Raktapitta kulakandana rasa* - 375 mg, *Pravalapanchamrita* - 250 mg, *Laksha churna*

- 500 mg, *Guduchi satva* - 250 mg in two divided doses with honey; 2. *Kutajadivisesa yoga* - 1 TSF 1 BD with warm water; 3. *Chiktrakadi vati* - 2 tab BID for chewing 30 minute before meal; 4. *Abhralauha* - 2 tab BID after meal. Diet restriction and relaxation advised.

In the first follow up (after 15 days) it was found that the patient got 70% improvement. After thorough interrogation and physical and systemic examination the following medicines advised for another 15 days:

1. *Raktapitta kulakandana rasa* - 250 mg, *Pravalapanchamrita* - 200 mg, *Laksha churna* - 250 mg, *Madhuyashti churna* - 250 mg in two divided doses with honey; 2. *Chiktrakadi vati* - 1 tab BID for chewing 30 minute before meal; 3. *Abhralauha* - 1 tab BID after meal. Diet restriction, relaxation and morning walk advised.

In the second follow up after 15 days, the improvement in term of the patient's view was as follows:

- Reduction in frequency of liquid stool containing blood - 100%
- Reduction in cramps in abdomen - 100%
- Reduction in itching around perianal region - 95%
- Reduction in general body ache - 100%
- Reduction in weakness and feverishness - 75%
- Improved appetite - 75%

After physical and systemic examination the following medicines were advised for 15 days:

1. *Pravala bhasma* - 500 mg, *Guduchi satva* - 250 mg, *Madhuyashti churna* - 250 mg in

two divided doses with honey; 2. *Chitrakadi vati* - 1 tab BID for chewing 30 minute before meal; 3. *Jatyadi taila* P/R to apply before and after defecation. Diet restriction, relaxation and morning walk asked to continue.

In the third follow up, we found the patient completely recovered from ulcerative colitis. Advised to continue *Pravala bhasma* tab - 500 mg (BD); *Abhralauha* tab - 1 (BD) after meal and *Asvagandha* cap – 1 (BD) for few days more; also asked to follow the instruction regarding diet and exercise.

Discussion

It would be right to say that modern system of medicine is capable of offering reasonably effective treatment for so many diseases. The diagnostic tools to find out disease causing factors are also equally good. But here in this case neither the investigations nor the treatment helped much for considerable period of time. In ayurveda, diseases are classified as syndromes (groups of symptoms) with one predominant symptom and with some subsidiary symptoms. If we scrutinize, we can see no new symptoms manifesting in any of the so-called new diseases. The symptoms are the result of vitiation of the *dosha*, *dushya*, etc. The vitiation of *dushya*, etc. are the result of the vitiation of *dosha*. If the vitiation of *dosha* is managed, the diseases will be automatically alleviated; it is called *samprapti vighatana*

So the time tested remedies and therapies of ayurveda are capable of curing any condition if applied according to the fundamental principles. In this regard, we mention here two

important verses of *Charakasamhita*; *picchavasti* and the above ayurvedic drugs were selected for the treatment of ulcerative colitis with reference to this.

Vikāranāmākuśalō

na jihriyāt kadācana ।

na hi sarva vikārāṇām

nāmatōṣṣti dhruvā sthiti: ॥ (Ca.sū. 18/44)

Rōgamādaḥ parīkṣēta

tatōṣṣantaramauśadham ।

tata: karma bhiṣak paścāt-

jñānapūrvam samācarēt ॥ (Ca. sū. 21/20)

These remedies were found affective and having no side effects during treatment regimens; particularly *picchavasti* was found very effective and open a new dimension in the treatment of ulcerative colitis.

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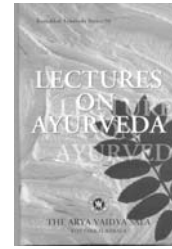
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2. *Pravalapanchamritarasa* (*Yogaratnakara*)
3. *Lakshachurna* (*Bhaishajyaratnavali*)
4. *Guduchisatva* (*Siddhayogasangraha*)
5. *Kutajadivisesayoga* (Ayurvedic Pharmacy, Banaras Hindu University, Varanasi, UP)
6. *Abhralauha* tab (Dhutatapaswara, Mumbai)
7. *Pravalabhasma* tab (Dhutatapaswara, Mumbai)
8. *Jatyadi taila* (*Sarngadharasamhita*)
9. *Madhuyashtichurna* (*Sarngadharasamhita*)
10. *Kutajabilvapanaka* (*Bhaishajyaratnavali*)
11. *Asvagandha* cap (Himalaya Drug Co., Mumbai)
12. *Pilex* ointment (Himalaya Drug Company)

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AYURVEDIC EDUCATION - ANALYTIC REVIEW

Gupta Gaurish Kumar and Sharma Ajay Kumar*

Abstract: Ayurveda is a science of life with two main objectives - maintenance and promotion of a positive health, and cure of the diseases. Improvement in the standard of ayurvedic education is one of the possible methods for increasing the popularity and acceptability of ayurveda amongst the masses. Here, the authors suggest few strategies to improve the teaching/academic activities of ayurveda.

Now-a-days people are attracted more towards western civilization. The impact of western culture has changed the life style of Indians to a larger extent. It is surprising that the western people are highly impressed with the Indian culture whereas more Indians are turning towards western civilization.

It is well-established fact that ayurvedic science has lot of potential that is why many scholars of other sciences are adopting ayurveda as the way of leading their lives. Ayurveda had a glorious past. But unfortunately due to various reasons there had been a constant decline in the modern times in the status of ayurveda. When we speak of medical education the young generation is tempted to study modern system of medicine. Very small fraction of younger generation is coming forward to study ayurveda as medical science. The reason for the change in basic approach has to be critically analyzed.

It appears that poor standard of ayurvedic education, degradation of ayurvedic science at various fronts, various lacunas at different levels are some of the important factors of the deterioration of the interest of people and students in ayurveda.

The limitations of modern medical science in controlling various diseases like articular disorders, liver disorders and stress induced disorders, etc. have forced modern scientists to search for various systems of medicines for controlling such challenging disorders. Adoption of ayurveda seems to be one of the best possible solutions because of its cost effective and safeness. To bring it into practical life, the interest of the people, especially younger generation, in ayurveda has to be increased. Also, the need of an improved system ayurvedic education deserves special attention. The following are few suggestions

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to improve the teaching/academic activities in ayurveda.

There is a need of uniformity in teaching degree and formulating in minimum standards of ayurvedic education. The syllabus to be implemented at undergraduate, postgraduate and doctorate levels must be uniform throughout India. Minimum standards of ayurvedic education must be made mandatory to be followed by various ayurvedic institutions.

Similarly the basic qualifications for selection of students for various ayurvedic courses have to be the same throughout the country. It is to be seen that the period and pattern of courses, the pattern of examination and implementation of the norms are to be strictly conducted by C.C.I.M. Selection of teachers/physicians/medical officers for various ayurvedic institutions should be made on standard parameters for basic qualifications of the concerned post.

Greater need is felt for creating cordial relationship between teachers and student for making the teaching/academic atmosphere in ayurvedic institutions. It is expected that ayurvedic scholars should have adequate knowledge of Sanskrit. This will help in better understanding of the subject. While imparting education it is expected from a teacher to impart subjective, objective and analytical knowledge to a student with an approach of correlation of ayurvedic concepts with modern concepts on scientific background. This approach will develop interest of ayurvedic scholars in ayurvedic science.

Regular conduction of seminars, symposia, workshops and extension lectures will help in upgrading the knowledge and standards of ayurvedic education. More of Ayurvedic people should be encouraged to participate in such activities. Regular reorientation courses for teachers in their respective subjects should be made compulsory, which will help in free flow of knowledge at different levels. There has to be clear-cut difference in the quality and quantity of teaching materials to the undergraduate, postgraduate and doctorate levels. For the purpose the existing literature whether published, hand written, ayurvedic or allied literature has to be screened and incorporated in ayurvedic courses logically.

It is felt that there is serious lacuna in imparting of practical training to students. There seems to be no - way out except to emphasize on clinical/bedside/practical teaching or demonstrations to the students for better grasping of the subject by the students. Practical demonstrations are likely to induce lot of confidence in youngsters. Teaching methodology has to be modernized by the introduction of audio-visual methods for teaching purposes. It will improve the reception of the subject and make the teaching activities more interesting.

Academic tours, mobile camps and surveys from different angles are to be conducted regularly. This activity will encourage the exchange of knowledge at different levels and ultimately lead to better standards of ayurvedic education.

There is need for well-organised and standard

valuation and examination systems throughout the country. Minimum standard of examinations must be maintained at all costs in different ayurvedic institutions throughout the country. Meritorious students should be encouraged by awarding various prizes, appreciations, honours, etc. This will encourage ayurvedic students and thus involve themselves in ayurvedic studies regularly. There is an urgent need to supplement ayurveda with modern scientific developments of allied sciences to improve the standards of teachings and practice of ayurveda.

Conclusions

Ayurveda is struggling hard to regain its past glory. Measures like scientific research in

ayurveda, validation of ayurvedic principles on scientific parameters, improving the standards of teaching in ayurveda and creating awareness about the importance of ayurveda amongst the masses are some of the measures which need to be pursued urgently.

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AYURVEDIC NORMS FOR STANDARD DRUGS

K. Ojha, Ch.V.Rao, S. Mehrotra and P. Pushpangadan*

Abstract: Herbal medicines are the best ground for the discovery of therapeutically active drugs in many disease and ailments. Detailed pharmaceutical, toxicological and chemical data of a drug would ensure the over all safety of the medicament. Here, the authors try to enlighten the ayurvedic norms for standard medicines.

Introduction

The term *drug* derives from the French word *drogue*, which means herb, and is a synonym of *dravya* that used for medicinal purpose or for *chikitsa* in ayurveda; and it is defined by WHO (1966) as - “*Drug* is any substance or product that is used or intended to be used to modify or explore physiological systems or pathological states for the benefit of the recipient”; whereas *dravya* is one among *shadpadartha* i.e. *dravya*, *guna*, *karma*, *samanya*, *visesha* and *samavaya*, and substratum of *guna* and *karma* i.e. properties and action. It is composed of five proto elements (*panchamahabhuta*) and is used as diet (*ahara*) or drug (*aushadha*)

Thus, the term *dravya* covers a wide range of elements than *drug*. “*Nanaushadhi bhutam jagat kinchit tam, tam ukti-artham iha tam tam abhipretya*” which means nothing in the world is devoid of medicinal properties can be utilized by wisdom as if and when used or required. Further, Charaka says about the four

components of medicine, where *dravya* is given a place next to a physician - “*Bhishak dravyanyupsthata rogi padachatustayam*”

Bhishak - the physician (Principal who guides the treatment); *Dravya* - the medicine (tools of physician); *Upasthata* - the attendant (helper or nursing staff); *Rogi* - the patient (the field where physician applies his skill and the medicine acts and the attendant takes care of, which is the patient)

Norms for standard drug

Sutrasthanam of *Charakasamhita* refers to four qualities that the drug must possess - *bahuta* (should be in plenty (availability)), *yogatvam* (can be used as combination), *anekavidha kalpana* (usable with various types of formulation) and *sampad* (must have potency to combat the disease).

Siddhistahanam of *Charakasamhita* refers to the standard norms of drugs (6/15-16), and also reveals the skill of ancient sages who had the vision to look beyond the physical world

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and attain wisdom without any modern equipment or procedures.

Alpamātram mahāvēgam
bahudōṣaharam sukham ।
laghupākarā sukhasvādā
prīṇanam vyādhināśanam ॥
Avikārī ca vyāpattau
nātiglānikaram ca yat ।
gandhavarṇarasōpētā
vidyānmātrāvadauśadham ॥

Alpamatram:- That amount of drug which is effective without any adverse or side effect, which the modern scientist consider as therapeutic index, can be measured as: $\text{Therapeutic effect} = \frac{\text{maximum non-toxic dose}}{\text{minimum effective dose}} = \frac{\text{lethal dose}}{\text{effective dose}} = \frac{LD_{50}}{ED_{50}}$. The wider the gap between the two values the better is the drug.

Matra (dose) with a prefix of *alpa* shows that it should be used in a small quantity. The ancient sages were aware of toxicity in high doses and advised small quantity of drug.

Further, *auśadha* is *veeryapradhana* whereas *ahara* is *rasapradhana*, which means drug has potency and food has taste. We can take one glass of cane juice but not of ginger because cane juice is *rasapradhana* (tasty) whereas ginger juice is *veeryapradhana* (potent) hence cannot intake more.

Mahavegam: - The drug should respond with great intensity, which is dependent on its pharmacokinetic properties. Therefore routes of administration, dose, latency of onset, time of peak action, duration and frequency of administration of a drug must be considered for *mahavegam*.

The pharmacokinetic action starts with absorption of drug and ends up in excretion. In between there is distribution, metabolism

and storage. According to absorption the route can be chosen for the drug administration i.e. oral, topical, parenteral, or rectal with the consideration of the various factors of bioavailability, later on chemical alteration of the drug in the body takes place, which is biotransformation or metabolism.

In ayurveda there are certain other substances that are *yogavahi* i.e. carrier of drug or vehicle, which are equally important as drug. Further, *anupana* is given which facilitates the digestion of drug, may act as catalyst or bioenhancer of drug. They will certainly increase the velocity of drug response.

Finally, excretion i.e. passage out of systemically absorbed drug through kidney, liver or lungs by means of urine, faeces, exhaled air, saliva, sweat and milk.

Bahudoshaharam: The drug should cover a wide range of diseases or disorder like broad-spectrum. In ayurveda the drugs are classified into three groups; some rectify the discordance of body elements; some vitiate body elements and some are conducive to the maintenance of good health.

The Pharmacodynamics i.e. study of drug effect, is broadly classified as follows:

Stimulation:- Certain drugs have stimulatory effect on *vata*, *pitta* and *kapha*. Where it provokes the action of three bio-humors, there which are responsible for all kind of biological activities known as *prakopaka* drug.

Depression:- Certain drugs have depressing effect on three bio-humours viz. *vata*, *pitta* and *kapha*, which inhibits the activities performed by the above three. These are called as *samaka* drug. One of the best examples of such type of drug is *guduchi* (*Tinospora cordifolia*), now considered as adaptogen.

Replacement:- According to ayurveda body is composed of seven tissues, which regulates the body functions. So all the wear and tear of tissues can be either replaced or fulfilled by deficit substances or body tissue, which can be nutritional or any other kind. In ayurveda there is *dhatuposhaka dravya*, prescribed for the purpose with the principle of *Sarvada sarvabhavanam samanyam vrdhikaranam*.

Sukham:- Disease is known as *dukham* whereas disease-free condition is *sukham*. It can be described as *anukula vedneeyam* the drug should give a feeling of well-being after administration, which is an indicative of betterment of the health.

Laghupakam - The drug should be easily digestible (metabolize quickly) to get better results and quick relief; *Sukhasvadanam* - It should be palatable in quality (taste) and quantity (amount) or both; *Preenanam* - Drug must give pleasure or it should elevate mood as depression itself is mother of many diseases; *Vyadhinasanam* - The drug must have potency to cure diseases; *Avikari/avyapad* - It must not have any side effect or any adverse effect.

Adverse effect: - It may be defined as any undesired or unintended consequences of drug administration i.e. - all kinds of noxious effects, trivial, serious, or even fatal, can be classified into two: 1. Predictable: - Based on pharmacological properties, side effects/ toxic effects and 2. Unpredictable: - Based on the constitution of patient, allergy and idiosyncrasy.

Side effects:- Unavoidable, unwanted pharmacodynamic effects at therapeutic dose - An example is the case of NSAIDs, the gastric mucosa get damaged, resulting in peptic ulcer.

Secondary effects:- Indirect consequences of primary drug action. For eg. when antihistaminic drug is given to patient it causes sedation.

Toxic effect:- Due to increased dose or prolonged use. An example is that prolonged use of chloramphenicol leads to bone marrow suppression.

Poisoning:- It is the dose, which distinguishes a drug from a poison. Further, Charaka says: "a drug not perfectly understood is (fatal) like poison, weapon, fire and thunder bolt, a perfectly understood drug is (life saver) like ambrosia".

Intolerance:- Chemo-toxic effect of drug in individual at therapeutic dose, e.g. one tab of chloroquine cause vomiting and abdominal pain.

Drug allergy:- To understand drug allergy, the mechanism is divided into four types as follows:

1. Type I Anaphylactic - IgE mediated allergic reaction
2. Type II Cytolytic activity
3. Type III Retarded reaction
4. Type IV Cell mediated - Delayed hypersensitivity.

Photo sensitivity:- Reaction to light can be divided into two types: 1. Photo toxic- Diseases and drug metabolites accumulate in the skin and 2. Photo allergic - Exposure to light of higher wave length. (320-400 nm, UV-4).

Drug dependence:- WHO has defined dependence as a state, psychic and sometimes also physical, resulting from the interaction between a living organism and a drug, characterized by behavioral and other responses that always includes a compulsion to take the drug on a continuous or periodic basis in order to experience its psychic effects and sometimes to avoid the discomfort of its absence. Tolerance may or may not be present. A person may be dependent on more than one drug. Dependence is up to such extends

without which survival is not possible. CNS is a prime factor in the development of drug dependence, which once developed is difficult to treat. This may be of two types i.e. 1. Psychological Dependence - related with mind and 2. Physical Dependence - related with body.

Drug abuse:- The term refers to the inappropriate and usually excessive, self administration of a drug for non medical purposes. The term conveys the meaning that use of drugs for such purposes has social disapproval and is harmful to individual and society. Almost all abused drugs exert their primary effect on the CNS. Prolonged abuse of drugs leads to personality changes, decreased productivity, economic and social misery. Drugs used for this purpose are often called substance of abuse.

Drug withdrawal:- Abrupt cessation of drug after prolonged use is known to cause adverse reactions with a typical withdrawal syndrome and exacerbation of the underlying disease. The drugs identified under this heading are opioids, anticonvulsants, corticosteroids, etc. Sudden cessation of antidepressant drugs leads to recurrence of depression or rebound effect.

Teratogenicity:- Drug causes foetal abnormalities or intra uterine death. The sedative thalidomide prescribed for motion sickness to pregnant women, develops anomalies in the newborn commonest were amelia or total absence of limbs and phocomelia or absence of one or more limbs.

Carcinogenicity and mutagenicity:- Estrogens exacerbate mammary carcinoma in menstruating

females but may reduce the size of growth and extent of metastases if administered to post menopausal patients.

Drug induced disease (iatrogenic):- The intelligent man who desires health and a long life should not take any medicine prescribed by physician who is stranger to the art of application. One may survive the fall of thunder on ones head but one cannot expect to escape the total effects of medicine prescribed by an ignorant physician. Thus iatrogenic is not drug-induced disease but physician induced disease.

Natiglanikara: - Drug should not produce any depression or guilty; *Gandhavarnarasopetam:* - Should have pleasant smell, color, and taste; *Matravad aushadham:-* Given in proper dose acts like medicine. If overdose occurs, then it is toxic or if it is not sufficient then it does not have significant effect on disease.

Conclusion

In spite of the long use of drug by the patient, the fact that traditional parameters of use is restricted to the practitioners in view of cost and because of moral considerations. The safety of pharmaceutical products is a concern for the patients and the general public. Therefore, mixtures of plants or animal parts or mineral and their major and minor compound used as a remedies should be studied in detail for their wider and better utilization as drugs and pharmaceutical industries to achieve total healthcare coverage of the growing population.

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IMPOTENCY (Part - V)

K. Razeena*

Abstract: This is the last part of the essay. It gives details of management of impotency in ayurveda. Suggestions are also made for future research in this field.

AYURVEDIC MANAGEMENT

The ayurvedic approach is intended to bring the patient back to his normal constitution along with relief from disease. The treatment consists medicines, diet, daily routine, and mental health and covers a vast field. Ayurveda balances and rejuvenates an organism reducing its susceptibility and empowering its immunity. The remedies are represented by its vast pharmacopoeia of herbs, minerals and products of animal origin.

The ayurvedic therapy can be broadly divided into two types - *brimhana* and *langhana*. Of them *brimhana* finds a fair application in *klaibya*, as it is a *sukrakshayaja vyadhi*. The system focuses on causes rather than symptoms. In case of *klaibya* also the treatment of choice is *hetuvipareeta*. Charaka states - *Sadhyanameva klaibyanam karyo hetuviparyaya*.

The treatments are person specific rather than disorder specific. Thus, the appropriate choice

of therapy should be selected considering the causative factors and after a thorough evaluation of the patient. It seems, a positive therapeutic approach should include : 1. *Dravya chikitsa* (drug therapy), 2. *adravya - manasika chikitsa* (included in psychotherapy) and 3. *pathyacharana* (diet and regimen)

Charaka has suitably combined these three in formulating a general line of treatment for *klaibya* as shown below:

- A. Purification therapy: - i. *Snehayukta virechana* preceded by *purvakarma* and ii. *vasti* i.e. a) *asthapana* (finally *yapana*) and b) *anuvāsana*.
- B. *Vrishya yogas*:- i. *Dravya vrishyas* and ii. *adravya vrishyas* (psychotherapy).
- C. *Pathyahara*: - Therapeutic diet.

Necessity of this kind of approach

Vajeekarana preceded by *samsodhana* therapy: - As *klaibya* is a *sukrasrita roga*, *vajeekarana* therapy which exclusively acts on *sukradhatu* forms the choice of treatment.

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The utility of *samsodhana* therapy

If the corresponding body channels are clear and competent, a *vajeeekarana* remedy reaches the target tissues and organs more effectively. The *samsodhana* procedures are based upon promoting body's natural method of elimination of unwanted substances. Thus, they form the essential pre requisite for *vajeeekarana* therapy. Also, they assure the curability of many of the diseases including those result in *klaibya*. The *samsodhanas* advised in *klaibya* are *virechana* and *vasti*, which are included in *panchakarma*. Before initiating the *panchakarma*, *snehana* and *svedana* are restored to, which brings out the vitiated *doshas* localised in the tissues to *koshtha*, from where that can be eliminated easily.

Purvakarmas advised along with *panchakarma* also have the potential to cure *klaibya* and related diseases. They should be selected appropriately based on the causative factors. Though *nasya* and *vamana* are not advised generally, in specific conditions resulting in *klaibya* these can be employed - eg: *vamanakarma* is employed in *atisthula*, and *nasyakarma* in *sirorogas* and *kantharogas* (affections of CNS and cervical lesions). Thus according to the *doshavastha*, causative factors, *rogibala* and others, we can make necessary modifications in general line of therapy.

After the *samsodhana* therapy, the *vajeeekarana* therapy acts on the defective *sukra dhatu* and improves its health thereby promoting general health.

The utility of *vajeeekarana* therapy

Vajeeekarana tantra is that branch of ayurveda, which exclusively acts on *sukradhatu* and its derivative *beeja*. As ayurveda emphasises

prevention over cure without neglecting cure, Charaka places it under *urjaskara chikitsa* and describes its high curative potential too.

The word, *vajeeekarana* can be roughly translated as aphrodisiac. However, the Indian definition is somewhat different from the western use of the word. In the West, aphrodisiac means that which arouse sexual desire. The ayurvedic equivalent denotes that which strengthens the body by re-invigorating the sexual organs. Or, *vajeeekarana* is a specialised treatment influencing the fundamental aspect of formation, functioning and maintenance of *sukradhatu* leading to overall nourishment, which also affords the prevention and cure of sexual dysfunctions and fertility disorders. Thus in short, *vajeeekarana* therapy preceded by the *samsodhana* therapy assures sexual and reproductive health and improvement of *ojus*.

Further more, if we make a proper selection among the *vajeeekarana* formulations, to get such a formulation, which besides in *sukradhatu*, has a curative capacity or a beneficial effect, on the derangement or diseases those resulted in *klaibya*, that will be better promising; because it offers a better curability and a prevention of further occurrence as *vajeeekarana* has the potential as a preventive medicine also.

The *vrishya* drugs and formulations are numerous in the ayurvedic texts. Those are all clinically tested and approved for *sukragatavyadhis* by *acharyas*. It is the duty of the physicians to select the appropriate drugs for each clinical type, as the ready reference showing the efficacy of each formulation in the specific clinical type of impotency is lacking. Now a days, clinical

studies and reports are available for some of the ayurvedic *vrishya* drugs and for potent formulations made use of these drugs.

From these study reports we can come to some conclusions, that this drug or this formulation can be tried in impotency resulted from this specific cause with positive results. From a proper understanding of the specific pathogenesis in each type, we can formulate a clinical approach in each type. A modest attempt of this kind is made here.

THERAPEUTIC APPROACH OF KLAIBYA

Simple virile impotency

The formulations should have high nourishment potential that is sufficient to replenish the depleted *sukra*. Along with the medication, celibacy for a suitable period also is desirable. Based on the ayurvedic principles, the glandulars of sex glands of animals should be tried because in simple virile impotency, only *sukra* is depleted as a result of excessive sexual act.

Drugs like *Withania somnifera*, *Ginko biloba*, etc. have proven efficacy; *Bastandak-sheerabhavita tailayoga*, *vrishyagutika*, etc. are very effective. Bhavamisra advises *talamuli* (*Curculigo orchiodes*) as a good aphrodisiac.

Pittaja klaibya

Abstinence from *nidana* is the most fruitful remedy. Smoking cessation, alcohol avoidance, etc. has to be practised. The re-invigoration of *sukra* by potent *vajeekaranas*, which are *pittasamaka*, also will be highly suitable to correct the bad effects. If there is associated severe *dhatukshaya*, the treatment of *kshayajanya klaibya* should be employed.

Pittasamaka and *yakrit vikara samaka* drugs

will be suitable for cases of alcoholic impotence, because these may be associated liver cirrhosis. *Guduchi* and *yashtimadhu* are proven as hepato protectives. These may be tried, or the combinations of these with other *vrishya* drugs, after assessing the intensity of resulted hypogonadism (in cirrhosis and alcoholism). *Samsodhana therapy - virechana* is to be done carefully with selected drugs, those are advised for *virechana* in *yakritika rogas*, because, the *pittala* drugs will adversely affect *yakrit*.

Kshayajanya klaibya

As far as this severe ailment is considered, immediate care should be taken to make and maintain the lost *dehabala*. The impotence here is adaptation to cope with debility, as immediate survival is more important. Thus formulations advised should have a high nourishing potential for the body - i.e. highly potent *rasayanas* should be used, which in turn will nourish *sukra* also. Charaka advises *yapana-vastis*, *ksheerasarpis*, etc., which have nourishing power and immediate effect.

Amlaki - the best *rasayanadravya*, *satavari-rasayana* arid multivitamin supplement drugs, *vidaryadi*, *kakolyadi gana - jeevana* and *brimhana* etc. should be made use of. Formulations like *Brahmarasayana*, *Chyavana-prasa*, *Asvagandha rasayana*, etc. should be selected depending on the condition. Potent *rasaushadhis* like *Siddhamakaradhvaja* also give immediate result.

Jarajanya klaibya

In old age, the pathogenesis is accelerated by general decaying of body. The formulations to be used in this category should act by improving the digestive ability, immune status

and general health. In this way the health of *sukra* is also improved. Some preparations are specifically indicated in *jarajanya klaibya*. The above *rasayana dravyas* will get positive results here also. *Asvagandha* is a drug with clinically proved efficacy. Drugs with antioxidant potential, like *asvagandha*, *yashtimadhu*, *amlaki*, *satavari*, etc, are important as they prevent body decaying. *Yapanavastis* and *navneeta* are specially indicated as both *balya*, *brimhana* and *vrishya*.

Beejopaghataja klaibya

The impotency and *beejopaghata* are to be treated with *vajeekarana yogas*. The potency and fertility are probably reversed when optimum nourishment for the depleted *dhatu*s and the cure of ailments of *sukra* and the restoration of its health are assured. *Apatyakara svarasa*, glandular and *Brimhani gutika* are some formulations effective for both spermatogenesis and leydig cell function:

Kharasukraja klaibya

As discussed earlier, the patient may have a psychogenic link, probably a performance anxiety. A counseling approach and *sukra-janaka* or *sukrasravaka dravyas* should be employed. *Dugdha* (milk), *masha*, *bhallataka phalamajja*, *amalaka*, etc. which are *sukra-wardhaka* and *sukrapravartaka* can be used.

Vasculogenic impotency

In impotency associated with atherosclerosis, we have drugs - (a) *amalaki* - clinically proved anti atherogenic and cholesterol reducing action in animal studies; (b) garlic is also proved effective. *Vajeekarana* formulation of garlic: *gandhasarpis* should find its application here. According to ayurveda, *sarpis* is having the unique capacity to imbibe the properties of

the ingredients without losing its qualities. Hence *gandhasarpis* is assumed effectual in *atistaulyavikaras*, especially hypercholestrimia and atherosclerosis. However, the claim should be proved clinically. Or, one can use the appropriate *rasayana* formulations of garlic that are highly effective against atherosclerosis. Other drugs with *lekhana* property (eg:- *tila*) should be tried.

Neurogenic impotency

The drugs which are having a clinically proven efficacy as stimulants of CNS and are claimed as *vrishya* are of value. The main thing to be noted is the dosage, because most of these drugs, on exceeding certain dose, are CNS depressants. eg: *bhanga*, *kupeelu*, *datura*, *ahipheena*, *akarakarabha*, etc.

Some physicians opine that *Madanakamesvari lehya*, in some patients, shows initial stimulation followed by depression. One of the physicians shared his experience with one patient: a neurogenic impotent, who himself increased the dose and frequency of administration wishing further improvement of performance and reported again with loss of the regained power. It should be noted that this formulation contains *bhanga* in high proportion. While prescribing such medicines one should be very careful about the dose. *Brihanmakaramushti* is another formulation from *Bhaishajyaratnavali* found effective in neurogenic cases.

In hyper prolactinaemia

In modern science, impotency resulted from hyper prolactinaemia is treated with Bromocriptine - a dopamine agonist. Ayurvedic *vrishya* drug *kapikachu*, contains levodopa - immediate precursor of dopamine, should be

tried clinically in this. Also, *kapikachu* and *asvagandha* are having effect in CNS - both psychogenic and neurogenic functions. *Kapikachu* is effective (clinically proved) in Parkinson's disease.

Diabetic impotency

This suggestion of a specific formulation for diabetic impotency is very difficult, because, in diabetes, any of the factors upon which erectile function is dependent may be altered and the treatment differs for each of these variable factors. In diabetic impotence, the first step should be to control diabetes. Then the factors involved in the pathogenesis should be considered and the appropriate medicines should be selected.

There is a formulation called *Vilasinivallabha rasa* in *Yogaratanakara* that claims cure of both *prameha* and erectile failure. This has to be evaluated clinically to assess the efficacy in diabetic impotents.

Some other formulations like *Makaradhvaja*, *Siddhamakaradhvaja*, *Hemabhasma*, etc. are claimed to be effective in some diabetic impotent patients.

Marmachedaja klaibya

This is termed incurable by the *acharyas*. A treatment pattern for *vitapa marmabhighata* is seen in an ancient *Keraleeya* scripture on *Marmachikitsa*:

- Irrigation with *taila* and *ghrita*
- *Lepana* with *bimbi* leaves, myrobalans, black sesame, seeds of castor plant - all equal parts, are to be triturated with milk and then mixed with ghee and applied. These two procedures should be repeated alternatively and frequently.

THE UTILITY OF GLANDULARS

Glandulars are claimed to have efficacy, but it is yet to be proved. Some clinicians prefer to avoid glandulars saying that some of them may be harmful. No study exists to prove that glandulars should be used, or to be completely abandoned.

On going through the list of *vrishya* glandulars ayurveda make use of, we will find *gandhamarjara veerya* (semen of civet cat) the semiliquid unctuous secretion (*Veveria civeta*, *Veveria zibetha*) contained in a pouch situated in between anus and genital organs of the animal. Civet cat is found in Malabar of North Kerala. Susruta and Bhavamisra have mentioned its *vrishya* property. It is of *katu vipaka*, *ushna veerya*, *katutiktarasa* and *laghuruksha* in *guna*. Despite, lacking the properties commonly attributed to *vrishya* drugs, it is found to be effective by *acharyas*.

It is surprising that civet chemically similes with yohimbine - the extract of plant *Corynanthe yohimbe* or *Paustinalia yohimbe* - Rubiaceae family - widely used as an oral aphrodisiac. Chemically yohimbine is an indole alkylamine alkaloid acting as a selective alpha-2 adreno receptor antagonist. Civet also contains indole, ethylamine, propyl amine, etc. It is highly needful to conduct a clinical trial with civet and it should be compared with the efficacy of yohimbine.

The chemical constituents of other glandulars, which are made use of, should be analysed and be subjected to clinical trials. Then only the convincing evidences for the claims can be made.

Efficacy of yasadabhasma

Among the mineral remedies indicated for

veeryavardhana, *Yasada* (Zn) is included. It has been found that zinc supplementation was accompanied by an increase in both sperm count and plasma testosterone in males with mild zinc deficiency. It appears that zinc supplementation is useful in male impotency only in the context of moderate to severe zinc deficiency. It is certain that the deficiency causes regression of male sex glands and testes. Researchers in their studies of sexually impotent males who were suffering from chronic kidney failure or who had low levels of zinc in their blood, reported a marked improvement in sexual potency in those patients who had zinc added to their haemodialysis solutions. No such changes were observed in patients who got placebos instead of zinc. Among the causes of zinc deficiency, chronic alcoholism, diabetes mellitus, nephrotic syndromes are included and is specified chronic zinc deficiency and hypogonadism usually associate. These diseases result in impotency. Thus if the causatives are any of these, it is desirable to try zinc (*Yasada bhasma* - dose 60-125 mg). As zinc improves testicular function it can be tried in *beejopakhataja klaibya*.

FEW VAJEEKARANA FORMULATIONS

A. Internal medicines

1. *Vanari gutika*:- This is a well known formulation with curability of erectile failure and *drutasrava* (premature ejaculation).

One *kudaba* (240g) of *vanari* (*Mucuna pruriens*) seeds is to be boiled in one *prastha* of milk until the milk attains a highly thick consistency. After peeling the cotyledons off, the seeds are to be ground well, made into *vatika* form and fried in ghee. Thus fried *vatikas* are again boiled with twice amount of sugar for forming a

coating over these. Then these are kept dipped in honey. The dosage is five *tankam* in the morning and evening.

2. *Kapikacchu - Ikshura yoga*: Powdered seeds of *kapikacchu* (*Mucuna pruriens*) and *ikshuraka* (*Asteracantha longifolia*) are to be mixed with sugar and put in a glass of milk. This medicine needs no *agnipaka* (heating). Instead of *kapikacchu* and *ikshura*, *ucchadachurna* and *satavari churna* also can be used.

3. *Saugata gutika*: This is herbomineral formulation. The drugs required are - purified mercury, purified sulphur, *nagakesara*, *champak*, *kumkuma*, *lavanga*, *akarakarabha*, *ajamoda*, *samudrasosha*, *jatipatri*, *jatiphala* - one part each and 2 parts of *ahiphena*; all these are to be ground well and prepared pills in the size of *badara* seeds (*Ziziphus jujuba*). This is to be taken with honey at early night and after one *yama* (3 hours); one more dose should be taken with one *karsha* of *yavani beeja taila*, which helps to get erectile ability for one *yama*. This is effective in premature ejaculation also.

4. *Makshikadi yoga*:- This is also a herbo mineral formulation, especially helpful in *jarajanya klaibya*. Purified *makshika*, *parada*, *silajith* and *lohachurna* are mixed with *hareetaki* and *vidanga* - all in equal parts. This mixture is to be consumed with ghee and honey for 21 days.

5. *Gokshuradi churnayoga*:- A mixture of powders of *gokshura*, *ikshura*, *masha*, *nakuli* (*Mucuna*) and *satavari* are to be triturated with milk for making a *kalka*. This is highly effective in *klaibya* especially in *jarajanya klaibya*.

6. *Brihat Makaramushti*:- This *anubhuta* (clinically tried) *yoga* is indicated for *snayudaurbalya* and *shandatva* in *Bhaishajyaratnavali*. Usually *snayu* denotes a nerve, fibrous tissue. From the ingredients of formulation, it seems this should be tried for curing neurogenic impotency.

12 parts of *akarakarabha churna* is to be mixed well with purified *lohabhasma*, *makaradhvaja* and *karaskarabeeja churna*, (seeds of *nux-vomica*) each 1 part and $\frac{1}{8}$ th part of purified *svarnabhasma*. The dose is 4 *ratti* (500mg). The required dose should be triturated well with betel leaves juice and take mixed with honey. This claimed to be highly effective.

7. *Vilasinivallabharasa*:- 12g each of purified *gandhaka* and *parada* are to be powdered well and mixed with 24g of powdered and purified *datura* seeds. This is to be triturated well with *daturabeeja taila* to form *vati*-like formulation. Dose is 1-2 *ratti* (125-250 mg) daily along with sugar. This cures both *prameha* and erectile failure. *Rasa* and *gandhaka* are capable of curing *prameha*. Thus sugar will not be affecting diabetes.

8. A glandular: - Testicles of goat (*bastanda*) cooked in milk and ghee by adding powdered long pepper and rock salt claims to augment sexual capacity enormously.

B. External medicines

1. *Vasalepayoga*:- This is an *anubhutayoga* from *Bhaishajyaratnavali*. Equal parts of *sukaravasa* and honey are to be mixed thoroughly. The *lepana* of this mixture is effective in erectile dysfunction. Caution should be taken for any allergic manifestation or dermatitis. Excessive application may results in *guhya*rogas.

2. *Asvagandha taila*: - Medicated *tilataila* is to be prepared with *asvagandha*, *satavari*, *kushtam*, *mamsi* and *simhi* adding 4 times quantity of milk as *drava dravya*. The prepared oil on external application helps to attain and maintain an erection for satisfactory sexual intercourse.

3. Medicated mustard oil:- Mustard oil medicated with *bhallataka*, *brihati* and *dadima* is also claims to give positive result.

Vrishyavasti yogas

Kvatha of *ksheerakakoli* (*payasya*), *sthira* and *rasna*, *svarasa* of *ikshu* and *vidari*, honey and ghee – each one *prasrita* with one *prasrita pippali* as *kalka* is an *uttama vrishya niruha vasti yoga*.

Some *yapana vastis*

a. A *ksheera kashaya* is made with total 8 *pala* of *bala*, *atibala*, *apamarga* and *atmagupta*, and 4 *pala* of coarsely powdered *yava*. This is to be used for *vasti*, adding *kalkadravyas* (*pippali*, *yashti* and *madana*) honey, ghee, *tailam* and jaggery. This is especially helpful in *sukrakshaya*, even for senile patients.

b. Milk prepared with testicles of buffalo, bull, goat and pig; and flesh of crab and rabbit, adding *kalka* of *ucchada*, *ikshurabeeja* and *kapikacchubeeja*, honey, ghee and rock salt should be given for sexual incapacities. This is *vrishya* and useful even in aged persons.

c. 4 *prastha* of fresh *chatusneha*, $\frac{1}{2}$ *pala hapusha kalka* and $\frac{1}{2}$ *karsha saindhava* form a *vrishya vasti yoga*. This is helpful in *mutrakricchra* and *pittaja vyadhis* also.

d. 4 *prasrita* each of ghee and honey, adding *ushanodaka* - in same quantity with $\frac{1}{2}$ *pala satapushpakalka* and $\frac{1}{2}$ *aksha* (6g) rock

salt is *vrishyatama*, *deepana*, *varnya*, *balya* etc. This is very safe (devoid of complications). This is *udavartahara* and *pramehaghna* also.

Adravya vajeekarana and daivavyapasraya chikitsa

Like activities, places and situations influence on sexual desires so also touch (that soothes the skin), speech (that gladdens the ears), clear nights mellowed by beams of full-moon-night, dulcet songs (that charm the soul and captivate the mind), wreaths of sweet-scented flowers, bank of clear water rivers, etc. influence one's sexual desire.

The stimuli that excite sense organs are having a psychogenic mode of action. Especially a nasal stimulation with sweet scented flowers, etc. create a sensual mood. This is widely made use of by the aromatherapists claiming beneficial effects; essential oils such as rose, sandalwood, etc. are the commonly used for this purpose.

Ayurveda states, the foremost aphrodisiac is life-partner i.e. exhilarating woman. The qualities to be possessed by the female partner are clearly explained as equally desirous to sex, skillful in copulation, charming, attractively dressed, etc. Or, the importance of the female partner should not be neglected, and couples therapy should be the treatment of choice when the sexual problem is secondary to major marital adjustment problems.

For *abhicharaja klaibya*, Charaka advises *daivavyapasraya chikitsa* and *sukrakara bhaisajya*. *Abhichara* is that which causes mental trauma first followed by physical incapacity. This therapy involves chanting *mantras* (incantations), *aushadis* (sacred

herbs), *mani* (precious gems), *mangala* (propitiatory rites including oblations), *bali* (offerings), *homa* (sacrifices), *niyama* (vows), etc. These are specifically aimed for psychogenic causation. Usually this therapy is employed when both *yuktivyapasraya* and *satvavajaya* fails. This is believed to have its beneficial effects on the higher functions of the brain. It improves *dhee*, *dhairya*, etc. which are the best remedies for psychologic ailments.

The dietary factors and regimen

Susruta includes *bhojanani vichitrani* and *panani vividhani* in the *vrishya gana*. It is the *ahara dravyas* (nutrient substances) that supply materials from which the body builds up the structural and functional elements. It is vivid from the properties of *sukra* and *kapha*, and that a wholesome diet sufficient to supply the required amount of *kapha*, specifically *ap-bhuta* predominant principles (nutrients) analogous to *sukra*, is essential to maintain the health of *sukradhatu*.

Regarding the properties of *vrishyadravyas* applicable to both *ahara* and *aushadha dravyas*, it is specified to be *madhura*, *snigdha*, *brimhana*, *balavardhaka* and *manoharshana*. Charaka opines that the qualities imparting *brimhana* are *guru*, *bahala*, *snigdha*, *picchila*, *manda*, *sthira*, *seeta*, *slakshna* and *sthula*. These qualities of *aharadravyas* provide proper nourishment to *kaphadosha* and *dhatu* like, *rasa*, *mamsa*, *medas*, *majja* and *sukra*. The properties of *ap-bhuta* predominant *dravyas* are also similar.

Bhavamisra opines that it is the specific property exhibited by *snigdha guna dravyas* to be *sleshmala*, *vrishya* and *balya*. Thus, *snigdha guna* is having predominance in imparting *vrishata*. Susruta states that all

ksheeramamsa ganas and *kakolyadi gana* are the best *vajeekarana dravyas*. These satisfy the properties to be possessed by the *vrishya* drugs.

There is a list of *pathyaharas* in *Bhaishajyaratnavali* for *dhvajabhanga*. In the Complete Illustrated Guide to Aromatherapy, Julia Lawless advises a wholesome nutritious diet that is must for optimum health and the maintenance of sexual vitality. Zinc and carotene are specifically indicated to increase sexual vigour. On NIH consensus statement 1992 December, Dr. Green advises for regular exercises, healthy diet, nonsmoking, and teetotalism. Long distance bike riding is discouraged; adequate exercise is a basic requirement for a healthy body.

According to ayurveda, *vyayama* results in maintaining a *suvi bhakta dridhagratva* (healthy well built body) and it is the potent method of *sthaulyapakarshana* (prevents and cures obesity). *Atisthaulya* is a causative of *kricchra vyavayata* (sexual dysfunction). All these indicate that *vyayama* has its own importance in the daily life for performing healthy sexual act. Massage (*abhyanga*), *utsadana* and *udvartana* are also recommended as *vrishya* as they have beneficial effects more than exercises on muscular and nervous system and also a psychogenic effect.

CONCLUSION

Impotency may be understood as the presence of a condition limiting choices for sexual interaction, possibly limiting opportunity for sexual satisfaction. Usually men do not perceive erectile dysfunction as a normal part of aging. They seek to identify means by which they

can return to their previous level and range of sexual activities. Such levels, expectations and desires for future sexual interactions are important aspects of the evaluation of impotent patients.

Knowledge of risk factors can guide for prevention strategies in impotency. Judicious avoidances of drugs that cause erectile failure as side effect, smoking cessation, alcohol avoidance and dietary changes, all are of value in the changing life style.

Impotence can be effectively treated with a variety of methods. Availability of new diagnostic procedures and specific treatment are emerging, that may help in selection of cause-specific treatment. Both allopathic and ayurvedic therapeutic approaches emphasize the importance of cause specific (*hetuvipareeta*) treatment for sexual dysfunctions. The medicines used in ayurveda are to be critically analyzed, clinical trials conducted for assessing the efficacy in each clinical type and the results thus arrived at need to be published so as to get a specific therapeutic method.

Lack of sexual knowledge and anxiety are common factors of erectile dysfunction. Here, the best approach is to counsel the couples rather than drug therapy of any system; education and reassurance may also be helpful. One of the major hurdles in the field of sexual dysfunctions is that large segments of public and health care professionals remain unaware about the latest contributions in the field. This situation has caused the advanced treatments inaccessible for most of the patients. Of all these, the reluctance from the part of physicians to deal honestly with sexual matters forms the

worst part; so also the patients are often inhibited for even initiating a discussions in the matter; improving both public and professional knowledge about impotence will serve to remove these barriers.

The needs for a future research

The necessity of a thorough research in this field is the need of the time as many important aspects of impotency are yet to be explored. The needs and directions in this regard can be summarized as follows:

- Studies to define and characterize what is normal erectile function as stratified by age.
- Epidemiological studies directed at the prevalence of male erectile dysfunction and its medical psychological correlates, particularly in the context of possible racial, ethnic, socio economic and cultural variability.
- Development of a symptom score sheet and staging system to aid in the standardization of patient assessment and treatment outcome.
- Randomized clinical trials assessing the effectiveness of specific behavioural, mechanical, pharmacologic and surgical treatments either one or in combination.
- Clinical trials to assess the effectiveness of various ayurvedic therapeutic options - oral

medicines, external applications and *vasti yogas*, either alone, or in combinations in specific clinical types.

- Studies on the specific effects of hormones (especially androgens) on male sexual function; determination of the frequency of endocrine causes of impotency and the rate of success of appropriate hormonal therapy.
- Extensive clinical trials to evaluate the supposed hormonal changes by medication with ayurvedic drugs.
- Social / psychological studies of the impact of erectile dysfunction on subjects, their partners, and their interactions and the factors associated with seeking care.
- Development of new therapies, for male impotency with greater specificity.
- Long-term follow up studies to assess treatment effects, patient's compliance, and late adverse effects.

The collaborative efforts of investigators and clinicians from the spectrum of relevant disciplines are required for these studies. Such efforts will be fruitful to improve the understanding of appropriate diagnostic assessments of this condition, so also the appropriate selection of treatments from the various therapeutic options.

ANTILIPID PEROXIDATIVE EFFECT OF *CORIANDRUM SATIVUM* – AN *IN VITRO* STUDY

C. Sheela Sasikumar*

Abstract: The antiperoxidative effect of coriander seeds was tested by using iron-induced lipid peroxidation in 5% rat liver homogenate. The degree of peroxidation was measured by thiobarbituric acid reactive substance (TBARS) content and coriander provided significant protection against lipid peroxidation. Results suggested antiperoxidative effect of coriander (*Coriandrum sativum*).

Introduction

Coriandrum sativum, Linn (Apiaceae) is a glabrous, aromatic, herbaceous annual whose leaves and fruits are used in cooking¹. The leaves are acrid, astringent, aromatic, analgesic, anti-inflammatory and styptic and are useful in the treatment of pharyngopathy, epistaxis, chronic conjunctivitis, inflammation, jaundice, hemorrhoids, etc. The seeds contain β -sitosterol, D-mannitol and flavanoid glycosides².

Lipid peroxidation is a complex process whereby polyunsaturated fatty acids of cellular membranes undergo reaction with oxygen to yield lipid hydroperoxides³. The reaction occurs through a free radical chain mechanism initiated by the abstraction of a hydrogen atom from polyunsaturated fatty acids by a reactive free radical, followed by a complex sequence of disseminative chain reaction⁴. Antioxidants

present in intracellular and extracellular compartments play an important role in the defence against lipid peroxidation⁵. When our endogenous antioxidant defence is not completely effective, dietary antioxidants are of particular importance in reducing the cumulative effects of oxidative damage. Effect of spice principles on scavenging superoxide radicals had been investigated earlier⁶. Since coriander forms one of the commonly used spices, this study is an attempt made to elucidate the antiperoxidative effect of coriander seeds on *in vitro* peroxidation of rat liver homogenate.

Materials and methods

Coriander seeds were dried, powdered and used for the investigation. Thiobarbituric acid (TBA), trichloroacetic acid (TCA), ferrous sulphate were purchased from central drug

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house. 1,1-, 3,3-tetra-ethoxy propane (TEP) was procured from Sigma Chemical Co., St Louis, MO, USA. All other reagents used were of analytical grade. Wistar male albino rats of body weight 100-150g were selected for study. Animals were sacrificed by cervical decapitation, the liver was immediately excised and a homogenate was prepared using phosphate buffer saline (PBS) pH 7.4.

Lipid peroxidation was induced by adding 0.5nM Fe SO₄⁷. Homogenate (5%, 3 ml) was preincubated at 37°C for 30 minutes with different concentration of coriander powder (dissolved in water). After incubation for 30 minutes, 100ml of mixture was taken out to estimate the concentration of TBARS as per Okhawa *et al*⁸.

The results are the mean + SD of six animals. Levels of significance have been evaluated by using students 't' test. Coriander showed significant protective effect against iron-induced lipid peroxidation (Table 1); the degree of protection rendered was in dose-dependent manner.

Table 1

Protective effect of *Coriandrum sativum* on iron-induced lipid peroxidation in rat liver homogenate

<i>Coriandrum sativum</i> (µg/ml)	TBARS (nmoles/mg protein)
0	5.63 + 0.56
10	3.47 + 0.38*
20	3.32 + 0.44*
50	3.16 + 0.28*
75	2.88 + 0.12*
100	2.86 + 0.16*

Values are mean + SD for 6 animals.

Significantly different from control group p<0.001*

Discussion

Lipid peroxidation is a complex and natural deleterious process. The inhibition of lipid peroxidation could be due to presence of antioxidant phytochemicals in *Coriandrum sativum*. Phytochemicals are biologically non-nutritive chemicals found in plants. Various classes of phytochemical like phenols, isoflavones, saponins, indoles, flavanoids, carotenoids, etc., have been shown to possess antioxidant property⁹.

Phytochemicals have different mechanism of action and act at different sites in the chain reaction. The activity of natural product antioxidants is due to the presence of substituted groups, such as carbonyl, phenolic, phytyl side chain, electron with-drawing group, electron donating group, etc. Non enzymatic free radical scavenger like mannitol can scavenge hydroxyl radical¹⁰.

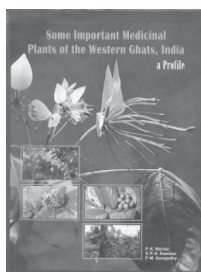
Thus many plant products exert antioxidant effect by quenching free radicals and singlet oxygen. The phytochemicals present in *Coriandrum sativum* could have scavenged free radicals in either initiation or propagation process of lipid peroxidation. The results suggest that *Coriandrum sativum* have antioxidant property. Since the leaves as well as dried fruits are used regularly for seasoning, the results play a very significant role in projecting coriander as a dietary antioxidant.

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IMMOBILITY

Abichal Chattopadhyay*

Abstract: Immobility is a common problem in old age; however, now-a-days, this symptom is found in the young generation also. The possible causes of immobility, whether lasting, recent or progressive, are discussed in this paper. Some ayurvedic diagnosis in comparison with modern interpretation of pains is also dealt with.

Introduction

Immobility is a frequent presenting symptom of present time. Though it is more commonly seen in the geriatric unit, now-a-days it is found in the young persons also. Some of the possible causes of immobility, are reversible if correctly diagnosed and treated. The rest can be improved or made tolerable if correctly managed. Pain in the bones, joints and muscle and soft tissues is caused due to the aggravation of *vayu*. The special seats of *vayu* are the bladder, rectum, hips, thighs, feet, bones and colon¹. The discordance in the qualities of *vayu* in the particular affected organs results in different types of *vatic* disorders². *Vayu* is mainly aggravated due to degeneration (*dhatukshaya*) and occlusion (*avarana*). In immobility, the function of *vyanavayu* is definitely impaired as the motion, extension and contraction are controlled by this specific *vayu*³. The *vayu* gets vitiated by the specific etiological factors which ultimately result in turn in the filling

up of the vacuum body passages and produces different disorders affecting the whole body or the specific region⁴. The *vayu* on account of its quality of subtleness (*sukshmatva*) provokes the other two humors with the occlusion of body channels. It also degenerates the body elements⁵.

Causes of immobility

The general causes of immobility are: pain in bones - *abhighata*, *majjakshaya*, *majjavrita-vata*, *asthikshaya*; pain in joints - *asthimajjagata vata*, *sandhigata vata*, *kroshthukasirsha*; pain in muscles and soft tissues - *mamsa-medogata vata*, *mamsavrita vata*. The main sites of pain which reduces mobility are: *asthi* (bones), *sandhi* (joints) and *mamsa-meda* (muscle of soft tissue)

Pain in *asthi*: Pain in *asthi* is noted for its persistence and severity, which is often worsened by movement and weight bearing. The general

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causes of the pain in *asthi* can be correlated as *abhighata* (trauma), *majjakshaya* (osteoporosis), *majjavrita vata* (osteomalacia) and *asthikshaya* (Paget's diseases)

Abhighata causes the *vata* aggravation by *dhatukshaya*⁶. The precipitating trauma may be so slight as to go unnoticed.

Majjakshaya is common and frequently confused with *majjavrita vata*. In this condition the atrophy of bone tissue and the reduced amount of bone are characteristic⁷. It is identical to osteoporosis. The X-ray of affected bone will show generalized rarefaction and changes in the trabecular pattern in the femoral neck.

Majjavrita vata means the softening of the bones because of their inadequate calcification, which results in the flexion of the body and girdle pain⁸. It is identical to osteomalacia characterised by painful immobility. The hip movement becomes weak leading to waddling gait. In osteomalacia raised serum alkaline phosphatase and reduced calcium level are the suggestive diagnostic criteria.

Asthikshaya is a combination of the atrophy of osteo-tissues associated with the falling of hair, nail and teeth, fatigue and impaired firmness of the joints resulting in deformity and increased fragility⁹. On X-ray, an affected bone is often seen thickened and bowed, and the normal trabecular pattern distorted and there are patches of rarefaction and sclerosis.

Apart from this, the commonest form of malignant bone disease is that due to a secondary spread. The metastasis is usually from a primary lesion in the prostate, lung, breast, thyroid or kidneys.

Pain in *sandhi*:- Painful joints are frequently made more uncomfortable by weight bearing and movement. They are likely to lead to immobility. The general causes of pain in *sandhi* are: *asthi-majjagata vata* (osteoarthritis), *sandhigata vata* (rheumatoid arthritis) and *kroshthukasirsha* (pseudogout).

Asthi-majjagata vata is a chronic destructive arthropathy most commonly found in elderly. It is characterised by pain in the bones and joints, arthralgia, loss of strength, loss of sleep and persistent pain¹⁰. Due to pain, joint movements are limited. It is classically not symmetrical but often both hips or both knees and sometimes all the four joints are damaged, but not equally. X-ray of joints are useful for diagnosis.

Sandhigata vata is a symmetrical polyarthritis due to synovial proliferation, predominantly affecting the young or early middle-aged women. It is characterised by painful swelling of the joints associated with difficulty in extension and flexion¹¹.

Kroshthukasirsha commonly affects the knees. The mechanism of pain in this condition is an inflammatory reaction provoked by the presence of crystals in the synovial fluid. In this condition the *rakta* is also vitiated where the inflammation and persistent severe pain are characterised. In pseudo gout the chemical substance is pyrophosphate salt. The fluid from the affected joint must be examined for leukocytes and crystals.

Apart from the above joint disorders, different types of arthropathies like *gulphagraha* (ankle stiffness), *janubheda* (bow leg), *januvislesha* (knock knee), *sronibheda* (girdle pain),

TABLE 1
Ayurvedic diagnosis and modern interpretation of different pains

Features	Ayurvedic diagnosis	Modern Interpretation
<i>Vinama</i> (flexure of body) <i>Jrimbhana</i> (pendiculation) <i>Parivestanam</i> (girdle pain) <i>Soola</i> (colicky pain)	<i>Majjavrita vata</i>	Osteomalacia
<i>Asthisiryata</i> (atrophy of bony tissue) <i>Asthidaurbalya</i> (weakness of bone) <i>Asthi laghuta</i> (lightness of bone)	<i>Majjakshaya</i>	Osteoporosis
Fall of hair, nail and teeth <i>Srama</i> (fatigue) <i>Sandhisaitihilya</i> (looseness of joint)	<i>Asthikshaya</i>	Paget's disease
<i>Asthibheda</i> (cracking of the bones) <i>Parvabheda</i> (piercing pain in joint) <i>Sandhishoola</i> (arthalgia) <i>Mamsakshaya</i> (loss of flesh) <i>Balakshaya</i> (loss of strength) <i>Asvapna</i> (loss of sleep) <i>Santata ruk</i> (constant pain)	<i>Asthimajjagata vata</i>	Osteoarthritis
<i>Vata purna dritisparsa</i> (palpitation like a bag full of air) <i>Sotha</i> (oedema of joint) <i>Vedana in prasarana and akunchana</i> (painful movement of joint)	<i>Sandhigata vata</i>	Rheumatoid arthritis
<i>Gourava</i> (heaviness of body) <i>Atitoda</i> (severe aches) <i>Dandamustihata</i> (feeling of pain of the body that had been beaten with) Rheumatica <i>Sramita</i> (extreme exhaustion)	<i>Mamsamedogata vata</i>	Polymyalgia
<i>Kathina and Vivarnapidaka</i> (hard and grey papule) <i>Sotha</i> (swelling) <i>Romancha</i> (horripilation) <i>Pipeelika sancharavat vedana</i> (sensation like biting of ant)	<i>Mamsavrita vata</i>	Polymyositis

trikagraha (stiff waist), *prishthagraha* (stiff back), etc. are commonly found which result in immobility¹².

Pain in *mamsa-meda* :- Muscular pain and weakness may be the causes of immobility. The patients may complain of arthritis but on direct questioning and examination it becomes clear that the main problem is the muscles. The general causes of pain in *mamsa-meda* are: *mamsa-medogata vata* (polymyalgia rheumatica and muscle ischaemia) and *mamsavrita vata* (polymyositis).

Mamsa-medogata vata is a variety of collagen disorder where the muscle symptoms are most marked, the patient complaining of heaviness of the body, severe pain and extreme exhaustion¹³. The helpful diagnostic measures are normochromic anaemia and a very high E.S.R.

Mamsavrita vata is a rare, nonspecific inflammatory disorder mainly affecting the proximal limb girdle muscles. The affected muscles are weak, and tender and associated with frequently oedematous dermatitis¹³. This is a collagen disorder and more often a manifestation of neoplastic disease in elderly.

Conclusion

It may be concluded that pain in bones, joints, and in muscles and soft tissues is the causative factor of immobility. Psychological and iatrogenic causes for immobility cannot be ignored. Here the emphasis is made particularly on pain in relation to ayurvedic and modern concept.

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**ANTI-INFLAMMATORY ACTIVITY OF THE EXTRACT OF
ARISTOLOCHIA BRACTEOLATA LINN.**

R. Vijaya Muthu Manikandar, V. Rajamanickam, R. Arivukkarasu and A. Rajasekaran*

Abstract: *Aristolochia bracteolata* Linn. is a traditionally used medicinal plant for curing inflammation, worm infestation and as uterine stimulant and antibacterial. This paper deals with the anti-inflammatory activity of its leaf extract.

A simple ointment, traditionally prepared with the extract of *Aristolochia bracteolata*, on testing for anti-inflammatory activity in the laboratory found tremendously effective in rats.

The leaves, air dried, coarsely powdered, were extracted with methanol and chloroform in a Soxhlet extractor. Both alcoholic and chloroform extract were concentrated and kept in a dessicator and used in the preparation of ointment.

The ointments were prepared in 10% w/w of the extract of chloroform (wc) and alcoholic extract (WA) in 90% w/w of white soft paraffin separately. The preliminary anti-inflammatory activity of these ointments tested on rats. The anti-inflammatory activity was tested by carrageenin induced oedema in the paw of the animal.

Albino rats weighing between 180g - 250g were divided into 4 groups of three animals each. The paw volumes were measured with plethysmogram. The suspension of carrageenin

(0.1 ml of 1% in water) was injected in sub plantar region. The un-injected paw served as control. The ointment was applied by spreading it on cotton wool and placing the wool with adhesive tape on the paw to which carrageenin in suspension was injected. The measurement of paw volume was carried out at time intervals of 0hr, 1 hr, 2hr and 3hr.

The difference between the amounts of swelling in different groups was attributed to the effect of the treatment given to the respective groups. From these observations, percentage inhibition of inflammation was calculated. Ibuprofen (IBU) was taken as standard drug for comparison. From the preliminary experiments carried out on rats it was inferred that of all the extracts tested, the ointment of methanolic extract and chloroform extract showed marked inhibition of oedema in rat paw. The alcoholic extract showed 71.28%, for chloroform extract 50.74% and for Ibuprofen 76.28%.

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Anti-inflammatory activity of formulations

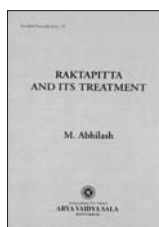
Group	Dose	Volume of Paw oedema				% of inhibition of oedema 3 hrs. after Carrageenin inj.
		0 hr.	1 hr.	2 hrs.	3 hrs.	
Group I	Ointment base	0.5 ml	0.6 ml	0.7 ml	0.8 ml	-
Group II	WA	0.5 ml	0.6 ml	0.4 ml	0.3 ml	71.28
Group III	WC	0.5 ml	0.5 ml	0.5 ml	0.4 ml	50.74
Group IV	STD	0.5 ml	0.6 ml	0.5 ml	0.3 ml	76.28

* indicates P<0.05; % of inhibition = $\frac{V_c - V_t}{V_c} \times 100$ (Vc - Volume of Control, Vt - Volume of Test)

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RAKTAPITTA AND ITS TREATMENT
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Rakthapitta is a serious disease to be handled with extra care and caution. This text gives the necessary information regarding the causes, diagnosis and management of this deadly disease.

Essay adjudged first in All India Ayurveda Essay Competition 2003.

EFFECT OF *DARUHARIDRA ASCHYOTANA* IN ALLERGIC CONJUNCTIVAL INFLAMMATION - A CLINICAL STUDY

N. Srikanth*, Mridula Dua* and D.K. Mishra**

Abstract : A clinical study of 52 cases of allergic conjunctivitis, attending OPD of Eye Department, Central Research institute (Ay.) New Delhi was conducted to evaluate the effect of a potent anti-inflammatory and anti-allergic indigenous ophthalmic drug - *daruharidra* (*Berberis aristata* DC.). Topical administration (*aschyotana*) with decoction of root bark of *daruharidra* was scheduled for 5 days and *aschyotana* procedure was repeated for the same period at an interval of 7 days. Follow up was done for one month. The study revealed that the scheduled therapy is highly valuable in the management of allergic conjunctivitis of varied aetiology.

Introduction

Allergic conjunctivitis is a commonly occurring ocular problem in the day-to-day ophthalmic practice. Apart from phlyctenular conjunctivitis as a manifestation of endogenous allergy and spring catarrh an exogenous allergy, the conjunctiva may react to many other sensitizing factors viz, external, physical or chemical. Allergy as a cause of conjunctival congestion has however been exaggerated. Anything which does not fall into the description of a specific condition and any condition whose aetiology is undermined is often attributed to allergy. This evasive diagnosis is further supported by the favorable response of the conjunctival congestion to steroids (Dhanda et al. 1996).

Aetiology:- There are however very specific

factors, which do cause well-defined allergic reactions in the conjunctiva (Dhanda et al. 1996, Agarwal and Gupta 1982).

- Allergic reaction to foreign matter in the conjunctival sac, e.g. leafy vegetations, ants, cosmetics like eye shadows, etc.
- Allergic conditions like hay fever and asthma
- Parasitic infestation in intestines
- Allergy to edibles like eggs, milk, fish, meats, certain fruits and vegetables
- Drug allergy to local applications commonly to atropine but may even be to homatropine, pilocarpine and eserine. Allergy to chemotherapeutic drugs like sulpha and antibiotics like penicillin, streptomycin, tetracycline and meopycin has been known.
- Allergy to mediations like an injection of xylocaine is well known

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- Allergy to chemical substances like plastic made contact lenses, prosthetic implants and the plastic of spectacle frames.
- Allergy due to septic focus elsewhere particularly staphylococcal infection and tubercular focus.

The diagnosis of allergic conjunctivitis should be made only after excluding specific causes of conjunctival congestion. History of sudden onset following use of some sensitizing material, infestation of a drug or food or of a medication application suggests an allergic basis. A conjunctival smear for eosinophils, higher eosinophilic count in differential WBC counts and detection of intestinal parasites may help diagnosis.

Need for alternative therapies:- Current line of management advocates the use of topical steroids / decongestant drops along with anti-histamine agents, is not found satisfactory and should be repeated only during exacerbations; besides, there are adverse effects (Anonymous, 1996). At this juncture its becomes essential to explore safe effective drug which could effectively tackle such conditions. Ayurvedic literatures have recorded more than 60 plant drugs useful in the treatment of various eye disorders. *Daruharidra*, one of such agents has potent anti-inflammatory and anti-allergic action.

Drug profile:

Name : *Daruharidra* (*Berberis aristata* DC.)
Part used : Root bark

Pharmacological profile:

Rasa : *Tikta kashaya*
Guna : *Laghu, ruksha*
Vipaka : *Katu*
Virya : *Ushna*

Ophthalmic uses and indications:- *Netra-rujahara* (analgesic ophthalmic action),

netrakanduhara (anti-allergic action), *kaphaja-bhishyandahara* (effective in allergic ocular conditions) (Srikanth N. 2000). Berberine, an alkaloid isolated from *Berberis aristata* and its salt berberine hydrochloride produced depressant effect on histamine, 5-HT and bradykinin. It exhibited anti-inflammatory property on acute, sub-acute and chronic models of inflammation. Clinical application of berberine in chronic trachoma patients by interaconjunctival injection proved highly effective. The effect confirmed by scientific studies revealed berberine may prove practical remedy for large-scale use in trachoma patients. Berberine in a dose of 0.5 mg per egg protected 50-75% chick embryos from the lethal effect of the trachoma organisms inoculated into the yolk sac. The results supported the ancient ayurvedic claims on the use of the plant *Berberis aristata* in eye diseases and clinical report on the efficiency of berberine in trachoma (Bhatnagar 1970, Halder 1970, Imaz 1977, Verma. RL.1993, Anonymous 1996).

Materials and methods

52 clinically established cases of acute/chronic allergic conjunctivitis were selected from Eye OPD.

Aims and objectives:- The study was aimed at establishing clinical and therapeutic efficacy of *daruharidra* decoction on topical administration in the cases of allergic conjunctivitis. An attempt has been made to observe the incidence of age, sex, occupation, *prakriti* and role of aetiological factors in relation to the causation of the condition.

Selection of the drug:- Fresh decoction prepared with root bark powder of *daruharidra* was taken for topical use.

Method of preparation:- One part of powdered drug is added to 16 parts of clean water and

boiled on mid fire until approximately $\frac{1}{8}$ of liquid remains and filtered (shelf-life- 12 hrs.). Procedure of *aschyotana*:- Installation of 10 - 15 drops of medicated decoction into conjunctival sac when eye is completely opened and patients in supine position.

Schedule of administration:- All patients selected for the study were treated with *aschyotana* for 5 days and repeated the procedures for the same period at an interval of one week.

Selection criteria:

- Patients presenting with cardinal features of allergic conjunctivitis viz. redness, itching, lacrimation, irritation and photophobia
- Chronicity less than 5 years.

Exclusion criteria:

- Vernal kerato conjunctivitis
- Phlyctenulosis
- Atopic kerato conjunctivitis
- Giant papillary conjunctivitis
- Stevens Johnson syndrome
- Parasitic infestation
- Chronicity more than 5 years
- Allergic skin diseases anywhere in the body

Criteria for assessment: The assessment was based on presenting signs and symptoms and their alleviation (model score sheet). Routine haematological and biochemical examinations were done before treatment.

Model score sheet

Clinical features	Score	
	Present	Absent
Redness	30	0
Itching	20	0
Lacrimation	20	0
Irritation	20	0
Photophobia	10	0

Observations

Total 52 cases of both sexes under the age group of 15-24 years and 58-64 years were studied, of which, 20 cases were males and 32 were females. The maximum number i.e. 16 and 14 cases were between the age group of 20-34 years and 35-44 years respectively (Table 1). The maximum number i.e. 35 cases were of *kapha prakriti*; regarding occupation, 27 cases were field workers, 14 housewives and 11 were desk workers (Table 2 & 3). Further, under diet pattern 37 cases were non-vegetarians and 15 were vegetarians (Table 4). Regarding the

TABLE 1

Table showing distribution of age and sex

Age	Male	%	Female	%	Total	%
15 - 24	3	5.7	5	9.6	8	15.4
25 - 34	6	11.5	8	15.4	14	26.9
35 - 44	4	7.6	12	23	16	30.8
45 - 54	5	9.6	4	7.6	9	17
55 - 64	2	3.8	3	5.7	5	9.6
Total	20	38.5	32	61.5	52	100

TABLE 2

Distribution of *prakriti*

<i>Prakriti</i>	No. of patient	%
<i>Vata</i>	9	17
<i>Pitta</i>	8	15.4
<i>Kapha</i>	35	67
Total	52	100

chronicity of the illness, 17 cases were 0-6 months old (Table 5). Clinical features viz. itching, redness and irritation were present in all the 52 cases; lacrimation in 43, photophobia in 12, blepharitis in 18 cases were observed. Rise in ESR observed in 23 and alleviated AEC noticed in 22 cases (Table 6). The aetiological

TABLE 3
Distribution of occupation

Occupation	No. of patient	%
Desk workers	11	21
Field workers	27	52
House wives	14	27
Total	52	100

TABLE 4
Dietary habits

Diet	No. of patient	%
Vegetarian	15	29
Non-vegetarian	37	71
Total	52	100

TABLE 5
Table showing chronicity of illness

Chronicity of illness	No. of patient (n=52)	%
0 - 6 months	17	32
7 - 12 months	8	15.4
1 - 1 year and 6 months	6	11.5
1 year 7 months - 2 years	5	9.6
2 years - 2 years and 6 months	2	3.8
2 years 7 months - 3 years	4	7.6
3 years - 3 years and 6 months	3	5.7
3 years and 7 months - 4 years	7	13.5
Total	52	100

TABLE 6
Incidence of clinical features

Clinical features	No. of patient (n=52)	%
Itching	52	100
Redness	52	100
Irritation	52	100
Lacrimation	43	82
Photophobia	12	23
Blepharitis	18	31
Raise in ESR >20/151 hour	23	44
Raise in AEC >500	22	42

factors viz. exposure to tropical winds noticed in 23 cases; occupational irritants in 24, inflammation of surrounding tissues in 18; use of irritant drugs in 5, exogenous allergens in 17, use of cosmetics in 16, contact with pets in 6 and no specific cause in 13 cases were observed (Table 7).

Results

Complete relief from presenting symptoms viz. itching was noticed in 38 (73%) (n=52) cases, redness in 37 (71%) (n=52), irritation in 32 (61.5%) (n=52), lacrimation in 39 (90.6%) (n=43) while complete relief from photophobia was

observed in 9 (75%) (n=12) subjects (Table -8). Irrespective of symptomatic relief, complete relief from all the presenting symptom was noticed in 30 (57.7%) cases and relief from certain presenting symptoms was observed in 22 (42.3%) cases. (Table -9)

Discussion and conclusion

By considering the observations and results, it may be concluded that the decoction of the *daruharidra* may be successfully employed in the management of acute and chronic conjunctivitis of varied aetiology. The response obtained may be explained with the anti-allergic,

TABLE 7
Distribution of aetiological factors*

Sl. No	Aetiological factors	No. of patient (n=52)	%
1.	Exposure to tropical winds	23	44
2.	Occupational irritants	24	46
3.	Inflammation of surrounding tissues	18	34
4.	Use of irritant drugs	5	9.6
5.	Exogenous allergens	17	32
6.	Use of cosmetics	16	30
7.	Contact with pets	6	11.5
8.	No specific cause	13	25

*Dhanda *et al.* 1996, Aearwal and Gupta 1982

TABLE 8
Symptom-wise response

Sl. No	Clinical features	RESPONSE AFTER TREATMENT			
		Relief		No relief	
		Patients	%	Patients	%
1.	Itching (0=52)	38	73	14	27
2.	Redness (0=52)	37	71	15	28.8
3.	Irritation (0=52)	32	61.5	20	38.5
4.	Lacrimation (0=43)	39	65.1	4	34.8
5.	mPhotophobia (n=12)	9	75	3	25

TABLE 9
Response after treatment

Description	No. of patient	%
Complete relief of all presenting symptoms	30	57.7
Complete relief of certain presenting symptoms	22	42.3

anti-inflammatory and antibacterial properties attributed to the drug (Bhatnar1970, Halder 1970, Imaz 1977, Sabir 1976, Verma. RL.1993, Anonymous 1996) besides its *netrarujahara* (analgesic ophthalmic action), *kaphajabhi-syandahara* (effective in allergic ocular conditions) and *netrya* (conducive to eye) actions (Srikanth, N. 2000).

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ETIOPATHOGENESIS AND MANAGEMENT OF ATATVABHINIVESA (MENTAL DISORDER)

Hemlatasharma*

Abstract: *Atatvabhinivesa* is a separate disease entity described in *Charakasamhita*. Here the author gives a discussion of the disease and compares it with modern symptomatology. A possible prescription is also suggested.

Introduction

Mind controls the normal behavior of human being and hence it has the basic role for good function of a healthy body. In ayurveda *rajas* and *tamas* are the *manasik doshas* that affect the activity of mind, or in other words, *rajas* and *tamas* are the two psychopathogenic factors of mental disease. While describing the pathogenesis of *atatvabhinivesa* Charaka mentions the psychopathogenic role of these two *doshas*. *Charakasamhita* does not mention the psychic disease separately but includes it in *apasmara*¹.

Atatvabhinivesa is a condition in which the vitiated *manodoshas* impairs the mental functions resulting idiocy (*moodhachittata*) and the sufferer lacks the sense to differentiate *nitya* and *anitya* or *hita* and *ahita*.

The problem of solving mental disorders and of providing some fundamental means for its management has become great challenge to the humanity. Though serious attempts have now been made by the medical world to solve the problem no proper solution has yet been

found. The problem is still serious and requires more efforts to go for detailed study and research to find out good solutions. This paper is being prepared to highlight the main issues of *atatvabhinevesa*, its etiopathogenesis and management through ayurvedic approach.

Aetiology:- The general causes of *atatvabhinivsa* are - use of improper and unhygienic food stuff, suppression of natural urges and vitiation of *doshas*.

Use of improper and unhygienic foodstuff: Charaka says what so ever the food is taken by a person the mind acts accordingly. A man cannot properly express his ideas if he takes unwholesome food. In cases of *atatvabhinivesa*, bad food habit plays a main role.

Suppression of natural urges (*adharaniya vegas*): - There are 13 types of *vegas* such as *nidra*, *asru*, *vit*, *mutra*, *sukra*, *chardi*, etc. The suppression of these urges cause provocation of *apanavayu* and thereby the path of it being diverted towards the *manovahasrotas* and causes mental disorder.

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Sampraapti-ghatak:- *Dosha - Manasika - raja, tama; Sareerika - vata, pitta, kapha; Dooshya - rasa, rakta; Srotas - manovaha, buddhivaha, rasavaha.*

Atatvabhinivesa can be compared with the modern psychiatric disorders like paranoia, depression, etc. presenting psychotic symptoms; the symptoms may be abnormal beliefs or certain disturbances in the pattern of thinking. Paranoia (*para* = beside, *noia* = to think) is a psychiatric syndrome marked by the presence of delusions and signs of disorganization. For this, the treatments are mostly converged on psychiatric or physical aspects and the drugs are prescribed accordingly

Management: - As *atatvabhinivesa* is a psychic as well as physical disease, the treatment should be done in both wings for better result. The treatment can be effected on four lines i.e. a) psychic, b) purification of the body (*panchkarma*), c) medicinal (*samana*) and d) other measures.

Psychic treatment: - Here, the patient should be pacified by his friends and relatives expounding both his moral and material qualities and thereby try to impart him the understanding, resolution, memory and concentration. Measures like yoga and *pranayama*, etc. may be helpful.

Purification:- *Vamana, virechana* and *nasya* are the primary procedures generally prescribed in *atatvabhinivesa*. In *vamana/virechana karma, Bramhighrita* or *ghrita* prepared out of *medhya rasayana* are to be used for the purpose of *snehana*. After *samyaklakshna, bashpasveda* is to be done for one day followed by *vamana/virechana. Sansarjana krama* must be done after the procedure.

Nasyakarma: - *Snehana nasya* by *Bramhi ghrita* for two days and *avapeedana nasya* (*vacha, sigru, vidanga*) every third day, up to 7 days are to be done.

Samanachikitsa:- *Sirodhara* is to be done by *Chandanabalalakshadi tailam*. Other medicines generally prescribed are:

Bramhighrita orally (10 ml) - 1 hour before meal; *Medhya rasayana churna* - 10g twice daily with milk for 3 month; *Satavari kalka* and *Satavari churna* - 10g with milk at bedtime; *Vacha churna* 3g with milk at bedtime; *Smrutisagara rasa* 125 mg, *Vatakulantaka rasa* 60 mg, *Pravala pishti* 250 mg - thrice daily with honey; *Sarsvatarishta* 20 ml after meal; *Brahmivati* - 2 twice daily.

Conclusion

There are many side effects like insomnia, hallucination, decreased appetite, liver parenchyma damage, etc. in the allopathic system of treatments. No such side effects in ayurvedic system of treatments hence it is more beneficial to the society. Concept of typologies of personality and the methods of treatment of mental disease should be explored seriously on experimental grounds on the lines of ayurveda so that we may get better results.

References:

1. *Charakasamhita, Chikitsasthanam*, Chapter 10
2. *Ibid* - 10 /61-62

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A SCIENTIFIC STUDY OF DIFFERENT *PRAKRITI* IN FEMALES WITH SPECIAL REFERENCE TO BIRTH RATE OF MALE CHILD

Annapurna and A. K. Sonker*

Abstract: Ayurveda is the science that imparts the knowledge of life and has a holistic approach to life sciences. In this holistic approach, *prakriti* (personality) plays an important role to decide the factors affecting the survival of life. This paper tries to study the different *prakritis* in females with regard to the birth rate of male child.

Introduction

The term *prakriti* derives from the root *kr* to do prefixed with *pra* and suffixed with *ktin* (*ti*) and it signifies the meaning of personality with - factual exposition with *prakarshena etad adhikam 'karoti'* (which augments profusely the existing entity). All the Sanskrit lexicons have similar etymology with variant meaning as *arogya* (health), *svabhava* (temperament), *yonī* (preordial source) and *samsiddhi* (nature). The well-known Lexicon (Monier William's Sanskrit-English dictionary) puts forth a number of meanings as nature (a co-efficient), temperament (figure), constitution (source), a multiplier (natural condition) and a mother (original producer).

Thus, having seen the variant meaning of *prakriti* it may be concluded that *prakriti* is known as nature or *svabhava* of the person which is total sum of the physical, psychological and spiritual aspects of the life.

Formation of *prakriti*

Prakriti of the individual is formed by their predominance of the *doshas* at the time of *sukra-sonitasamyoga* in the *garbhasaya* (uterus)¹.

Some factors, which influence the formation of *prakriti* are *sukraprakriti*, *sonitaprakriti*, *kalaprakriti*, *garbhasayaprakriti*, *aharaviharaprakriti* and lastly *mahabhuta vikara prakriti*².

These factors are responsible directly for the formation of the *prakriti*, while some are responsible for the development of *prakriti* viz. *jati* (race), *kula* (family), *desa* (place or country), *kala* (time), *bala* (strength), *vayas* (age) and *pratyatmaniyata* (individuality)³.

These factors can be considered as responsible for development of specific characteristics in the various individuals of the same *prakriti*. *Prakriti* plays an important role in the health

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and disease status of the individuals. Ten fold methods to examine a patient includes *prakriti* at the top of the list, so its perfect knowledge is a must for a physician.

Prakriti is also helpful in the determination of the life span of the individuals because *prakriti* of all the individuals remain constant neither it vitals nor it changes. Any change in the *prakriti* indicates near possibility of death.

Classification of *prakriti*

According to *Samhita*, *prakriti* is of 4 types i.e. 1. *daihika prakriti* or *deha prakriti*, 2. *manasa prakriti*, 3. *garbhasariraprakriti* and 4. *jatisariraprakriti*.

Deha prakriti :- In ancient Indian literature, the *prakriti* is said to be seven types according to the predominance of one, two or three *doshas* - viz. *vata prakriti*, *pitta prakriti*, *kapha prakriti*, *vata pitta prakriti*, *pitta kapha prakriti*, *vata kapha prakriti*, and *vata pitta kapha prakriti*. Among them *vata prakriti* is *hina* (inferior), *pitta prakriti* is *madhyama* (medium) and *kapha prakriti* is *uttama* (superior).

All the seven types of *prakritis* can be identified with various symptoms mentioned in ayurvedic compendia.

Prakriti is the basement of ones personality. Personality is a dynamic force of an individual by which his behavior is different its situation is guided and secondly seems to be of a structured man. It embraces every phase of human character, intellect, temperament, skill, morality and every attitude that has been built up in the course of ones life. It also includes the metaphysical, psychological and

constitutional environmental aspects of human life.

Foundation of personality:- A newborn infant can scarcely be said to have personality because it lacks a characteristic organization of psychophysical system. However, we can say that personality begins at birth, thus infant has a potential personality.

We have already suggested that physique temperament and intelligence may helpfully be regarded as the raw materials of personality, even though they undergo maturation slowly over the years.

Study of personality:- Traditionally, personality study has been advocated to generating theories about human nature and individuality and about the causes and menacing of important psychological differences among individuals. In this effort, many personality psychologists have tried to find the most enduring and stable human attributes. Much attention has been also given to measuring complex human behavior as objectively as possible and to discovering useful method for studying individuals.

The union of sperm (*sukra*), ovum (*artava*) and consciousness (*atma* or *jiva*) inside the uterus (*kukshi*) is known as zygote, embryo or fetus (*garbha*). Besides, *atma*, the association of *prakriti* and *vikaras*, is also essential⁴.

The embryo is the product of *panchabutas* (*akasa*, *vayu*, *agni*, *jala* and *prithvi*) and seat of *chetana* (*atma*); thus *chetana* is the sixth *dhatu*. Vagbhata mentions that the association of *mahagunas* (*satva*, *rajas* and *tamas*) along with above components is the embryo⁵.

Ayurvedic philosophy believes that the human body is composed of five *mahabhutas*, sources of these *mahabhutas* are said to be mother, father, *rasa* and *atma*. *Atma* is always associated with *satva*. The normalcy of *sonita* and *sukra* greatly depend upon the use of *satmya* (wholesome) or suitable or congenial diet. Considering this fact the formation of embryo (*garbha*) is said to be from six components (*sadbhavas* i.e. *matrija*, *pitrija*, *rasaja*, *atmaja*, *satvaja* and *satmyaja*). Regarding this, Charaka recapitulates that neither mother, father, soul nor wholesome suitable diet, or dietetics are capable of forming the fetus; neither the *satva* coming from other world enters the fetus, or in other words none of these factors singularly capable of forming the embryo, it is formed only by combination of all⁶.

The primary instincts and the goal of life is *pranaishna*, *putraishna*, *dhanaishna* and *paralokaishna* i.e. pursuit of life, male-child, wealth, and realization respectively. Of these, *putraishna* is the important factor to instinct for propagation of generation.

According to *acharya*, sex of a child depends upon the relative predominance of *sukra* or *artava* i.e. if *sukra* is more then the foetus would be a male and if *artava* then a female. Charaka describes that as a healthy seed after sowing sprouts and grows according to it's own character i.e. the paddy seed will grow as paddy and a barley seed only as barley, a male or female are born according to the dominance of *sukra* or *artava* respectively⁷.

Dalhana says that as *artava* is four *anjali* and *sukra* one *prasriti* in quantity, *artava* will

always be more in quantity than *sukra*, but here the quantity of pure *artava* situated in the uterus that is responsible for fertilization, has to be considered. However, occasionally due to over excitement, etc. the quantity of ejaculated *sukra* may be more, or due to psychological depression it may be less, thus affecting relative amount of *sukra* and *artava*; citing the opinions of others, he mentions that instead of the amount of functional potency of *sukra* and *artava* influences the formation of sex.

The capacity of producing children is known as reproductive power. Reproductive power depends on the reproductive unit i.e. the sperm in males and the ovum in females. In ayurvedic texts it is described that persons of *kaphaja*, *pittaja* and *vataja prakriti* have more, moderate and less reproductive power respectively.

Observation

Sixty healthy female cases were selected for the present study. Among them, minimum age of the case was 40 years and maximum was 60 years. It was observed that the maximum number of issues of the married individuals was of *pittaja prakriti* while minimum number of issues of the individuals of *vataja prakriti*.

TABLE 1
Distribution of number of cases according to age group

Age group	No. of cases	Percentage
40-45	20	33.33
46-50	24	40.33
51-55	8	13.33
56-60	8	13.33
Total	60	

TABLE 2
Distribution of number of cases according to different *prakritis*

Female <i>prakriti</i>	No. of females	Percentage
<i>Vataja prakriti</i>	10	16.66
<i>Pittaja prakriti</i>	34	56.66
<i>Kaphaja prakriti</i>	16	26.66

Reproductive power in *vataja prakriti* male and *vataja prakriti* female was more than that of having *pittaja prakriti* male and *pittaja prakriti* female.

Conclusion

Of 60 females selected, different *prakriti* (personality type) in females with special reference to birth rate of male child were noted.

Ayurveda describes the co-relationship between different *prakritis* and reproductive power of individuals; it emphasizes that persons of *kaphaja prakritis* have more reproductive power whereas in *pittaja* and *vataja prakritis* moderate and less reproductive power respectively.

From the study it can be concluded that males of *vataja prakriti* when unites with the same female *prakriti* they have the maximum number (rate) of pregnancies. And in case of *kaphaja prakriti* male unites with the same *prakriti* female they have the maximum number of birth of male child. This primitive study paves a path for further scientific probe in this field of research.

TABLE 3
Distribution of number of children according to male and female *prakriti*

Female <i>prakriti</i>	Male <i>prakriti</i>	Total No. of issues	NUMBER OF ISSUES		
			No. of married individual	No. of issues of individual	No. of issues per individual
<i>Vatajaprakriti</i>	<i>Vataja</i>	58	2	20	10.00
	<i>Pittja</i>		2	4	2.00
	<i>Kaphaja</i>		6	34	5.56
<i>Pittajaprakriti</i>	<i>Vataja</i>	148	12	44	3.56
	<i>Pittja</i>		10	58	5.80
	<i>Kaphaja</i>		12	46	3.92
<i>Kaphajaprakriti</i>	<i>Vataja</i>	100	4	30	7.50
	<i>Pittja</i>		8	50	6.25
	<i>Kaphaja</i>		4	20	5.00

TABLE 4
Number of issues according to sex in different *prakriti* female

Female <i>prakriti</i>	Total No. of issues	Male issues	Female issues	Percentage	
				Male issues	Female issues
<i>Vataja</i>	58 per 10 <i>vataja</i> female	30	28	51.72	48.28
<i>Pittaja</i>	148 per 34 <i>pittaja</i> female	56	92	37.83	62.17
<i>Kaphaja</i>	100 per 16 <i>kaphaja</i> female	66	34	66.00	34.00

References:

1. *Charakasamhita, Chikitsasthanam, 1/21-1; Susrutasamhita, Sareerasthanam, 4/62 and 5/2*
2. *Charakasamhita, Chikitsasthanam, 8/95*
3. *Ibid, Indriyasthanam, 1/5*
4. *Ibid, Sareerasthanam, 4/5; Susrutasamhita, sareerasthanam, 5/2*
5. *Charakasamhita, Sareerasthanam, . 4/6 Ashtangasamgraham, Sareerasthanam 5/4*
6. *Charakasamhita, Sareerasthanam, 3/3 (1), 94/4*
7. *Ibid 2/12, Susrutasamhita, Sareerasthanam, 3/4*

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TRIDOSHA THEORY
A Study on the Fundamental Principles of Ayurveda

Dr. V.V. Subrahmanya Sastri

The theory of *tridosha* forms the foundation of ayurveda. In this text the learned author scientifically explains the physiology of human body through the principles of *vata*, *pitta* and *kapha* keeping in view some of the processes as explained by modern science without detriment to the main concept postulated in ayurveda.

The author, late Sri. V.V. Subrahmanya Sastri, is well known in the world of ayurveda. He was Professor of Ayurveda, Deputy Director and Research Officer under CCRAS. He was also a successful practitioner, an erudite scholar and an eminent pundit deeply immersed in the study of classical texts.

Dr. P.K. Warriar in his preface to the new edition

EXCERPTS FROM CHIKITSAMANJARI – XLV

Unnikrishnan, P.*

Abstract: Generally, the Sanskrit term *kushtha* is used to denote skin lesions. Almost all types of skin lesions come under the term *kushtha*, including leprosy. In this chapter the aetiology, classification and treatment of *kushtha* are elaborated. Treatment modalities for *svitra* (vitiligo-leukoderma) are also dealt with.

TREATMENT OF KUSHTHA AND SVITRA

Based on *doshas*, *kushtha* is divided into seven i.e. *vatika*, *paittika*, *kaphaja*, *vatapaittika*, *vatakaphaja*, *pittakaphaja* and *sannipatika*. This classification is based on the predominance of the vitiated *dosha* because all *kushthas* are caused by the vitiation of all the *doshas*. However, specific names are given to *kushthas* and they are grouped based on *doshas*. The name of *kushtha* and the vitiated *doshas* in each of them are given below and *kushtha* is divided into eighteen based on this nomenclature:

Name of <i>kushtha</i>	<i>Dosha</i> vitiated
1. <i>Kapala</i>	<i>Vata</i>
2. <i>Audumbara</i>	<i>Pitta</i>
3. <i>Mandala</i>	<i>Kapha</i>
4. <i>Vicharchee</i>	<i>Kapha</i>
5. <i>Riksha</i>	<i>Vata, Pitta</i>
6. <i>Charma</i>	<i>Vata, Kapha</i>
7. <i>Ekakushtha</i>	<i>Vata, Kapha</i>
8. <i>Kitipa</i>	<i>Vata, Kapha</i>
9. <i>Sidhma</i>	<i>Vata, Kapha</i>
10. <i>Alasa</i>	<i>Vata, Kapha</i>
11. <i>Vipadika</i>	<i>Vata, Kapha</i>
12. <i>Dadru</i>	<i>Kapha, Pitta</i>

13. <i>Sataru</i>	<i>Kapha, Pitta</i>
14. <i>Pundareeka</i>	<i>Kapha, Pitta</i>
15. <i>Visphota</i>	<i>Kapha, Pitta</i>
16. <i>Pama</i>	<i>Kapha, Pitta</i>
17. <i>Charmatalam</i>	<i>Kapha, Pitta</i>
18. <i>Kakana</i>	<i>Vata, Pitta and Kapha</i>

The predominance of *doshas* in *kushtha* is to be decided based on the symptoms and functions of *doshas* detailed in *Doshabhedeeya* (A.H. *Sutrasthanam* Chapter 12).

Kushtha caused by vitiation of all *doshas* and *kushtha* that has affected bone marrow (*majja*) and reproductive system (*sukla*) need not be treated as they have bad prognosis.

Kushtha kills the patient having infected and putrefying lesions, reddish sclera, hoarse voice, impaired digestion, excessive thirst and diarrhea. Unction is to be done as the first measure with medicated ghee capable of relieving *kushtha* with due consideration of status and grade of the vitiated *doshas*. The patient should then be purged with the drugs specified in the treatment of *veesarpa*. Drugs such as *vara* (*Emblica officinalis*, *Terminalia chebula* and

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Terminalia bellirica), *nikumbha* (*Baliospermum montanum*), *kumbha* (*Operculina turpethum*), prepared drugs such as *Manibhadra gula*, *Tiktaka ghrita*, *Mahatiktaka ghrita*, *Guggulutiktaka ghrita*, etc. are to be consumed considering the vitiated *dosha*, state of vitiation, season, etc.

A *kashaya* prepared from the following kills *kushtha* like Narasimha, the incarnation of Lord Vishnu, kills Daiteyas, the demons.

<i>Khadira</i>	<i>Acacia catechu</i>
<i>Arishta</i>	<i>Azadirachta indica</i>
<i>Guluchee</i>	<i>Tinospora cordifolia</i>
<i>Patola</i>	<i>Trichosanthes lobata</i>
<i>Darvee</i>	<i>Coscinium fenestratum</i>
<i>Duralabha</i>	<i>Tragia involucrata</i>

One *prasrutha* (96g) of *bakuchee* (*Psoralea corylifolia*) mixed with sesame oil shall be consumed every day and when it is digested, wholesome food has to be taken; this quickly relieves *kushtha*. Consumption of this preparation, followed by *mukkti* with *techippoo* (flower *Ixora coccinia*), relieves lucoderma (*svitra*).

Kushtha caused by intense vitiation of *kapha* is relieved by local application of *Kachuradi churna*. *Panchavalkadi taila*, detailed below, relieves *kushtha* caused by *pitta*.

Panchavalkadi taila:

Sesame oil shall be medicated with a decoction prepared from *panchavalka* (Bark of *Ficus racemosa*, *Ficus microcarpa*, *Ficus religiosa*, *Ficus benghalensis* and *Ficus arnottiana*), *nisa* (*Curcuma longa*) and *gopi* (*Hemidesmus indicus*) as liquid component and fine paste of the following as solid component:

<i>Rambha</i>	<i>Musa paradisiaca</i>
<i>Udakakanda</i>	<i>Nelumbo nucifera</i>
	<i>Nympha alba</i>

<i>Madhuka</i>	<i>Nymphaea nouchali</i>
<i>Tvak</i>	<i>Kaempferia rotunda</i>
<i>Sevya</i>	<i>Monochoria vaginalis</i>
<i>Amaya</i>	<i>Glycyrrhiza glabra</i>
<i>Chandana</i>	<i>Cinnamomum verum</i>
	<i>Vetiveria zizanioides</i>
	<i>Saussurea lappa</i>
	<i>Santalum album</i>

Oil extracted from the seeds of *neervetti* (*Hydnocarpus laurifolia*) - chaulmugra oil, is very effective for the treatment of *kushtha*. A variation of *Panchavalkadi taila* in which, one-third or one-fourth quantity of sesame oil replaced with chaulmugra oil, and *kalka* replaced with *Eladigana churna*, is also effective.

An equal quantity of sesame oil and chaulmugra oil medicated with the decoction of the following as liquid component and fine paste prepared from *Eladigana* as solid component on application relieves blisters, *pama* and *dadru*.

<i>Manjal</i>	<i>Curcuma longa</i>
<i>Aanayati</i>	<i>Elephantopus scaber</i>
<i>Doorva</i>	<i>Cynodon dactylon</i>
<i>Mayuri</i>	<i>Achyranthus aspera</i>
<i>Bhringa</i>	<i>Eclipta prostrata</i>
<i>Neeli</i>	<i>Indigofera tinctoria</i>
<i>Tripadi</i>	<i>Desmodium triflorum</i>
<i>Choram</i>	<i>Kaempferia galanga</i>
<i>Vempata</i>	<i>Ventilago maderaspatana</i>
<i>Pulichuvatu</i>	<i>Helix aspera</i>
<i>Parpatam</i>	<i>Hedyotis corymbosa</i>
<i>Kallal</i>	<i>Ficus arnottiana</i>
<i>Nalpamaratvak</i>	bark of -
	<i>Ficus racemosa</i>
	<i>Ficus microcarpa</i>
	<i>Ficus religiosa</i>
	<i>Ficus benghalensis</i>
<i>Poovatechi</i>	<i>Ixora coccinia</i>
<i>Muringa</i>	<i>Moringa oleifera</i>

Pullani *Calycopteris floribunda*
Ikshvakupatra *Lagenaria siceraria*
Poytalacchi *Naravelia zeylanica*

Sesame oil medicated with expressed juice of *paimanjil* (*Curcuma longa*), *parpata* as liquid component, and the following as solid component, on application relieves *chori* (scabes), *chirangu* (skin lesions) *visarpa* and *kushtha*.

Nalpamara *Ficus racemosa*
 Ficus microcarpa
 Ficus religiosa
 Ficus benghalensis
Triphala *Terminalia chebula*
 Emblica officinalis
 Terminalia bellirica

Chandana *Santalum album*
Sevya *Vetiveria zizanioides*
Kushtha *Saussurea lappa*
Choram *Kaempferia galanga*
Pulichuvatu *Helix aspera*
Karakil *Aquilaria agallocha*

To the above preparation added with *techippoo* (flower of *Ixora coccinia*) as decoction is also effective. Medicated ghee prepared with the *kashaya* of *techippoo* as liquid component and fine paste of the roots of *techi* as solid component on external application relieves *chori* and *kushtha*. Ingestion of the ghee promotes good complexion and healthy skin.

Fine powder of the following should be subjected to the process of *bhavana** in the expressed juice of *kanjunni* (*Eclipta prostrata*), *kashaya* of *khadira* (*Acacia catechu*) and in *bhringatoya* for seven times.

Veppin-panchanga bark, root, seed, leaf and heartwood of *Azadirachta indica*

Maricha *Piper nigrum*
Vara *Terminalia chebula*
 Emblica officinalis
 Terminalia bellirica

Vakuchi *Psoralea corylifolia*
Konna *Cassia fistula*
Nalpamara *Ficus racemosa*
 Ficus microcarpa
 Ficus religiosa
 Ficus benghalensis

Tee *Plumbago indica*
Krishnakhya *Piper longum*
Sita *Sugar*
Ooruppu rock salt

Consumption of the above powder with cow's milk, warm milk or ghee relieves eighteen types of *kushtha*, five types of *kasa*, *tamakasvasa*, all diseases caused by vitiated *vata* and dysmenorrhea. It also rejuvenates the body and increases strength and stamina.

Tritriphaladi gulika:

Fine powder of the following rolled to pills in the size of one *aksha* (12g) in the expressed juice of *alirasa* (*Eclipta prostrata*) on consumption mixed with honey cures all types of weeping skin diseases and chronic ulcers in leprosy.

Tritriphala *Terminalia chebula*
 Emblica officinalis
 Terminalia bellirica
 Holarrhena pubescens
 Celastrus paniculatus
 Embelia ribes
 Psoralea corylifolia

**Bhavana* is a process where powder of solid substances are mixed to a paste in liquid components such as decoction, expressed juice, etc. and exposed to the sun for drying. This process, at times, is repeated several times to fortify the potentiality of the powder. However, in certain cases, drying in the sun is not allowed and instead drying in shade is to be done.

	<i>Hydnocarpus laurifolia</i>
	<i>Semecarpus anacardium</i>
Vahni	<i>Plumbago indica</i>
Nisa	<i>Curcuma longa</i>
Parantimula	<i>Ixora coccinia</i>

One *kudaba* (192g) of the seeds of *attitirukhanda* (*Ficus racemosa*) subjected to *bhavana* in cow's urine, expressed juice of *rajani*, *madhukara* (*Eclipta prostrata*), decoction of *patola*, juice of *kattazha* (*Aloe barbedensis*), decoction of *nimba* (*Azadirachta indica*) and *paruva* (*Streblus asper*) consumed with honey and sesame oil relieves *kushtha*. Fine powder of the following consumed with sesame oil relives *kushtha*.

<i>Sasankalekha</i>	<i>Psoralea corylifolia</i>
<i>Vidangasara</i>	<i>Embelia ribes</i>
<i>Pippali</i>	<i>Piper longum</i>
<i>Hutasamula</i>	<i>Plumbago indica</i>
<i>Ayoraja</i>	Iron powder
<i>Aamalaka</i>	<i>Emblica officinalis</i>

Tiktakaghrita:

Prepare twelve *palas** of medicated ghee with a decoction of the following each one *pala*, in two *adhakas* (6.146 l) of water and reduce to one-eighth.

<i>Patola</i>	<i>Trichosanthes lobata</i>
<i>Nimba</i>	<i>Azadirachta indica</i>
<i>Katuka</i>	<i>Picrorhiza scrophulariiflora</i>
<i>Darvi</i>	<i>Coscinium fenestratum</i>
<i>Patha</i>	<i>Cyclea peltata</i>
<i>Duralabha</i>	<i>Tragia involucrata</i>
<i>Parpata</i>	<i>Hedyotis corymbosa</i>
<i>Trayamana</i>	<i>Gentiana kurroo</i>

Fine powder of the following, each one *karsha* (12g), shall be added as solid component in the above preparation. Consumption of this preparation relieves *kushtha* caused by vitiated *pitta* and arrests its spread.

<i>Trayanti</i>	<i>Gentiana kurroo</i>
<i>Musta</i>	<i>Cyperus rotundus</i>
<i>Bhunimba</i>	<i>Andrographis paniculata</i>
<i>Kalinga</i>	<i>Holorrhena pubescens</i>
<i>Kana</i>	<i>Piper longum</i>
<i>Chandanam</i>	<i>Santalum album</i>

A slight variation of the above where *techippoo* is also added in the *kashaya* is more effective.

Mahatiktakaghrita:

Medicate four *nazhi** of ghee with thirty-three *kazhanju* (432g) of the following drugs in total as solid component, eight *nazhi* of expressed juice of *nellikka* (*Emblica officinalis*) and thirty-two *nazhi* of water. Intake and local application of this ghee cures skin diseases and itching. This preparation is more potent than *Tiktaka ghrita*, detailed earlier.

<i>Saptacchadam</i>	<i>Alstonia scholaris</i>
<i>Parpatakam</i>	<i>Hedyotis corymbosa</i>
<i>Samyakam</i>	<i>Cassia fistula</i>
<i>Katuka</i>	<i>Picrorhiza scrophulariiflora</i>
<i>Vacha</i>	<i>Acorus calamus</i>
<i>Triphala</i>	<i>Terminalia chebula</i>
	<i>Emblica officinalis</i>
	<i>Terminalia bellirica</i>
<i>Padmaka</i>	<i>Prunus cerasoides</i>
<i>Patha</i>	<i>Cyclea peltata</i>
<i>Rajanau</i>	<i>Curcuma longa</i>
	<i>Coscinium fenestratum</i>
<i>Saraibe</i>	<i>Hemidesmus indicus</i>
	<i>Ichnocarpus frutescens</i>
<i>Kane</i>	<i>Piper longum</i>
	<i>Piper longum</i> (wild var.)
<i>Nimba</i>	<i>Azadirachta indica</i>
<i>Chandana</i>	<i>Santalum album</i>
<i>Yashtyahva</i>	<i>Glycyrrhiza glabra</i>
<i>Visala</i>	<i>Citrullus colocynthis</i>
<i>Indrayava</i>	<i>Holarrhena pubescens</i>
<i>Amrita</i>	<i>Tinospora cordifolia</i>
<i>Kiratatiktakam</i>	<i>Andrographis paniculata</i>

*1 *pala* = 48g; 1 *nazhi* = 192 ml

<i>Sevya</i>	<i>Vetiveria zizanioides</i>
<i>Vrisha</i>	<i>Justicia beddomei</i>
<i>Murva</i>	<i>Chonemorpha fragrans</i>
<i>Satavari</i>	<i>Asparagus racemosus</i>
<i>Patola</i>	<i>Trichosanthes lobata</i>
<i>Ativisha</i>	<i>Aconitum heterophyllum</i>
<i>Musta</i>	<i>Cyperus rotundus</i>
<i>Trayanti</i>	<i>Gentiana kurroo</i>
<i>Dhanvayashakam</i>	<i>Tragia involucrata</i>

A *kashaya* prepared from *techippoo* can also be used in place of water in this preparation for enhanced effect.

Khadirasaradi ghrita:

A *kashaya* shall be prepared from the following:

<i>Khadirasara</i>	Kath	100 pala
<i>Rogaghna</i>	<i>Cassia fistula</i>	100 pala
<i>Vyosha</i>	<i>Zingiber officinale</i>	
	<i>Piper nigrum</i>	
	<i>Piper longum</i>	
<i>Tritriphala</i>	<i>Terminalia chebula</i>	
	<i>Emblica officinalis</i>	
	<i>Terminalia bellirica</i>	
	<i>Holarrhena pubescens</i>	
	<i>Celastrus paniculatus</i>	
	<i>Embelia ribes</i>	
	<i>Psoralea corylifolia</i>	
	<i>Hydnocarpus laurifolia</i>	
	<i>Semecarpus anacardium</i>	each 10 pala

To the above preparation, add one *adhaka** of ghee, two *adhakas* each of *nisarasa* (*Curcuma longa*) and *dhatrirasa* (*Emblica officinalis*); and mix fine powder of the following as solid component.

<i>Vyosha</i>	<i>Zingiber officinale</i>
	<i>Piper nigrum</i>
	<i>Piper longum</i>
<i>Chitraka</i>	<i>Plumbago indica</i>

<i>Parantimula</i>	root of <i>Ixora coccinia</i>
<i>Katuka</i>	<i>Picrorhiza scrophulariiflora</i>
<i>Tila</i>	<i>Sesamum indicum</i>
<i>Yashti</i>	<i>Glycyrrhiza glabra</i>

The ghee so prepared, termed *Khadirasaradi ghrita*, has to be kept in a clean container covered with cereal grains and for a period of forty-five days. This medicine shall be consumed with strict regimen for the cure of *kushtha*.

Guggulvadi churna mixed with sesame oil, half the quantity ghee, *chaulmugra* oil and *kanayenna* (oil extracted from the axial wood piece of the extractor) - altogether half the quantity, may be applied all over the body and exposed to sun for warming; this relieves *kushtha*. Oil should be applied on the head at this time.

Guggulvadi churna:

<i>Guggulu</i>	<i>Commiphora mukul</i>
<i>Maricha</i>	<i>Piper nigrum</i>
<i>Vidanga</i>	<i>Embelia ribes</i>
<i>Sarshapa</i>	<i>Brassica juncea</i>
<i>Kasisa</i>	onsulphate
<i>Sarjarasa</i>	<i>Shorea robusta</i>
<i>Musta</i>	<i>Cyperus rotundus</i>
<i>Sriveshtaka</i>	<i>Pinus roxburghii</i>
<i>Ala</i>	Orpiment
<i>Gandha</i>	Sulphur
<i>Manassila</i>	Realgar
<i>Kushtha</i>	<i>Saussurea lappa</i>
<i>Kampillya</i>	<i>Mallotus philippensis</i>
<i>Ubhayaharidra</i>	<i>Curcuma longa</i>
	<i>Coscinium fenestratum</i>

Gandhaka (sulphur) and *nisa* - 1 *karsha* each, *parada* (mercury) – 1 *nishkam* (4 g), are to be ground to a paste; this should be mixed in one *kudaba* (192g) milky latex of *snuhi* (*Euphorbia ligularia*) and one *prastha* (768g) of coconut

*1 *adhaka*= 3.073 kg

milk and expose the mixture to the sun in an open vessel till all the water content is absorbed. This oil, on external application cures *kushtha*, *kitipa* and vitiated *vata*.

Add sesame oil and mercury to expressed juices of the following, mix well and expose to the sun. Rubbing this oil relieves *kushtha*, *kitipa*, *pidaka*, itching and foul smell from the lesion.

<i>Kanaka</i>	<i>Datura metal</i>
<i>Bhujagavalli</i>	<i>Rauwolfia serpentina</i>
<i>Malatipatra</i>	<i>Jasminum grandiflorum</i>
<i>Durvarasa</i>	<i>Cynodon dactylon</i>
<i>Gada</i>	<i>Saussurea lappa</i>
<i>Kunati</i>	Realgar

Medicate a combination of - ghee, coconut oil, sesame oil and chaulmugra oil in equal quantities with the expressed juice of *ravu* (*Curcuma longa*) and *parpataka* as liquid component and *durva kalka* as solid component. The filtered oil, when get cold and mixed with the fine powders of the following and *Eladi gana* (ref. A.S. Su. 15), on application relives *chirangu* (skin lesion) and *chori* (scabs)

<i>Mudga</i>	<i>Vigna radiata</i>
<i>Kuvanooru</i>	<i>Maranta arundinacea</i>
<i>Arakku</i>	<i>Laccifer lacca</i>
<i>Amukkuram</i>	<i>Withania somnifera</i>
<i>Uzhunnu</i>	<i>Vigna mungo</i>
<i>Sarjarasa</i>	<i>Shorea robusta</i>
<i>Guggulu</i>	<i>Commiphora mukul</i>
<i>Vella</i>	<i>Embelia ribes</i>
<i>Sarshapa</i>	<i>Brassica juncea</i>
<i>Nisadvanda</i>	<i>Curcuma longa</i>
	<i>Coscinium fenestratum</i>
<i>Manayola</i>	Realgar
<i>Gadam</i>	<i>Saussurea lappa</i>
<i>Kaseesam</i>	Onsulphate
<i>Mulaku</i>	<i>Piper nigrum</i>
<i>Takaravittu</i> (fresh)	<i>Cassia tora</i>
<i>Gandhakam</i>	Sulphur

<i>Talam</i>	Orpiment
<i>Sriveshtam</i>	<i>Pinus roxburghii</i>

Medicated oil prepared from the following shall be applied locally for the cure of all *kushthas* caused by vitiated *kapha*.

Kachoradi taila:

<i>Kashaya</i> :	
<i>Arka</i>	<i>Calotropis gigantia</i>
<i>Arkavalli</i>	<i>Ventilago maderaspatana</i>
<i>Agada</i>	<i>Saussurea lappa</i>
<i>Panchamahiruha</i>	<i>Ficus racemosa</i>
	<i>Ficus microcarpa</i>
	<i>Ficus religiosa</i>
	<i>Ficus benghalensis</i>
	<i>Ficus arnottiana</i>
<i>Aksha</i>	<i>Terminalia bellirica</i>
<i>Abhaya</i>	<i>Terminalia chebula</i>
<i>Amalaka</i>	<i>Emblia officinalis</i>
<i>Varnavatiyuga</i>	<i>Curcuma longa</i>
	<i>Coscinium fenestratum</i>

Expressed juice of:

<i>Kachoratinila</i>	<i>Kaempferia galanga</i> (leaf)
<i>Hema</i>	<i>Datura metal</i>
<i>Rajatari</i>	<i>Mussaenda frondosa</i>
<i>Dhanavalli</i>	<i>Naravelia zeylanica</i>
<i>Saireeyam</i>	<i>Cardiospermum halicacabum</i>
<i>Karalatika</i>	<i>Nilgirianthus ciliatus</i>
<i>Bala</i>	<i>Momordica charantia</i>
<i>Bhadra</i>	<i>Sida rhombifolia</i> ssp. <i>retusa</i>
<i>Bhringi</i>	<i>Aerva lanata</i>
<i>Ikshvaku</i>	<i>Eclipta prostrata</i>
<i>Koola</i>	<i>Lagenaria siceraria</i>
<i>Rajani</i>	<i>Trichosanthes lobata</i>
<i>Hariparni</i>	<i>Curcuma longa</i>
<i>Snuk</i>	<i>Centella asiatica</i>
<i>Kharmamsu</i>	<i>Euphorbia ligularia</i>
<i>Rogaripu</i>	<i>Calotropis gigantia</i>
<i>Akshatika</i>	<i>Cassia fistula</i>
<i>Apamarga</i>	<i>Gossypium herbaceum</i>
<i>Keetari</i>	<i>Achyranthus aspera</i>
<i>Ketaki</i>	<i>Embelia ribes</i>
	<i>Pandanus odoratissimus</i>

<i>Surasi</i>	<i>Ocimum sanctum</i>
<i>Asuk</i>	<i>Saraca asoca</i>
<i>Agnijihva</i>	<i>Gloriosa superba</i>
<i>Drona</i>	<i>Leucas aspera</i>
<i>Abhidhana</i>	<i>Mitragyna parvifolia</i>

The above as *drava*, fine paste of the following as *kalka* and sesame oil. The quantity of sesame oil shall be one-fourth the quantity of total *drava*.

<i>Gada</i>	<i>Saussurea lappa</i>
<i>Phalatraya</i>	<i>Terminalia chebula</i>
	<i>Terminalia bellirica</i>
	<i>Emblica officinalis</i>
<i>Kalaya</i>	<i>Aquilaria agallocha</i>
<i>Abda</i>	<i>Cyperus rotundus</i>
<i>Manjishtha</i>	<i>Rubia cordifolia</i>
<i>Arka</i>	<i>Calotropis gigantea</i>
<i>Arkavalli</i>	<i>Ventilago maderaspatana</i>
<i>Agada</i>	<i>Saussurea lappa</i>
<i>Panchamahiruha</i>	<i>Ficus racemosa</i>
	<i>Ficus microcarpa</i>
	<i>Ficus religiosa</i>
	<i>Ficus benghalensis</i>
	<i>Ficus arnottiana</i>
<i>Aksha</i>	<i>Terminalia bellirica</i>
<i>Abhaya</i>	<i>Terminalia chebula</i>
<i>Amalaka</i>	<i>Emblica officinalis</i>
<i>Varnavatiyuga</i>	<i>Curcuma longa</i>
	<i>Coscinium fenestratum</i>

Local application of the following relieves all types of *kushtha*.

<i>Maricham</i>	<i>Piper nigrum</i>
<i>Saindhavam</i>	Rock salt
<i>Tailam</i>	Sesame oil
<i>Arkaksheeram</i>	<i>Calotropis gigantea</i> (latex)
<i>Manasila</i>	Realgar

Seeds of *prapunnata* (*Cassia tora*), *karanjaphala* (*Pongamia pinnata*) and leaves of *rajavriksha* (*Cassia fistula*) ground to a paste with cow's urine on rubbing on the affected area relieves itching, numbness and

kushtha. Leaves of *arka* finely chopped and mixed with coconut scrapings should be left over for a day; and it is to be squeezed and the fluid so obtained mixed with fine powder of sulphur on application relieves *chirangu* (skin lesion). Seeds of *takara* (*Cassia tora*) cooked in milk are to be fermented overnight. On the next day, the mixture should be ground well with turmeric powder and applied externally.

The following drugs ground to a paste in buttermilk on application alleviates *chikku* (scabs), *chunangu* (scurf) and *chirangu* (skin lesion); it also promotes complexion.

<i>Konnayila</i>	leaves of <i>Cassia fistula</i>
<i>Katu</i>	<i>Picrorhiza scrophulariiflora</i>
<i>Manjal</i>	<i>Curcuma longa</i>
<i>Ellu</i>	<i>Sesamum indicum</i>
<i>Takarakkuru</i>	seeds of <i>Cassia tora</i>

Alternatively, *parpatakam*, *nilamparanda* (*Desmodium triflorum*), *pavitta* (*Morinda pubescens*), *nalpamarattol* and leaves of old jack tree, with their veins removed, can also be added to the above combination. The paste shall be prepared in buttermilk or water and applied externally for the relief of *chori* and *chirangu*.

The following shall be ground to a paste in milk and applied on the face for the relief of *chunangu*, *karel* and *karimangu* (dark discoloration on the face, especially around the cheek and eyes).

<i>Pazhutta peralila</i>	ripened leaves of <i>Ficus benghalensis</i>
<i>Chandanam</i>	<i>Santalum album</i>
<i>Vacha</i>	<i>Acorus calamus</i>
<i>Nisa</i>	<i>Curcuma longa</i>
<i>Gorochana</i>	Ox gall
<i>Kottam</i>	<i>Saussurea lappa</i>

Expressed juice from the leaves of *paruva* (*Streblus asper*) mixed with the juice of coconut pulp, boiled and reduced, on external application relieves *chori* and *chirangu*. The following drugs ground to a paste in buttermilk on local application relieves all types of *chori*, *chikku*, *pama* and *chunangu* within five days.

<i>Ponnaveeraver</i>	<i>Cassia auriculata</i>
<i>Kunati</i>	Realgar
<i>Nisa</i>	<i>Curcuma longa</i>
<i>Tumpa</i>	<i>Leucas aspera</i>
<i>Nimbapatra</i>	<i>Azadirachta indica</i>

Local application of the following in buttermilk in paste form relieves *kitibhakushtha*.

<i>Nalpamara</i>	<i>Ficus racemosa</i>
	<i>Ficus microcarpa</i>
	<i>Ficus religiosa</i>
	<i>Ficus benghalensis</i>
<i>Chukku</i> (old)	<i>Zingiber officinale</i>
<i>Varattumanjal</i>	<i>Curcuma longa</i>
<i>Konnakkurunnu</i>	<i>Cassia fistula</i>
<i>Takarakkuru</i>	<i>Cassia tora</i>

A *taila* prepared out of the following on application relieves *kitipa* and other skin diseases.

Manjalppal (juice of *Curcuma longa*), *gajapatirasam* (juice of *Elephantopus scaber*), *kallipatranir* [juice of *Euphorbia ligularia* (leaves)] and *ponnummattu* (juice of *Argemone mexicana*) as solid component, and *chengunna-ktam* (*Curcuma aromatica*) boiled and ground well as solid component.

The following, ground well in buttermilk on local application relieves *pama* and *kitipa*.

<i>Konnapatram</i>	<i>Cassia fistula</i>
<i>Katu</i>	<i>Picrorhiza scrophulariiflora</i>
<i>Tilam</i>	<i>Sesamum indicum</i>

Manjal *Curcuma longa*
Punnatabeejam *Cassia tora*

Neervettikkuru, *cheruttakatu* (*Picrorhiza scrophulariiflora*), *dosha* (*Saussurea lappa*) and *oshana* (*Piper nigrum*) shall be ground in *kati** warmed and applied for the relief of *pama*. Purified sulphur mixed with sesame oil on licking, or mixed with mercury on rubbing in palm relieves *pama*. A paste made out of the expressed juice from *pullanitalir* (tender leaves of *Calycopteris floribunda*), *ponmaratinila* (leaves of *Cassia fistula*) and *paimanjal*, mixed with an equal quantity of *Rajaneechurna* (turmeric powder) and butter on application heals *pama* and itching caused by *krimi*.

Three *kazhanju* (12g) mercury wither in betel leaf, mixed with butter on external application for three days relieves, suppurative, sloughing and foul smelling skin lesions; then, taking bath after external application of oil medicated with *nalpamara* is recommended. Local application of equal quantities of sesame oil and coconut oil medicated with the expressed juice of *cherukatalati* (*Achyranthus aspera*) and *nilamparanta* (*Desmodium triflorum*) is also effective.

Fine paste of the following mixed with milk or butter on external application relieves *chirangu*. However, for those who cannot put up with heat, *vempata* (*Ventilago maderaspatana*) should be excluded from the preparation given below.

<i>Nalpamara</i>	<i>Ficus racemosa</i>
	<i>Ficus microcarpa</i>
	<i>Ficus religiosa</i>
	<i>Ficus benghalensis</i>

*Water mixed with bran got while washing the rice

<i>Triphala</i>	<i>Terminalia chebula</i> <i>Emblica officinalis</i> <i>Terminalia bellirica</i>
<i>Parpataka</i>	<i>Hedyotis corymbosa</i>
<i>Paranta</i>	<i>Cissus quadrangularis</i>
<i>Nannari</i>	<i>Hemidesmus indicus</i>
<i>Konnattalir</i>	<i>Cassia fistula</i>
<i>Musta</i>	<i>Cyperus rotundus</i>
<i>Nisa</i>	<i>Curcuma longa</i>
<i>Elabeeja</i>	<i>Cassia tora</i>
<i>Vempata</i>	<i>Ventilago maderaspatana</i>
<i>Ellu</i>	<i>Sesamum indicum</i>
Expressed juice from the leaves of <i>ammama</i>	

(*Datura metal*) mixed with a small quantity of mercury on local application relieves lesions in the groin and *chirangu* (skin lesions).

Ripened jack leaf, finely chopped, shall be fried in oil or ghee and ground to a thick and dense paste. Application of this paste on the groin lesion is very effective. When lesions become large and form to a chronic nature, purge the patient by giving *Manibhadragula* or *Avipatichurna*. Blood letting with leeches is also effective. *Manibhadra gula* is very effective as a purgative in all skin diseases.