WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 5, 1302-1317. Case Study ISSN 2277– 7105

MANAGEMENT OF PALMAR PSORIASIS THROUGH AYURVEDIC TREATMENT APPROACHES: A CASE REPORT

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Article Received on
28 Jan. 2023,

Revised on 18 Feb. 2023,
Accepted on 10 March 2023

DOI: 10.20959/wjpr20235-27538

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ABSTRACT

Palmer Psoriasis is a chronic, recurrent disorder and conventional lesions are well-marginated, erythematous plaque with a silvery-white surface scale. Inflammation and redness around the scales are common. Among all types of psoriasis, it affects approximately 0.5%–3% of the general population making it a worldwide health burden. In India, its incidence varies from .84% to 6%. The exact aetiology is unknown but considered it to be an autoimmune disease mediated by T lymphocytes. Its contemporary treatment has some limitations thus affecting the quality of life of patients. In this report, the management of a diagnosed case of palmer psoriasis is presented. The patient was treated through an Ayurvedic multimodal approach using *Shamana chikitsa* including oral administration of decoctions, medicated *ghrita* and external application of *jeevantyadi yamaka* and *mulethi ghrita*. Although *Shodhana* is the treatment of choice in *Kushtha* considering the age issue of the patient, *Shamana chikitsa* was planned. Significant relief was noticed with no relapses until after two months of follow-up inferred efficacy of Ayurvedic protocol in the management of such autoimmune disorders.

KEYWORDS:- Palmer Psoriasis, *Shamana chikitsa, Eka-kushtha, Viruddha ahara, Mithaya Ahara.*

INTRODUCTION

Palmer Psoriasis is a chronic, recurrent disorder and conventional lesions are well-marginated, erythematous plaque with a silvery-white surface scale. The distribution includes extensor surfaces (i.e., knees, elbows, and buttocks); can also involve palms and scalp (especially the anterior scalp margin). Associated findings include psoriatic arthritis and nail

changes (onycholysis, pitting, or thickening of nail plate with accumulation of subungual debris).[1] It affects approximately 0.5%–3% of the general population making it a worldwide health burden.[2] In India, its incidence varies from .84% to 6%.[3] The exact aetiology is unknown but considered it to be an autoimmune disease mediated by T lymphocytes.[4] It has a strong psychosocial impact, interfering with the patient's quality of life.[5] In *Ayurveda*, all skin diseases can be included under the term *kushtha*. The word *kushtha* means that which makes one skin look disgraceful. Due to *Mithaya Ahara*, *Vihara* and *karma*, *Tridoshas* get vitiated affecting the *Twaka, Rakta, Mamsa* and *Ambu dushyas*, thus producing *kushtha*. It is noted as one of the *Astha Mahagadha*.[6] In *Ayurveda*, Psoriasis can be correlated to *Eka kushtha*, which is a type of *Vata-Kapha* predominant manifestation characterized by symptoms such as *Aswedanam* (absence of sweating),[7] *Mahavastu* (vast lesions), *Matsyashakalopama* (silvery scales like fish), *Krishna-Aruna Varna* (reddish black coloured patches).[8] Classics defined the *Nidana* (causative factor) of *Eka kushtha* as intake of *Viruddha ahara* (incompatible food), *Vega Dharana* (suppression of natural urges), following *Diva Swapna* (day sleep) and *Papakrma* (indulgence in sinful acts) indulgence in sinful acts etc.[9]

Case report

A 40-year-old female, a housewife, presented with chief complaints of red scaly patches with itching and cuts on the planter and palmer surfaces of both hands for 4 years. Patches were gradually spreading with severe itching and scaling those later turned silvery in appearance. The condition was diagnosed as palmer psoriasis by a dermatologist and treatment (corticosteroids and methotrexate) was given for 3 years, but the patient got no significant relief. No history of diabetes, hypertension or any major illness was found. No drug allergy or previous surgery was reported. No history of addiction to alcohol, smoking or any other drugs was found. Her urge for food and thirst were normal. Sleep was disturbed due to severe itching. Bowels were sometimes constipated, while bladder was regular.

Clinical examination

Atura bala pramana (brawn of individual) was assessed by ***Dashavidha Atura Pariksha*** (ten-fold examination of patient).[10]

- *Prakriti* (Constitution) of the patient -*Kapha-Vataja*.
- *Sara* (Proper nourishment of tissue)- *Madhyama.*
- *Samhanana* (Body built)- *Madhyama.*

- *Pramana* (Body proportion)- *Madhyama.*
- *Ahara shakti* (Digestive capacity), *Jarana shakti* (metabolic capacity)- *Madhyama.*
- *Satva* (Psychological strength) were *Madhyama* (medium).
- *Vyayama shakti* (Physical strength)- *Madhyama.*
- *Satmya* (Compatibility) – *Madhyama.*
- *Vaya* (Age) - *madhyama* (middle).
- *Vikriti* (Morbidity) - *Vata-kaphaja*.

Ashthavidha pariksha

- *Nadi* (Pulse)- *Vatadhitridoshaja.*
- *Mutra* (Urine)-normal with no *Daha.*
- *Mala* (Stool)- constipated and feeling of incomplete evacuation was there.
- *Jivha* (Tongue)- *sama* (coated), suggesting improper digestion.
- *Shabda* (Speech)- clear and fluent.
- *Sparsha* (Touch)- *Ruksha.*
- *Drik* (Eyes)- *Snigdha.*
- *Akriti* (Appearance)- *madhyama.*

Physical examination

Her general appearance was fair and afebrile. Vitals were stable (blood pressure 120/70mm Hg, heart rate 72/min, respiratory rate 16/min). She was under chronic stress due to illness. Localized symmetrically distributed pink to silvery white patches were present in both hands.

Dermatological examination

The following were the findings of the dermatological examination:

1. Asymmetrical, erythematous, cracked medium-to-large size on upper limbs on both surfaces with silvery scaling.
2. Candle grease sign was positive.
3. Auspitz's sign was positive.
4. PASI scoring—PASI score was 15%.
5. Course – Slowly progressive.

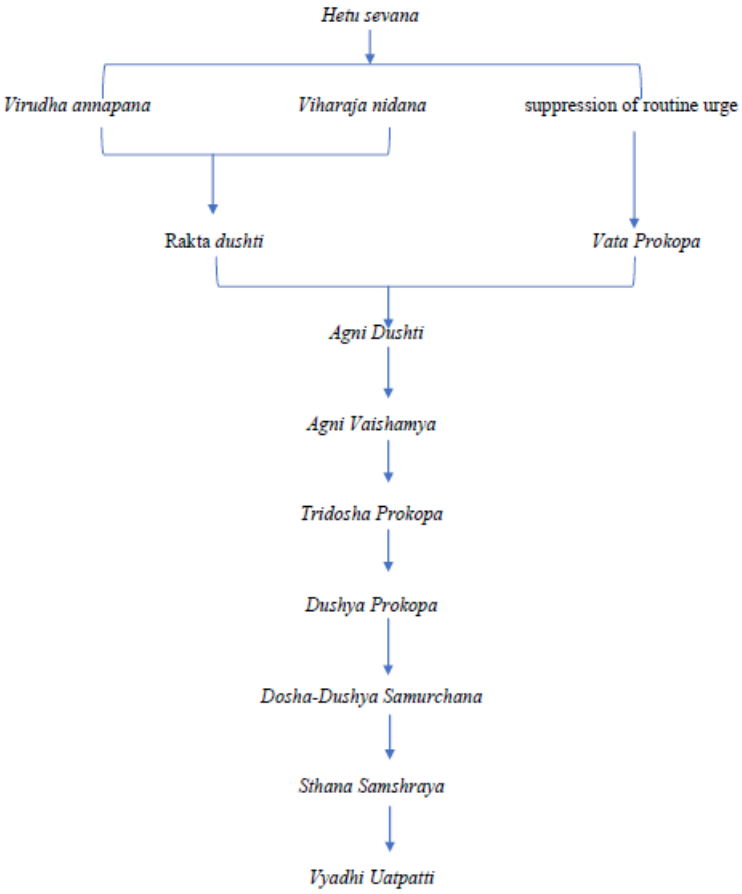
Samprapti ghataka

- *Dosha* dominance -*Vata-kapha*.

- *Dushya* (vitiated *dhatus*) - *Twaka* (skin), *Rakta*, *Mamsa*, *Ambu*
- *Srotas* -*Rasavaha* and *Raktavaha*.
- *Adhisthana* -*Twaka*.
- *Agni* - *Manda* (mild). *Svabhava* - *Chirakari* (chronic).
- *Sadhyasadhyata* (prognosis)- *Krichsadhya.*

***Hetu-parikshana*:** *Hetu parikshana* was made to find the factors responsible for her condition. It was revealed that she had a habit of eating *Virudha anna* (milk with citrus fruits, and curd at night). She used to take additional salt adding in her food daily. *Viharaja nidana*- She use to work on farms for long hours and was exposed to wind and sunlight leading to *Ati-viyayama*, *Anila-sevana* and *Atapa-sevana*. She use to hold her natural urges (*Vega-vidharana*) for a long time.

***Samprapti*:** The *Samprapti* of the disorder may be visualized below:



Apart from the above, the *Anila-sevana* and *Atapa-sevana* caused *Rakta-Pitta dushsti* making the *Dosha Shakhagata* leading to *Twaka dushti* (Skin disorder). Considering above mentioned *Samprapti* we decided to treat her *Kapha-Vata-Pittadushti*.

Diagnosis

The clinical sign and symptoms, dermatological examination, and previous history confirmed the case as "Palmer psoriasis." According to the classics, the case was diagnosed as *Ekakushtha.*

Treatment protocol

- *Dosha* equilibrium
- *Dushya* equilibrium
- Correct impaired *Agni*
- Convert *Ama Avastha* into *Nirama Avastha*
- *Rakta Prasadana*
- *Stroto Shodhana*
- *Kleda Nirharana*

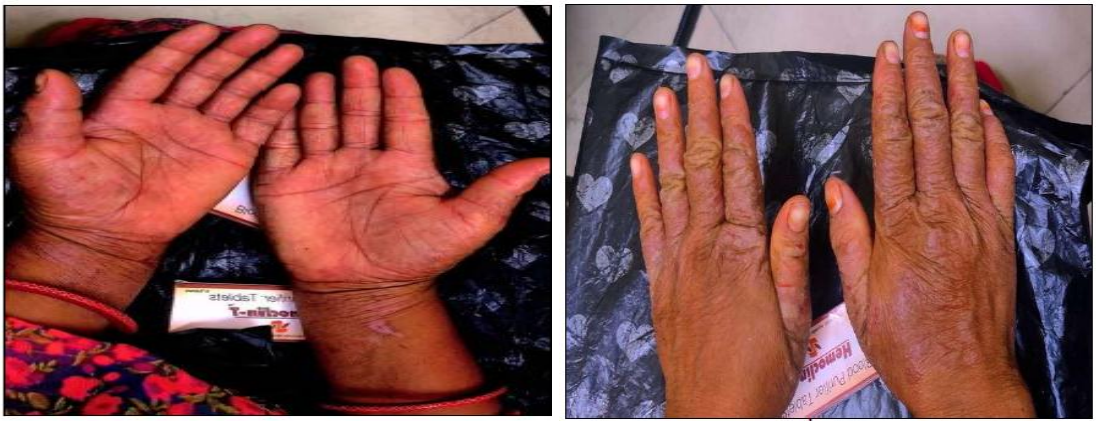
Treatment

Total duration- 2 months.

We started the treatment by *Nidana-parivarjana* i.e. eliminating the factors that trigger the episodes of the disease. The patient was asked not to consume the *Virrudha-anna* like milk with citrus fruits, curd at night and excessive intake of additional salt and was asked to wear cotton clothes and protect the skin from direct exposure to sunlight while going outside during day time. She was advised not to hold her natural urges (*Vega-vidharna*) and not to do excessive exertion (*Ati-viyayama*) and to relieve mental stress she was advised to practise meditation.

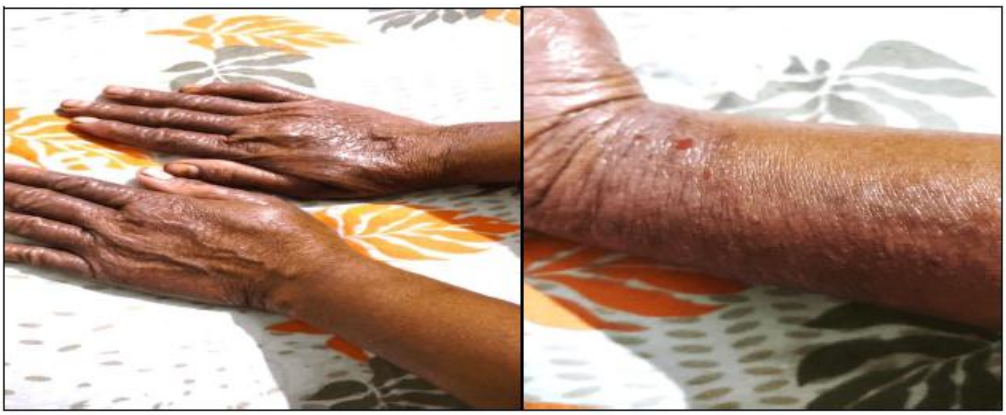
0 Day (1st Visit)	1 Month (2nd Visit)	2 Month (3rd Visit)
1.*Punarnavashtaka kashya* 15ml with *kaishora Guggulu* 500mg BD before the meal	1.*Brihat Manjisthadi* churna 5gm BD after the meal	1.*Punarnavashtaka kashya* 15ml with *kaishora guggulu* 500mg BD before the meal
2.*Amalaki* churna 2gm + *Vidanga* churna 1gm + *Bakuchi* churna 3gm +	2.*Usheerasva* 20ml BD with equal amount of water after meal	2.*Brihat Manjisthadi* churna 5gm BD after the meal

Shudha Gandhaka 500mg BD after meal		
3. *Arogyavardhini Vati* 500mg BD After meals	3. *Arogyavardhini Vati* 500mg BD After meals	3. *Jeevantyadi Yamaka* for LA
4. *Panchtikta ghrita guggulu* 10ml BD with milk after meal	4. *Chandrakala Rasa* 250mg BD after meal	
5. *Mulethi ghrita* for LA	5. *Mulethi ghrita* for LA	



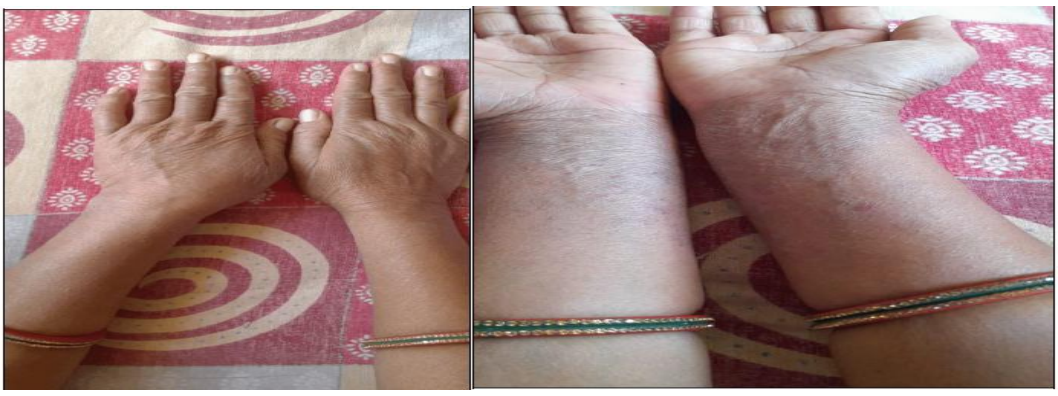
1 **2**

Figure 1 and 2:- Visit 1ST.



3 **4**

Figure 3 and 4:- Visit 2nd.



5 **6**

Figure 5 and 6:- Visit 3rd.

Table 1: Assessment criteria symptoms.

Symptoms *(lakshana)*	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
Matsya shakalopamam (~scaling)	No scaling	Mild scaling on rubbing/ itching	Moderate scaling on rubbing/ itching	Severe scaling on rubbing /itching	Scaling without rubbing/ itching
Aswedanam (anhydrosis)	Normal	Improvement	Present in few lesions	Present in all lesions	Anhydrosis in lesions and uninvolved skin
Mahavastu (extent of lesion)	No lesion on hand, neck, scalp, trunk, back	Lesions on partial parts of hand, neck, scalp, trunk, back	Lesions on most parts of hand, neck, scalp, trunk, back	Lesions covering vast area of the body	Lesions on whole body
Raga (erythema)	Normal coloration of skin	Faint normal coloration of skin	Faint normal coloration of skin	Glittery red coloration of skin	Reddish coloration of skin
Kandu (itching)	No itching	Mild itching (occasionally in 12 hr each episode lasting for 1-3 min) not disturbing routine activities usually scratching is not required	Mild itching (occasionally in 12 hr each episode lasting for 1-3 min) not disturbing routine activities usually scratching is not required	Severe itching (3-4 times in 12 hr, each episode lasting for 7-9 min). Disturbs routine activities and sleep	Intense and constant itching (>4 times in 12 hr, each episode lasting for 10-12 min). Disturbs routine activities and sleep

DISCUSSION

According to symptomatology, the confirmed case of palmer psoriasis was diagnosed as *Eka kushtha* in classics. The main causative factors in the manifestation of the pathology of *Eka kushtha* are *Vata-kapha pradhana tridosha* that leads to vitiation of *Twaka, Rakta, Mamsa* and *Ambu*.[11] Consumption of *Nidana,* which leads to simultaneous vitiation of *Doshas* and *Shaithilyata* (~derangement) in *Dhatus* (*Twaka, Rakta, Mamsa* and *Ambu*). Vitiated *Doshas* further affect *Shithila dhatus* leading to the manifestation of *kushtha*.[12] In the present case, an unwholesome diet i.e. *Virrudha-anna* (milk with citrus fruits, additional intake of excessive salt and curd at night) and sleeping during the day time (*Diwa-swapna*) by the patient might trigger the vitiation of *Doshas* that possibly lead the manifestation of *Eka kushtha*. The exact mechanism of such pathogenesis in modern terms needs to be understood.

Based on the involved *Dosha* and *Dushya* in this present case, *Vata-kapha shamaka* (pacifying *Vata* and *Kapha*) treatment was given along with *Pathya* diet including light easily digestible food, vegetables having a bitter taste like a pointed gourd, bitter guard, and neem *patra*, pulses such as red lentil, red gram, green gram, and old cereals.[13]

Mode of action of interventions

Jivantyadi yamaka is a classical preparation made up of ghee, oil, *Sarjarasa* (*Vetivera indica* L.), *Madhucchista* (*Apis cerana*), and herbs namely *Arka* (*Calotropis gigantea*), *Manjishtha* (*Rubia cordifolia*), *Jivanti* (*Leptadenia reticulata*), and *Darvi* (*Berberis aristata*). It is indicated in the treatment of *Eka Kushta* in the classics.[14] Antibacterial, antimicrobial,[15] antifungal, immunomodulatory,[16] and antioxidant properties of L. reticulate are evidenced by cell lines and in vitro studies.[17] Bee wax, one of its ingredients, is reported to have potent antimicrobial properties.[18] The ghee and oil provide the base for the medication. When a *lepa* is applied over the skin opposite to the direction of hairs on the skin, it gets absorbed by *Bhajaka Pitta* and enters circulation through *Siramukha* and *Swedvahi Srotas* (channels carrying sweat) which are already purified by the drugs advised. After which there is the formation of new metabolites and vitiated *Dosha* was pacified. The combined effect of all the medications helped in the removal of *Kleda* (toxic substances) leading to the purification of channels, thus breaking the pathogenesis of *Ekakushtha*. *Vyadhipratyanika* (disease antagonizing), *Doshapratyanika* (antagonizing doshas), and immune-modulation, anti-inflammatory, antimicrobial, emollient, analgesic, and anti-psoriatic effect of the formulation not only resolved the pathogenesis of *Ekakushtha* but also increased skin immunity (*Bhrajaka Pitta*).

Arogyavardhini Vati has *Katutki* as the main ingredient that has anti-pruritic and antioxidant properties that work as *Dhatu Poshaka* (promotes body tissue), hence resolving morbidity at the *Dhatu* level. It is *Hridya* (cardiotonic), *Deepani* (appetiser), *Pachani* (digestive), *Tridoshashamaka* (pacify all doshas), and is indicated *in Kushtha* treatment.[19] In an animal experimental study, the significant hypolipidemic activity of *Arogyavardhini vati* was reported.[20] Hence, it works as *Srotosodhaka* and removes *Kleda*, thus breaking the pathogenesis of *Kushtha*.

Manjistha (*Rubia cordifolia* L.) possess *Tikta, Kashaya* and *Madhura rasa; Guru, Ruksha guna; Ushna virya* and *Katu vipaka*. It is *Kapha shamaka* (pacify *Kapha*) due to *Tikta,*

Kashaya rasa; Ushna virya and *Katu-vipaka* while *Pitta shamaka* due to *Madhura, Tikta, Kashaya rasa; Guru* and *Ruksha guna*.[21] Therapeutic indications of *Manjistha* enumerated in Ayurvedic text are *Varnya* (improves complexion), *Kushtaghna* (anti-leprotic), *Rakta sodhaka* (blood purifier), *Krimighna* (anti-microbial), *Shothahara, Vedana sthapaka* (analgesic) and *Shonita sthapaka* (anti-coagulant).[22] Studies have reported the analgesic, anti-inflammatory,[23] anti-microbial, anti-oxidant and anti-cancer activities of *Manjistha*.[24]

***Kaishora guggulu*:** *Kaishora Guggulu* is a good herbal combination which corrects the function of the stomach and intestine, which helps improve digestion and remove toxins from the body. It has anti-bacterial, anti-inflammatory, anti-oxidant and anti-microbial properties which help in treating wounds. It is a good blood purifier therefore, corrects *Raktadushthi* (vitiation of blood).[25]

Panchatikta ghrita guggulu- The main contents of this drug are *Panchatikta gana dravyas*, ghee & Guggulu. So probable mode of action of *Panchatikta ghrita guggulu* can be said as all contents are having *tikta rasa, laghu* & *ruksh guna*, so it acts as anti-itching property, *kleda* & *vikrut meda upashoshan, vranashodhaka.*[26] It mainly acts on body wastes (*kleda*), fat(*meda*), *lasika* (plasma), *rakta* (blood), *pitta, sweda* (sweat) & *shleshma.*[27] *Nimba* (*Azadirecta indica*) has a chemical composition of Nimbin, Nimbidin possesses significant dose dependant anti-inflammatory activity & significant anti-ulcer effect.[28] *Guduchi* (Tinospora cordifolia) having Berberin & tinosporin mainly acts as an anti-oxidant & immune-potentiating thus cell layers during disease pathology are improved by this drug.[29] *Vasa* (*Adhatoda vasica*) Vascicinone has anti-histaminic properties as well as it is anti-oxidant & anti-inflammatory.[30] *Patol*a (Trichosanthas dioica) has anti-oxidant[31] & *Nidigdhika* (Solanum xanthocarpum) has anti-histaminic property.[32] *Guggulu* (Commiphora mukul) has an excellent property to act on *vikrut kleda* (abnormal body wastes) & *meda* (fat), *mamsa dhatu* (flesh) as it has *Katu, Tikta, Kashaya, Madhur rasa, Ushna veerya* & *katu Vipaka.*[33] *Guggulu* stimulates body activity to build up the immune system. *Ghrita* has lipophilic action so helps in ion transportation to a target organ. This lipophilic nature of *Ghrita* facilitates entry of the drug into the cell & its delivery to mitochondria and micro & nuclear membranes. Also, it helps in restoring the normal texture of the skin.[34]

Punarnava (*Boerhavia diffusa* L.) has *Madhura, Tikta,* and *Kashaya rasa* (sweet, bitter, astringent taste), *Laghu, Ruksha guna* (light, dry properties), *Ushna virya* (hot potency), *Katu vipaka* (pungent as end taste of digestion). It pacifies *Vata dosha* due to *Madhura rasa* and

Ushna virya and *Kapha dosha* due to *Tikta* and *Kashaya rasa*, *Ushna virya*, *Katu vipaka* and *Laghu, ruksha guna.*[35] *Punarnava* is *Shothahara* (anti-inflammatory) and *Vata kaphahara* (~pacify *Vata* and *Kapha dosha*).[36] *Acharya Sushruta* also explained the *Shothnashaka* and *Vatashamaka* quality of the green leaves of *Punarnava*.[37] Studies suggested its immune-modulatory,[38] antioxidant, hepatoprotective,[39] anti-inflammatory and anti-proliferative effects.[40]

Ushira (*Vetivera zizanioides* L.) pacifies *Pitta Dosha* and has *Kushthaghna*, *svedopnayana* (regulate sweat formation), *Tvakadoshahara* (pacify skin ailments), *Vishaghna* (pacify toxic effect) and *Dahaprashmana* (pacify sense of heat).[41] Its use is indicated in various skin disorders and it works as a stress reliever as well.[42] Various studies revealed its antibacterial, antiseptic,[43] anti-inflammatory, and wound-healing activities.[44]

Chandrakalarasa

Kajjali- *Kajjali* has properties like *Rasayana* (anti-ageing) *Yogavahi* (as a catalyst), *Jantughna* (anti-microbial) and *Sarvaamayahara* (Broad spectrum) it is essential to enhance the efficacy and potency of the prepared drug. It pacifies *Tridosha* & acts as a *Vruyshya* (aphrodisiac). It increases the bio-availability of drugs which helps to obtain greater efficiency of drugs.[45]

Tamra bhasma- It mainly reduces *Kapha Dosha* and Detoxifies *Pitta Dosha*. It promotes the proper flow of *Pitta dosha*, due to its cholagogue action and also has hematogenic action.[46]

Abhrak Bhasma- It is used as a rejuvenating agent for the brain and neuropsychiatric disorder, neuropathy etc. also act as *Vrushya* (aphrodisiac) and *Rasayana* (anti-ageing).[47]

***Kautki* (*Picrorhiza kurroa*) -** It acts as a potent liver stimulant and has hepato-protective, anti-cholestatic, anti-oxidant and immuno-modulating activity.[48]

***Guduchi* (*Tinospora cordifolia*) -**It contains several chemical components of different classes such as alkaloids, glycosides, steroids, diterpenoids, phenolics and aliphatic compounds. and it shows anti-oxidant, antipyretic, antidiabetic, anti-inflammatory, antistress, hepatoprotective immuno-modulatory activities.[49]

***Parpata* (*Fumaria indica*) -** It acts as an anti-helminthic, anti-dyspeptic, cholagogues, diaphoretic, diuretic, laxative, tonic properties and possesses curative properties for blood, skin, GI system & CNS.[50]

***Ushira* (*Vetiveria zizanioides*)-** Its root contain an essential oil that has aromatic and biological properties. It has both sedating and strengthening effects, so useful in depression, debility and many stress-related diseases. It also acts as a diuretic, haematinic, diaphoretic, anti-helminthic, anti-microbial, aphrodisiac etc.[51]

***Madhavi* (*Hiptage benghalensis*) -** It contains flavonoids and terpenoids it acts as an analgesic, anti-hemorrhoidal, hemastatic, anti-diarrheal, anti-infective & anti-diabetic etc.[52]
Shweta Chandana (*santalum album*) -It has hepatoprotective, memory-enhancing potency, anti-oxidant, antihyperglycemic and cardioprotective activity and also minimizes the risk of genito- urinary system infection.[53]

Shweta Sariva (Hemidesmus indicus)- It contains chemical constitutes like essential oil, triterpenoids, saponins, hemidesmin etc. and acts as a diaphoretic, diuretic, aphrodisiac, anti-diarrhoeal and helps in curing dyspepsia, leucorrhoea, uterine haemorrhagic & blood disorder.[54]

Mulethi- Glycyrrhetinic acid in liquorice extract gives an anti-inflammatory effect similar to glucocorticoids and mineralocorticoids liquorice root extract promotes the healing of ulcers. According to studies, glycyrrhizic acid inhibits all factors responsible for inflammation, cyclooxygenase activity and prostaglandin formation. It is also responsible for indirectly inhibiting platelet aggregation. It is reported to be an effective pigment-lightening agent. Some other active components in mulethi extract like glabrene, licochalcone A, and isoliquiritin are also responsible for the inhibition of tyrosinase activity. Liquiritin present in the extract disperses melanin, thereby inducing skin lightening.[55]

Amalaki- It contains alkaloids, tannins and phenols. The fruit of Amalaki contains two hydrolysable tannins Emblicanin A & B, which are good antioxidants, one on hydrolysis gives gallic acid, ellagic acid[56] and glucose whereas the other gives ellagic acid and glucose respectively.[57] The fruit contains phyllembline and phytochemicals like gallic acid, corilagin, furosine and geraniin. Its fruit juice contains the highest concentration of vitamin C.[58] Amalaki has anti-inflammatory activity, antioxidant activity, immunomodulator,

antitussive, anti-ulcer activity, anticancerous, antidiarrhoeal and spasmolytic, anti-diabetic, in reducing cholesterol and dyslipidemia, anti-microbial, anti-asthmatic.[59]

Vidanga- It contains several chemicals constituents like embelin, volatile oil, fixed oil, resin, tannin, christembine and phenolic acids like caffeic acid, vanillic acid, chorogenic acid, cinnamic acid, o-cumaric acid. The plant also contains potassium embelate, 2, 5-dihydroxy, 3-undecyl-1, 4-benzoquinone, embeline, quercitol, fatty ingredients, vilangin. It has anti-bacterial, anti-protozoal, anti-fungal, analgesic, anti-inflammatory, anti-oxidant and wound healing.[60]

Bakuchi- A pigment (probably a hydroxy flavone), a monoterpenoid phenol named bakuchiol, a brown fixed oil and raffinose and comarine compounds were found in seeds. It is used to treat a variety of skin problems such as leukoderma, skin rashes, infections, inflammatory diseases, dermatitis and edematous conditions of the skin. It also elevates boils and skin eruptions.[61]

Shudha Gandhaka- It has Raktashodhaka, Kandhughana and Rasayana properties mainly indicated in Kushtha Roga. It has antifungal and antibacterial properties thus it reduces the infection. It reduces features of Raaga and Pidika with Raktashodhaka and Kandhughana properties.[62]

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