



A NIDANATAMAK (AETIOPATHOLOGICAL) STUDY ON DARUNAKA
W.S.R. TO DANDRUFF AND SEBORRHEIC DERMATITIS

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ABSTRACT

Introduction: Dandruff is a common chronic scalp condition and is marked by itching and flaking of skin. Dandruff is extremely common disease affecting about 50% of the world population irrespective of gender and ethnicity. It is prevalent between ages 15 to 50. It is termed as *Darunaka* in *Ayurveda*. Most of Ayurvedic texts refer this complaint of *Darunaka* under minor disease (*Kshudra Roga*). This disease is given under the heading of *Kshudra roga* by some *Acharya* while in *Shirah Kapalagata roga* by others. The *Adhithana* of this disease is the *Keshabhoomi*. According to *Ayurveda* aggravated *Dosha* in *Darunaka* are *Vata* and *Kapha*, which causes the flakes, dryness and itching of the scalp skin. In *Ayurveda* the nearest correlation of dandruff and Seborrheic dermatitis can be made with “*Darunaka*”. *Darunaka* is the non-inflammatory type of Seborrheic dermatitis. Various aetiopathological (general as well as specific) factors are responsible for the pathogenesis of *Darunaka*. **Material and Method:** This survey study was done on 100 patients of *Darunaka* with classical signs and symptoms aged 16-70 were randomly selected from NIA hospitals, jaipur, irrespective of sex, religion & socio-economic factors etc. **Result:** The study highlighted that excessive use of *vata* and *kapha vardhaka ahara vihara*, lifestyle factors and stress were prominent etiological factors responsible for the pathogenesis of *Darunaka*.

Keywords: Dandruff, *Darunaka*, *Dosha*, *Vata*, *Kapha*.

INTRODUCTION: *Ayurveda* is one of the most ancient systems of life, health and care. The first intend of *ayurveda* is to maintain the healthy status of the people with the prevention of unborn diseases and second one is to treat the already arisen diseases. *Ayurveda* is the most ancient among the holistic health science donated to humanity by the perfect Indian heritage. Dandruff is a skin condition that mainly affects the scalp¹. Dandruff is the most common scalp disorder in adolescence (post-pubescence) and adulthood, but is rare and mild in children². Historically, it was thought that about 50% of humans were

affected to some degree, with onset at puberty and peak incidence and severity at about 20 years of age and becoming less frequent after the age of 50.³ Dandruff and Seborrheic Dermatitis are common disorders affecting the scalp that is often associated with itching⁴ and can be an embarrassing condition. These two diseases have a high prevalence rate and frequent relapses. Dandruff is found to affect 50% of the world population. In *Ayurveda* the nearest correlation of dandruff and Seborrheic dermatitis can be made with “*Darunaka*”. *Darunaka* is the non-inflammatory type of Seborrheic

dermatitis. It is a disease concerned to hair root which is the most common cause for hair loss.

Darunaka is characterized by *Tvak sphutana* (scaling of the scalp) *kandu* (itching), *Keshabhumi Rukshata* (dryness and roughness of scalp), *keshahcyuti* (diffuse hair falling), *daruna* (difficulty in tolerance), *svapa* (loss of touch sensation) and all these symptoms are due to vitiation of *vata* and *kapha* dosha⁵.

NEED TO STUDY: Dandruff is extremely common disease affecting about 50% of the world population irrespective of gender and ethnicity. It is prevalent between ages 15 to 50. It is a global phenomenon and many people find that Dandruff can cause social or self-esteemed problems. According to *Ayurveda*, *Darunaka* is classified as one among the *kshudraroga*. This is a condition manifested due to vitiation of *vata* and *kapha dosha* which results in dryness and itching in the scalp which further leads to scaling. This disease has affected a very good proportion of population with no complete treatment in modern system of Medicine. However *Ayurveda* drugs have a definite role in this disease and in the past many *Ayurveda* drugs have been proved effective in this disease. In this context, the present study is proposed to find out the etiological factors responsible for the pathogenesis of *Darunaka*.

AIMS AND OBJECTIVES: The aim of this study was to identify the role of etiological factors (both general and specific causative factors) of *Darunaka*.

MATERIAL AND METHOD: The study was carried out as a survey study. The literary material available in authentic ayurveda texts, current research articles and other relevant facts from allied sciences have been compiled and proforma was prepared. 100 patients already diagnosed of *Darunaka* have been registered randomly. After obtaining the informed consent, they were selected within age group 16-70 years irrespective of sex, religion, occupation and socio-economic states etc from OPD and IPD of NIA Hospital, Satellite and Bombaywala Hospitals and outreach camps organized by NIA, Jaipur India.

SELECTION CRITERIA:

INCLUSION CRITERIA:

1. Male and female between age 16 to 70 years and willing to give their written informed consent.
2. No major systemic disease involved.
3. Patients who have signs and symptoms of *Darunaka* (Dandruff and Seborrheic Dermatitis)

EXCLUSION CRITERIA:

1. Patients having other skin diseases like psoriasis, atopic dermatitis, pregnancy, lactation, immunodeficiency states and hypersensitivity.

OBSERVATIONS:

Table no. 1. Showing Age profile of study subjects (n=100)

No.	Age Group	Number of patients	Total percentage
1.	16-25	8	8%
2.	26-35	38	38%
3.	36-45	27	27%

4.	46-55	14	14%
5.	56-65	9	9%
6.	66-70	4	4%

The maximum subjects belongs to 26-35 age group i.e (38%)

Table no. 2. Showing Gender profile of study subjects (n=100)

S.NO	Gender	Number of patients	Total Percentage
1.	Male	75	75%
2.	Female	25	25%
3.	Bisexual	0	0%

The maximum subjects were male i.e (75%)

Table no. 3. Showing Education profile of Study subjects (n=100)

S.NO.	Education Profile	Total	Percentage
1.	Illiterate	3	3 %
2.	Primary	0	0 %
3.	Middle	5	5 %
4.	High School	12	12 %
5.	Higher Sec.	18	18 %
6.	Graduate	31	31 %
7.	Post Graduate	18	18 %
8.	PhD	13	13 %

The maximum participants recorded were graduates i.e. 31 (31%)

Table No. 4. Showing Desha profile of study subjects (n=100)

S. No.	Desha	No of Patients			Total	Total Percentage
		Jangala	Anupa	Sadharana		
1.	Janma	95	3	2	100	100%
2.	Karma	91	2	7	100	100%

The maximum participants belonged to Jangala Desha .

Table no. 5. Showing Hygienic habits of study subjects (n=100)

S.NO.	Hygienic status	Total	Percentage
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1.	Good	20	20%
2.	Moderate	70	70%
3.	Poor	10	10%

The maximum subjects were of Moderate hygienic habits i.e (70%)

Table no. 6. Showing *koshtha* of study subjects (n=100)

S.NO.	<i>koshtha</i>	Total	Percentage
1.	<i>krura</i>	34	34%
2.	<i>Madhyama</i>	56	56%
3.	<i>Mridu</i>	10	10%

The maximum subjects recorded were of *madhyam koshtha* i.e 56%

Table no. 7. Showing *Prakriti* wise distribution of study subjects (n=100)

S.NO.	<i>Prakriti</i>	Total	Percentage
1.	<i>Vata -Paittik</i>	42	42%
2.	<i>Vata -Kaphaja</i>	41	41%
3.	<i>Kapha-Pittaja</i>	17	17%

The maximum subjects were of *Vata -paittik* i.e 42%

Table no. 8. Showing the *Ahara Shakti* of study subjects (n=100)

S.NO.	<i>Ahara Shakti</i>	Total	Percentage
1.	<i>Pravara</i>	34	34%
2.	<i>Madhyama</i>	64	64%
3.	<i>Avara</i>	2	2

The maximum subjects recorded were of *madhyam Ahara Shakti* i.e 64%

Table no. 9. Showing the *Avidhi aharaja nidana* of study subjects (n=100)

S.NO.	<i>Avidhi aharaja</i>	Total	Percentage
1.	<i>Samasana</i>	65	65%
2.	<i>Vishamasana</i>	34	34%
3.	<i>Adhyasana</i>	45	45%
4.	<i>Ajeernasana</i>	42	42%
5.	<i>Langhana</i>	34	34%

The maximum subjects were of *samašana Avidhi aharaja nidana* i.e 65%

Table no. 10. Showing the *Kaphaja Aharaja nidana* of study subjects (n=100)

S.NO	<i>Kaphaja nidana</i>	Total	Percentage
1.	<i>Guru bhojana</i>	42	42%
2.	<i>Ati snigdha</i>	33	33%
3.	<i>Ati madhura</i>	65	65%
4.	<i>Dugdha</i>	72	72%

The maximum subjects recorded were of *Dugdha Kaphaja Aharaja nidana* i.e 72%

Table no. 11. Showing the *Vattika Aharaja nidana* of study subjects (n=100)

S.NO.	<i>Vattika Nidana</i>	Total	Percentage
1.	<i>Alpa bhojana</i>	34	34%
2.	<i>katu rasa sevana</i>	62	62%
3.	<i>ruksha sevana</i>	85	85%
4.	<i>sheeta ahara</i>	62	62%
5.	<i>Laghu bhojana</i>	70	70%

The maximum subjects recorded were of *ruksha Aharaja nidana* i.e 85%

Table no. 12. Showing the *Paittika Aharaja nidana* of study subjects (n=100)

S.NO.	<i>Paittika nidana</i>	Total	Percentage
1.	<i>Ati amla rasa</i>	45	45%
2.	<i>Ati katu rasa</i>	62	62%
3.	<i>Ati lavaṇa</i>	42	42%
4.	<i>Teekshṇa</i>	65	65%
5.	<i>Dadhi</i>	54	54%
6.	<i>Chacha</i>	65	65%
7.	<i>Vidahi anna</i>	54	54%
8.	Alcohol	10	10%

The maximum subjects recorded were of *Tikshṇa* and *chacha Paittika Aharaja nidana* i.e 65%

Table no. 13. Showing the *Viharaja Nidana* of study subjects (n=100)

S.NO.	<i>Viharaja Nidana</i>	Total	Percentage
1.	<i>Ativyayama</i>	61	61%
2.	<i>Vegasandharāṇa</i>	66	66%
3.	<i>Diva svapanam</i>	56	56%
4.	<i>Ratri jagrana</i>	72	72%

5.	<i>Atpa sevana</i> (Sun exposure)	67	67%
6.	<i>Dhuma</i> (Smoke exposure)	68	68%
7.	<i>Abhyangadvesa</i>	65	65%
8.	<i>Alasya</i>	45	45%

The maximum subjects recorded were of *Ratri jagrana* and *Dhuma*

Table no. 14. Showing the *kalaja Nidana* of study subjects (n=100)

S.NO.	<i>Kalaja Nidana</i>	Total	Percentage
1.	<i>Sheeta kaal</i>	65	65%
2.	<i>Ushna kaal</i>	25	25%
3.	<i>Vasanta kaal</i>	10	10%

The maximum subjects recorded were of *Sheeta kalaja Nidana* i.e 65%

Table no. 15. Showing the *Manasika nidana* of study subjects (n=100)

S.NO.	<i>Manasika nidana</i>	Total	Percentage
1.	<i>Krodha</i>	65	65%
2.	<i>Shoka</i>	54	54%
3.	<i>Bhaya</i>	58	58%
4.	<i>Chinta</i>	75	75%

The maximum subjects recorded were of *Chinta Manasika nidana* i.e 75%

RESULT AND DISCUSSION:

Age wise distribution: A survey of present study reveals that maximum numbers of patient's i.e. **38%** (38 pt's) were between the age group of **26 - 35** years followed by **27%** (27 pt's) of **36-45** years, followed by **14%** (14 pt's) of **46-55** years. This is due to the unawareness and lack of proper attention towards the homologous food intake and a misguided zeal towards the use of chemical cosmetics to look more beautiful/ handsome and a lack of proper hair care, usage of shampoo, hair conditioner, which are harmful to scalp are frequent in this age group causing Dandruff.

Sex wise distribution: Sex wise distribution has shown that the maximum number were male i.e. **75%** (75 pt's) and **25%** (25 pt) were female.

Marital status wise distribution: Marital status shows 67 (67 %) patients are unmarried and 33 patients (33 %) are married.

Religion wise distribution: The maximum number of the patients reported in this study **82%** (82 patients) comprised of Hindus while muslims were only 18% (18pt's). This might have occurred due to the dominance of the Hindu community in this region.

Occupation wise distribution: In occupational wise, the maximum number of

the patients who were working in offices (45%) 45 patients and students (33%) 33 patients. The ever-increasing tension of work in offices and studies by students followed by averting sleep till late night for reading and due to constant worries, irregular food habits, over indulgence in sleep, addictions like tea, tobacco etc. aggravating the *dosha* create *Darunaka* in a long run.

Socio-economic status wise distribution : Socio-economic status wise distribution of patients in this study noted that *Darunaka* is more prevalent (74%) - 74 pt's in middle class than in the upper class (14%) - 14 pt's and lower (12%) - 12 pt's.

Education wise distribution: Out of 100 patients, 31 patients are Graduate (31 %), 18 patients are post graduate (18%), 18 patients (18%) are higher secondary. The probable cause would be that in this period the persons more keen to his future, so he might be in more stress and that leads to Dandruff.

Habitat/ Desha: Out of 100 patients, all the patients were from urban area. The maximum numbers of patients belonged to *jangala Desha*. This may be due to site of study i.e. NIA Jaipur which is a *jangala Desha*. , most of the patients were from urban area. In urban life style there is a trend of consuming modern food stuffs, junk foods and unnatural food; those who work in or who in due course of their work get exposed to dust, smoke and extreme atmospheric conditions.

Diet wise distribution: Dietary wise distribution in the patients of *Darunaka* showed that, 84% (84 pt's) of the patients have vegetarian diet and 16 % (16pt's) have mixed diet.

Physical activity wise distribution: In this study the maximum subjects showed mild

physical activity i.e 72% and 24% showed moderate physical activity.

Addiction wise distribution: In this study the maximum subjects showed mixed addiction i.e 43% where as tea addicts showed 24%.

Hygienic wise distribution: In the study, the maximum subjects were of Moderate hygienic habits i.e (70%).It means only moderate hygienic cannot prevent the disease and hygiene what we take in limited aspect of life bathing ,washing, brushing, oiling,shampooing are very uninformative about the disease incidence.

Behavior wise distribution: 82% of the patients were having sound behavioral status so the behavior and mental status is also controlled.

Family history of Darunaka: The maximum subjects were of family history of *Darunaka* i.e 64%. The relation of inheritance is needful to go for details in further study.

Koshtha wise distribution : *Koshtha* wise distribution has shown *krura koshtha* i.e 56%. *Vata* being the main causative and vitiated factor in the pathogenesis of *Darunaka*, the patients of *vata* dominating were more prone to develop *Darunaka*.

Prakriti wise distribution: Most of the patients were having *vata pradhna pitta prakriti* i.e. 42%(42pt's) which is followed by *vata pradhana kapha prakriti* i.e. 41%(41pt's) and *Pitta pradhana kapha prakriti* as found in 17% of patients. *Vata pitta prakriti* is a common feature of *jangala desha*.,young age,youth and vegetarian people. The contribution of *Prakriti* and the *janma dosha pradhanya* in the manifestation of *Darunaka* is significantly

affected by *Desha*, *kaal* and *ahara* observed in the present study.

Sattva wise distribution: In this Maximum i.e. 55% patients possessed *madhyama sattva* followed by 29% patients with *pravara Sattva* and minimum i.e.16% patients possessed *avara Sattva*.

The tolerance and intactness of Mental Faculties is the *Sattva*, which plays a definite role in every disease. Maximum patients were observed with *madhyama Sattva* probably because of common prevalence of *madhyama Satva* in most of the beings.

Saar wise distribution: In the study, we analysed the patients in all eight categories of *saar* ,it is difficult to make it final for the analysis of the data, even then *saar* is an important aspect for *vyadhi pratibandhaka hetu*.This disease is localized in skin specially on *shirah kapala*.The *twak saar purusha* will have the immunity against the disease or if the disease occurs in this category, it will be easier to treat and relief will be quicker. Overviewing the total assessment of *saar* 76% were *madhyama Saar* and 14% were *avara Saar* .So we can say this disease is a moderate one not affecting the organic balance. Only 14% patients of *avara Saar* are difficult to treat.when *saar* is intact disease is treatable.

Sanhanana wise distribution: In this study, maximum i.e. 82% of patients were noted with *madhyama Sanhanana* , 12% of patients were noted with *avara Sanhanana* , whereas 6% of patients were noted with *pravara Sanhanana* .

Satmya wise distribution: In this Maximum i.e. 72% patients possessed *madhyama satmya* followed by 16% patients with

avara satmya and minimum i.e.12% patients possessed *pravara satmya* . *Ruksha satmya* patients were found in significant number.This category is very much prone to *tvak rukshata* and in the absence of *sneha* ,fissuring of skin may accumulate the pathogens from external atmosphere as well as internal *dosha*, *dhatu* and *mala*.

Pramana wise distribution: In this study, maximum i.e. 68% of patients were noted with *madhyama pramana* , 18% of patients were noted with *pravara Pramana* , whereas 14% of patients were noted with *avara pramana* . No valuable conclusions can be withdrawn by analyzing the above description with present study.

Vyayama Shakti wise distribution: In the study, maximum of 55% of patients were reported with *madhyama vyayamashakti* . In 24% of patients *pravara vyayamashakti* was observed. In 21% of patients, *avara vyayamashakti* was observed.

Ahara Shakti wise distribution: In the study, maximum of 64% of patients were reported with *madhyama abhyavaranashakti* . In 34% of patients *pravara abhyavaranashakti* was observed. In 2% of patients,*avara abhyavaranashakti* was observed.

In the study, maximum of 56% of patients were reported with *madhyama jaranashakti* . In 44% of patients *pravara jaranashakti* and *avara jaranashakti* was observed. No valuable conclusions can be withdrawn by analyzing the above description with present study.

Agni wise distribution: In the present study, maximum i.e. 54% patients were noted with *samagni* . *Vishamagni* and

teekshhagni was noted in 14% and 12% of patients, whereas 20% patients were noted with *manda Agni*. Agni plays a major role in the pathogenesis of a disease. Maximum patients reported *samagni*, *manda agni*. Here *vata* is the causative factor which may lead to vitiation of *jaṭharagni* and *dhatvagni*.

Avidhi Aharaja Nidana wise distribution:

The cause of the disease is having the dietary irregularities and not following the diet code, whether it may be due to ignorance or circumstantial. In this study maximum patients were of *Samasana* 65%, followed by *Adhyasana* 45%, *Ajeernasana* 42%, *Vishamasana* 34% and *Langhana* 34%. Skin is the best mirror of *samyak ahara* and *agni* and *avidhi ahara* data is confirming this basic fundamental.

Dosha prakopaka ahara incidence:

Maximum number of the patients were found taking *vattika ahara*, but the number of *paittik* and *kaphaja ahara* was also taken by the patients in little less amount. This shows that all *tridoṣa* can produce the disease in leadership of *vata* and *vata* can initiate the disease.

a. Vattika Nidana : *Vataja Nidana Sevana* reported were *Alpa bhojana sevana* 34%, *Katu bhojana sevana* 62%, *Vega Sandharana* 66% (bearing manifested urges), *Udvega* 75% (stress /anxiety), *shoka* 54% (grief), *Ratri jagarana* 72% (keeping awake in night), *vyayama atiyoga* 61% (excessive indulgence in physical exercise), *Sheeta Dravya Atiyoga* 62% (excess intake of cold substances), *Ruksha Dravya Atiyoga* 85% (excess intake of rough substances), *Anashana* 34% (fasting), *Laghu Dravya*

Atiyoga 70% (excess intake of light substances), *Atapa* 67% (exposure to sun).

b. Paittik Nidana : *Pittaja Nidana Sevana* have identified from the patients included *Katu Bhojana* 62% (intake of pungent food), *Ati amla bhojana* 45% (intake of sour food), *Ushna Bhojana* 65% (intake of freshly prepared hot food), *Vishama Ahara sevana* 34% (intake of incompatible food), *Ajeerna Bhojana* 42% (intake of food before digestion of the previous meal), *Atilavana Bhojana* 42% (intake of saline food), *Ati teekshna bhojana* 65%, *Atapa sevana* 67% (exposure to excessive hot sun), *Vidahi anna* 54%, *Dadhi* 54% (curd), *Chacha* 65%, *Krodha* 65% (anger), were reported.

c. Kaphaja Nidana : *Kaphaja Nidana Sevana* was observed as *Guru bhojana* 42% such as excess intake of *Pishtanna* (food prepared from flour of rice), *Ati snigdha bhojana sevana* 33%, *Ati madhura sevana* 65% (intake of sweet preparation), Intake of *Ksheera* and *Payasa* 72% (milk preparation), *Alasya* 45% (laziness), *Diva svapnam* 56% (sleeping during day time), *Dhuma* 68% (dust)

Viharaja Nidana wise distribution: *Ati avayama* 61%, *Vega sandhrana* 66%, *Diva svapnam* 56%, *Ratri jagarana* 72%, *Atpa sevana* 67%, *Dhuma* 68%, *Abhyangadvesa* 65% and *alasya* 45% were prominent *viharaja nidana* found in the patients and the pathogenesis of these aetiological factors is self explanatory.

Manasika Nidana wise distribution: This is also a significant factor as many of the diseases aggravate in the condition of unsound mental status. *Chinta* 75% (stress), *Krodha* 65% (anger), *Shoka* 54%

(depression) and *Bhaya* 58%(fear) were responsible for aggravation of diseases.

Kalaja Nidana wise distribution: *Sheeta kaal* or winters is having a great impact in aggravating the disease i.e *Sheeta* 65%(cold season),*Ushna* 25%(summer season),*Vasant* 10%(spring season) % means *ruksha*, *Sheeta* can produce the disease in highest amount.

First noticed symptoms in Darunaka: The table showed that flakes was the first presenting symptom of the disease in significant number i.e Flakes 100%, Dryness 98%,Itching 95% and Hairfall 90%.

Factors with which symptoms relieved wise distribution are: Summer season showed marked improvement in a significant number of patients i.e 35% followed by the use of antifungals in 25%.Regular cleaning improved the condition in 12% of the patients while other home remedies also improved some of the cases.

Factors which aggravate disease wise distribution: As mentioned earlier, winter season or *ruksha sita* is the most significant aggravating factor i.e Winters 55%,Stress 25% and Non-significant 20%.

Medication used wise distribution: In the present study, it was observed that, among 100 patients of *Dārunaka*, 32% were using head and shoulder Shampoos, 15% were using clinic shampoos, 25% were using patanjali ,5% ketoconazole and others home remedies 14% and None 9%.

Variety of oils used wise distribution: Among oil users coconut oil is the most common choiced one with 25%, 15% patients used *amla* oil,14% used almond oil,12% *sarshapa* oil, others 9% and None 25%.It is our observation that patients never

using the oil are significant in the diseased list.

Frequency of oiling wise distribution: In the study, 35% patients used oil twice weekly,18% weekly and 25% irregularly.None of the patients used oil daily,this is the prominent cause of the disease occurrence and recurrence.

CONCLUSION: Even though *Darunaka* is not a life threatening disease, it has high Cosmetic importance and it causes Social disturbance in both gender with untidy look by producing irritation, itching, shedding of the scales and hair fall. Important reasons of *Darunaka* can be traced from the general causative factors of *Darunaka* as well as *Vataja*,*Pittaja* and *Kaphaja*.In this study males were more prone to disease but a considerable percentage of females were also suffering from the disease.The educational level has found to be having direct impact on *Darunaka*.Sedentary lifestyle including less work ,devoid of regular use of oils has precipitated *Darunaka*.In other hand excessive hours of work ,stress,overburden,disturbance of sleep also directed to disease. The study revealed that several number of lifestyle factors are responsible for the development of *Darunaka* Irregular interval of the intake of food ,food pattern (*ahara vidhi*) such as *Adhyasana* ,*Vishamashana* ,*Ajiranashana* and excessive intake of *Madhura rasa dugdha*,*ruksha*,*sheeta*,*alpa*,*laghu*,*vidahi*,*snigdha bhojana sevana and dhuma ,diwaswapna, ratrijagrana,adhyayan,chinta,krodha,shoka, bhaya,sheeta-ushna-akrama sevana* are mainly related to todays life style,hygiene

related issues and circumstances leading to *samprapti* of *Darunaka*.

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