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CASE REPORT

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# Effect of Jalukavacharana in Nail Bed Infection - A Single Case Study

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# ABSTRACT

In Ayurveda all type of nail infections is referred to as Kunakha. Word 'Ku' means 'Bad' and 'Nakha' means nail. A single case study showing Kunakha condition, which had resistant to therapy in contemporary science, induces encouraging results after the administration of external and palliative treatment (Shaman Chikitsa). Administration of Ayurveda treatment (external and internal) consecutively for 45 days had yielded good results in clinical symptoms as well as significant improvement in cosmetic view. The Shothahara, Rakta Prasadaka, and Strotoshodhaka properties of this remedy successfully subside the pathological features and improve the normal appearance of nail.

Key words: Kunakha, Jalukavacharana, Nail Bed Infection.

#### **INTRODUCTION**

The Nail unit is made up of nail plate (made of protein Keratin) and the surrounding structures. Nail bed is the structure below the nail and helps to attach the nail to the finger. The Nail grows from the Matrix and is supported by the nail bed until it reaches the free edge. At the Proximal and distal margins, it is embedded in the nail folds. Many disorders can affect the nails, including deformity and dystrophy, injuries, ingrown toe nails and infections. Infections can affect any part of the nail and in turn may or may not cause changes in the nail appearance. Local and systemic disease can alter the appearance and function of nail and its surrounding structures.

Ayurveda refers nail infection as Kunakha. The word

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Kunakha is derived from Ku (bad) and Nakha refers to nail. Acharya considered it as a Pitta dominant Tridoshaja condition. Vata Dosha and Pitta Dosha together undergoing growth and vitiation are localized in the muscles surrounding nails. This morbidity has been identified as the disease Cippa. The condition in Kunakha that is generated by a mild increase in Doshas is identical one. Kunakha is referred as one among the Kshudra Roga by Acharyas.

Acharya Susruta in Nidana Sthana 13<sup>th</sup> chapter has explained the Nidana and Lakshana of Kshudra Rogas including Chippa and Kunakha. When any injury happens to the nail, it causes Vata and Pitta Prakopa and becomes Ruksha, Asita (Kala), Khara is known as Kunakha or Kulina.

This study aims to evaluate the effect of Jalukavacharana in the management of Kunakha. The basis for the assessment of the results was the response shown by the patient on signs and symptoms and effect of procedure in subjective and objective parameters before and after treatment.

#### AIM AND OBJECTIVES

To find out the effect of Ayurvedic medicine and Jalukavacharana in the management of Kunakha.

#### MATERIALS AND METHODS

#### **History of present illness**

68yr old male patient was clinically diagnosed as a case of Kunakha presented with Dry brittle yellowish brown

Nails along with reddish black swollen nail bed of both big toes and Right index finger since 1year. He has associated complaints of loss of appetite, constipation and pain in both toes since last one month.

## **History of past illness**

Patient was apparently well before 10 years. Later he had discoloration on his big toes, slowly it appeared on both toes and then to index finger. He took many treatments and no relief was found. He has allergy to Sulpha drugs, there is no history of Hypertension, DM or Dislipidemia. 1 year back he had the same complaints on left index finger also. Nail becomes dry and yellowish in colour. Then he took Homeopathic medication and got symptomatic relief for the left index finger. But there was no change in both big toes and right index finger. So, he came here for the better results.

#### **Personal History**

Bowel: daily once, constipated

Appetite: Less

Micturition: 5-6 times/Day, 2-3 times/ Night

Sleep: Sound

Heart rate: 76/min

Respiratory rate: 14/min

Diet: Mixed
Addictions: Nil

Allergy: Sulpha drugs

Family History: Nothing specific

#### **Treatment History**

He had tried both allopathic and homeopathic medication for the same, but no results was found.

#### **Physical Examination**

Grading given for Pain, Tenderness and Swelling and consistency

#### **Table 1: Grading**

Grade	Pain, Tenderness, Swelling and Roughness	Consistency of Swelling
0	Absent	Soft

1	Mild	Mild Hardness
2	Moderate	Moderate Hardness
3	Severe	Severe Hardness

## **Clinical presentation**

#### Table 2: Signs and Symptoms before treatment

Signs and Symptoms	Big Toe (R)	Big Toe (L)	Index finger (R)
Pain	2	3	1
Tenderness	2	3	1
Swelling on Nail bed	3	3	2
Consistency of Nail	Fragile and Raggeredness	Fragile and Raggeredness	Fragile and Raggeredness
Roughness	3	3	3
Colour of Nail	Reddish Yellow	Reddish Yellow	Reddish Yellow
Colour of Nail Bed	Blackish	Blackish	Blackish
Consistency of Nail Bed	3	2	3
Pussy appearance	Nil	Nil	Nil
Oozing of nail bed	Absent	Absent	Absent
Growth of Nail for past 1yr	Absent	Absent	Absent

#### Internal treatments given

#### First 15 days

- 1. Guluchyadi Kashayam 20ml, bid, BF
- 2. Bonniheal Cap Bid, AF
- 3. Haridrakhandam 1tsp with Honey at night

## Next 15 days

- 1. Drakshadi Kashayam 20ml Bid, BF
- 2. Balarishtam + Punarnavasavam 20ml, Bid, AF

3. Bonniheal Cap - Bid, AF

## After 30 days

- 1. Ksheerabala Cap 1cap, Bid, AF
- 2. Bonniheal Cap 1 cap Bid, AF

#### **External treatment given**

 Kshalana with Triphala Kashayam with 1 pinch of salt in night for 1 Month



Figure 1: 1 week after Kshalana

- External application Jeevanthyadi Yamakam \*first
   days
- 3. External application of *Indra Tailam*\* next 15 days
- 4. *Jalukavacharanam* done after first 15days : 2 leech in each finger done



Figure 2: Jalukavacharana



Figure 3: Jalukavacharana



Figure 4: Jalukavacharana

#### After 1 month

- Ksheerabala 101 Avarthi 3 drops on each Nail for Morning and Massage on Nail Bed was instructed for 15 minutes.
- 2. Evening Cutis Oil is applied for 30 minutes and then wash in Luke warm water.
- 3. Jathyadi Ointment for applying in night.

#### **OBSERVATION AND RESULTS**

After treatment results are given in the table below (table no 3)

After first 15 days he has a tremendous result in pain and Swelling on the Nail bed.

The Most important result found was the regrowth of Nail. For the past one year there was no growth and after 1 week of *Jalukavacharana* regrowth of Nails was noted.

**Table 3: After treatment results** 

	Big Toe(R)	Big Toe(L)	Index finger (R)
Pain	0	0	0
Tenderness	0	1	0
Swelling on Nail bed	Absent	0	Absent
Consistency of Nail	Regrowth with Normal texture	Growth started (Normal)	Growth started (Normal)
Roughness	1	1	1

Colour of Nail	White colour for growing nail was found	White colour for growing nail was found	Decrease in colour
Colour of Nail Bed	Normal	Normal	Normal
Consistency of Nail Bed	Normal for Growing Nail	Normal for Growing Nail	Normal for Growing Nail
Pussy appearance	Nil	Nil	Nil
Oozing of nail bed	Absent	Absent	Absent
Growth of Nail	Present	Present	Present



Figure 4: Regrowth (Right Toe)



Figure 5: Regrowth (Left Toe)

#### **DISCUSSION**

Common diseases which affect the nail are Bacterial and fungal nail infections, Periungual eczema, Viral Warts and Tumours. Systemic diseases include Vascular Phenomena, Psoriasis and as a result of

general metabolic factors influencing nail matrix function. Paronychia is a nail disease that is an often bacterial or fungal infection of the hand or foot where the nail and skin meet at the side or the base of a finger or to nail. Paronychia is generally correlated with the *Kshudraroga Kunakha* in Ayurveda.

Acharya Susruta in 20th chapter of *Chikitsa stana* explained about the treatment of Kunakha.[2] Vata Dosha and Pitta Dosha together undergoing growth and vitiation are localized in the muscles surrounding nails. This morbidity has been identified as the disease Cippa. The condition in Kunakha that is generated by a mild increase in Doshas is identical one. The Cippa Roga is also known as Anguliveshtaka disease. Acharya Charaka has called this disease as Aksata,[3] produced due to vitiated Raktha and Mamsa and it contains severe Daha and Paka beneath the Nails. Kunakha is explained in Kshudraroga by Susruta Samhita, Astang Samgraha and Ashtang Hridaya, Bhavaprakash, and Sharangadhara Samhita. Many local formulations are explained in Sushruta Samhita and Bhaishajya Ratanavali for the treatment of Kunakha, but in this case, along with external application, more emphasis is given for the internal administration of various drugs, which helps to break the basis pathophysiology.

In this patient appearance of Pain, discoloration, brittleness and other symptoms show the vitiated *Doshas* are *Vata* and *Pitta* and in turn *Raktha Dhathu*. During the period of internal medicine always care was given for calcium and Vitamin D supplement like Bonniheal which can help the regrowth of healthy nail.

Guluchyadi Kashayam was initially given to the patient to correct the Agni and Ama. It is Pittasleshmagna and Agnikrit in Karma.

Haridra Khandam was advised to take daily in night with honey. It is explained in Bhaishajya Ratnavali, Seetapitta Udardakota Adhikara. It is highly effective in allergy, and widely in treatment of skin disease. When prescribed along with Twak Roga Kashaya it gives tremendous result.

Triphala Kashaya was given for Kshalana because it is Vrana Ropana. Acharya Vagbhata in Sutra explained it as Kaphasrajit, for Tvakgada, and Kleda (Vrana Srava).

Drakshadi Kashaya is given in the second stage because it is Rakthaprasadana. It is explained in Jwara Chikitsa. Along with it Balarishtam and Punarnavasava was indicated. Balarishtam is 'Balapushti Agnivardhanam', it has good anti-inflammatory and analgesic action. Punarnavasava has also antioxidant, blood purifier, anti-inflammatory and rejuvenating properties.

Modalities available in contemporary science to treat the aforementioned *Kshudrarogas* are not satisfactory and have high cost. But the result of *Jalukavacharana* in *Kunakha* is noteworthy. Leech Saliva is reported to have many therapeutic contents like Hirudin, Bdellin, Hyaluronidase etc. Among them eglins and bdellins have anti-inflammatory and antifungal property<sup>[4]</sup> which gives relief in symptoms of *Kunakha*.

The salivary glands of leeches also produce a cornucopia of other pharmacologically active substances, including antihistaminic, proteases and possibly an anesthetic and an antibiotic. The therapeutic effect is not only released by a loss of blood but also by the secretions, which the leech emits into the wound. [5]

Leech has been used in thousands of cases to treat swelling after plastic surgery and graft operations until 1985 micro surgeons often failed when sewing severed ears, fingers and other body parts back on. Leeches are now regularly used in such cases to keep the blood oozing into the sewn or tissue until the venous congestion is relieved and normal venous drainage of the graft can develop properly.<sup>[6]</sup>

Administration of Ayurveda treatment (external and internal) consecutively for 45days had yielded good results in clinical symptoms as well as significant improvement in cosmetic view. Combined therapy, which is planned on the basis of basic principles of Ayurveda, conquers over the condition, which becomes resistance to contemporary established treatment.

#### **CONCLUSION**

The patient got relief from sign and symptoms such as swelling, throbbing pain, discoloration of nail of both toe and index finger, expressively reduced within 50 days with Ayurveda treatment like Jalukavacharanam without causing any undue side effect.

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