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A CLINICAL SUCCESS STORY OF AYURVEDIC MANAGEMENT FOR HYPERURACEMIA INDUCED GOUTY ARTHRITIS - A CASE REPORT

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Abstract

Hyperuricemia is a common disorder that affects patients of all ages and genders. The most common manifestation of Hyperuricemia is Gout, which can be very painful and is amenable to treatment. Hyperuricemia is also associated with Uric acid and Calcium Nephrolithiasis. Hyperuricemia affects about 38 million Americans, over 11% of the population, and the incidence is increasing worldwide.

Most patients with Hyperuricemia are asymptomatic, and the diagnosis requires a high degree of suspicion as serum uric acid levels are no longer routinely measured on serum blood panels. Patients with Hyperuricemia who develop gout are usually best treated with a Xanthine oxidase inhibitor like Allopurinol. Depending on the urinary chemistry and stone type, Allopurinol, Potassium citrate, or both may be recommended in Nephrolithiasis. This activity reviews the pathophysiology, presentation, evaluation, and treatment of hyperuricemia, as well as highlights the interprofessional team's role in caring for affected patients. According to Ayurveda, the treatment protocol followed here is Raktamokshana. Among various types of Raktamokshana, Jalaukaavacharan is one and this procedure is used in this case.

Key words: Hyperuracemia, Jalauoka, Raktamokshana

Introduction

Hyperuricemia is defined as an elevated serum uric acid level, usually greater than 6 mg/dL in women and 7 mg/dL in men. Elevated serum uric acid is present in an estimated 38 million Americans, and the incidence is increasing worldwide as developing countries adopt more Western diets and lifestyles. Most people with this condition will not have obvious clinical manifestations, however, it is unclear what the long-term effects of Hyperuricemia are on overall cardiovascular health, renal function, and overall morbidity.^[1] Hyperuricemia results from increased uric acid production, decreased excretion, or a combination of both processes.

Dietary purines are responsible for about one-third of the body's daily serum uric acid production; the rest is synthesized from endogenous sources. Elevated uric acid can also be seen with accelerated purine degradation in high cell turnover states (eg, Hemolysis, Rhabdomyolysis, Tumor lysis) and decreased excretion (eg, Genetic disorders, Renal insufficiency, Metabolic syndrome). About two-thirds of uric acid is excreted through the kidney and one-third through the gastrointestinal (GI) tract. However, these proportions can change depending on medications or dysfunction in the renal or GI systems.

Most people with Hyperuricemia are asymptomatic (85% to 90%), but elevated uric acid levels in the blood or urine can lead to gout or Nephrolithiasis. Hyperuricemia and Hyperuricosuria have also been linked with other disorders such as Metabolic Syndrome, Diabetes Mellitus, Cardiovascular Disease, Hypertension, Atherosclerosis, Obesity, and Chronic Renal Disease^{[2][3][4][5][6]}. In Ayurveda, this condition can be correlated to Vata Shonita.

CASE STUDY

The Present case study deals with 47 years old male patient presented with the complaints of severe bilateral ankle joint pain associated with swelling and heel pain since 2 years aggravated since a week.

History of Present illness

Patient was apparently healthy 2 years ago. Gradually, he started with the complaints of heel pain. Pain used to aggravate whenever he used to stand for long hours and do some extra physical work. Patient was treated conservatively at Allopathic Hospital. But he did not get

any satisfactory results. Later he got admitted in Ayurveda Mahavidyalaya and Hospital, Hubballi for further management.

History of Past illness

- Patient was not a known case of Type 2-Diabetes, Hypertension.
- There was no Surgical history.

Personal history

- Food habit: Mixed diet (Non-veg –Weekly twice)
- Sleep: Disturbed due to pain.
- Bowel: Constipated
- Micturition: 5-6 times/day, 1 time/night.

Family history: All Family members are said to be healthy.

Vital examination

Pulse Rate - 78 bpm

Respiratory Rate -18cpm

Heart Rate - 72bpm

Blood pressure - 130/90mmhg

Systemic Examination

- Respiratory System: Normal Vesicular Breath Sound heard.
- Cardiovascular System: S1 S2 heard. No added sound heard.
- Central Nervous System: Patient is conscious and oriented to time, place and person.
- Gastro-Intestinal Tract: Soft and Non-Tender

Local examination

Inspection - swelling - +

Palpation - Temperature - slightly raised, Tenderness - +++++,

Investigation

CBC - Within normal limits

HIV 1&2 - Negative

RBS - 80mg/dl

HbsAg - Non reactive

Uric acid - 11.6 mg/dL (BT)

MATERIALS AND METHODS

- Nirvisha Jalauka
- Haridra/ Yastimadhuchurna
- Bandage
- Gauze
- Cotton

Methodology

- Patient included for the study was explained about the procedure and informed written consent was taken.
- Patient was subjected to Jalaukavacharana(leeching) over the ankle region and heel region 1st day of treatment, and was continued for 5 more sittings of Jalukavacharana with gap of 1 day day between each sitting. Jalauka was placed for 45mins or till it got detached by itself. Paschat Karma- for Jaluka- Haridra was applied and Vamana for Jaluka was carried out till it became active when placed in Haridra Jala. To patient - the area of bite was applied with Haridra and pressure was applied for 15 mins to attain Haemostasis.

RESULTS

Table no :01 showing the intervention, sittings and remarks.

NO. OF DAYS	NO. OF SITTINGS	REMARK
1 st day	1 st sitting	No any remark
3 rd day	2 nd sitting	Mild swelling was reduced
5 th day	3 rd sitting	30% relief from the pain, swelling reduced
7 th day	4 th sitting	80% relief from the pain, swelling was completely reduced
9 th day	5 th sitting	No pain, no swelling

- By 2nd sitting of Jalukavacharana, marked reduction in pain was seen.
- Marked reduction in swelling. At the end of 5 sittings, patient had no pain or swelling over the ankle region.

DISCUSSION

Jalaukavacharana / Hirudotherapy / Leech therapy is one of the best and most successful instances of the use of invertebrates for therapeutic purposes. The mostly used medicinal leech (*Hirudo medicinalis*) belongs to phylum Annelida, class Clitellata and subclass Hirudinea. Among Indian leeches, *Hirudinaria granulosa* has got medicinal properties. Leeches are annelids or segmented worms and although closely related to earthworms, are anatomically and behaviourally more specialized. Leeches have three jaws and make “Y” shaped incision. When leeches begin feeding, they inject salivary components into the blood stream. The major ones are Hirudin- which is Thrombin inhibitor. It inhibits both platelet aggregation and coagulation cascade – this results in marked relief of venous congestion.

A ‘spreading substance’, Hyaluronidase, is also found in leech saliva, which modifies the permeability of connective tissue through the hydrolysis of endoglucuronidic linkages of hyaluronic acid, thus helps in the absorption of saliva. In addition, newer studies on leech saliva have revealed the presence of histamine, serotonin and also certain steroid hormones including cortisol, progesterone, testosterone, oestradiol, and dehydroepiandrosterone. Certain kininases have also been isolated from the leech saliva, which are possibly responsible for the analgesic action. Anti- nociceptive effect and counter irritation due to the leech’s saliva, reduces pain. Leech saliva contains bioactive substances like Hirudin, Eglins, Bdelins, Hyaluronidase, and Vasodilators.

These help by:

Improving local circulation
Reducing inflammation and pain,
Preventing further tissue damage

Mild bloodletting can reduce concentration of circulating metabolites (including uric acid).

CONCLUSION:

Jalaukavacharana helps in reducing the local inflammation, localized venous congestion and localized ischemia and reduces the need for surgical intervention in the initial stages, gives symptomatic relief and helps in maintaining the condition and prevents from going to further

stages. Hence, Jalaukavacharana can be implemented in treating the Pain caused due to Raised Uric acid level and the procedure is OPD based, minimally invasive and cost effective.



Fig. no:1: Collection of Jalauka before procedure



Fig. no: 2: Activating of Jalauka before procedure



Fig.no: 3: Application of Jalauka over the ankle region



Fig. no:4: Jalauka vamaana after the procedure

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