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A Case Report on Effect of *Dronapushpi Swarasa Nasya* in Hepatitis a Induced Hyperbilirubinemia

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ABSTRACT

Human body eliminates metabolic wastes either through sweat, urine, or through faeces. Any derangement in the normalcy leads to building up of metabolic wastes within the body. One such condition wherein there is accumulation of bilirubin in the blood is Hepatitis A. Viral infection is the cause and presenting with yellowish discoloration of sclera, dark urine, pale stool, fatigue, flu like symptoms, loss of appetite etc. In Ayurveda, such symptoms are mentioned under the broad name Kamala. The line of management mainly highlights the advice of Shodhana in the form of Virechana and different shamanaushadhis based on the stage of the disease. In traditional folklore practice, the patients of these symptoms are treated with tikshna, shodhananasya karma. With that practice in backdrop, a 34 years male patient presented with hyperbilirubinemia due to Hepatitis A, was treated with Dronapushpi swarasa Nasya twelve drops to each nostril, twice, in a gap of 6 days. When the bilirubin level was rising gradually even after usual internal medication, this treatment was planned and administered. The bilirubin level from 34.5 was reduced to 0.9 after the treatment gradually over a period of 2 months. The patient showed gradual recovery from almost all the symptoms clinically and in haematological report. The nasya did not show any complications in the patients. Dronapushpi swarasa can be effectively used to manage hyperbilirubinaemia.

KEYWORDS

Kamala, Dronapushpi swarasa, Shodhananasya, Hyperbilirubinaemia



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INTRODUCTION

Kamala is one among the *Pittaja vyadhi* and explained under *Rakta pradoshaja vikara*¹. The *haridra mutra, netra* and *twak* are the *pratyatma lakshana* of *kamala*¹. In modern parlance, many diseases presenting with this symptom, come under the broad heading of *kamala*. Hepatitis A is one which is due to viral infections. Unlike Haepatitis B and C, Haepatitis A does not cause chronic liver diseases and is rarely fatal, but it can cause debilitating symptoms and fulminant hepatitis, which is often fatal. Overall, WHO estimated that in 2016, 134 persons died from hepatitis A worldwide. The symptom can occur abruptly and include jaundice, fever, fatigue, loss of appetite, nausea, vomiting, abdomen pain, dark urine, diarrhoea, clay coloured stools, joint pain. Infected children under 6 years of age do not usually experience noticeable symptoms, and only 10% develop jaundice. Among older children and adults, infection usually causes more severe symptoms, with jaundice occurring in more than 70% of cases. As per WHO. There is no specific treatment for hepatitis A. Recovery from symptoms following infection may be slow and may take several weeks or months. Most important is the avoidance of unnecessary medications. Most people who get Hepatitis A feel sick for several weeks,

but they usually recover completely and do not have lasting liver damage. In rare cases, it can cause liver failure and death.

The treatment modality includes *shodhana* in the form of *virechana, shaman* based on the stage of the disease. The repeated *shodhana* is indicated based on the severity of the disease. As Hepatitis A also presents with the same symptoms, the same management can be adopted. In traditional folklore practice, the condition of *harita mutra netra, twak* is treated with repeated *shodhana nasya karma*. The advice of *Anjanaas* as treatment modality by Vagbhata², Bhaishajya Ratnavali³ and Chakradatta⁴, in the management of *Kamala* is the indication of role of *sthanika chikitsa* in the management of this condition. Hence, to achieve the *shodhana, rechana* effect, *Dronapushpi swarasa* was selected for the *nasya karma*. *Dronapushpi* is having *katutikta rasa, kaphavatahara, ushna virya* and *katuvipaka*⁵. *Dronapushpi-Lecusephalotes* has been reported to exert hepato protective action in carbon tetrachloride induced hepato toxicity in animals. Juice of it has been reported to act as an antibilious in herbal therapy for jaundice⁶. *Dronapushpi Nasya* is *Rechana nasya* which does elimination of *malarupi ranjaka pitta*.

In this patient with *kamala*, who was not responding to usual internal medication,



was treated with this *nasya karma*. Twelve drops of *Dronapushpi swarasa* was administered into each nostril, twice, in a gap of 6 days. The idea behind the treatment was to assess its effect on hyperbilirubinaemia rather than over Hepatitis A. The result observed was promising towards the management of hyperbilirubinaemia associated with Hepatitis A.

CASE REPORT

A 34 yr old male patient was said to be apparently healthy before 6 days. Gradually he developed fever, which was on and off in nature associated with yellowishness in eyes, urine and faeces. Along with this, patient developed whole body itching and reduced appetite. The severity of itching was increased day by day and it was so severe that patient had scratch marks all over the body. The quantity of food intake was reducing day by day. Also there was body ache, headache and weakness which were worsening gradually. No h/o loose stools or vomiting. Details of the examination are given in Table 1 and Table 2.

Table 1 Examination (Ayurvedic)

Nadi-76/min
Mutra-Pitavarna
Mala-Tilapishthanibha
Jihva-Saama
Shabda-Prakruta
Sparsha-Ushna

Druk-Netrapitata
Prakruti-VataKapha
Sara,*Satmya*, *Samhanana*, *Satmya*-*Madhyama*
Aharashakti, *vyayama shakti*-Alpa

Table 2 General Examination

Pallor-Present
Icterus-Present
Lymph nodes-Absent
Clubbing-Absent
Oedema-Absent
Systemic examination
RS-NVBS heard
CVS-S1S2 heard, no murmur
CNS-HMF intact
Abdominal examination
Inspection
Abdomen contour- normal
Umbilicus inverted & centrally placed
No scar, No visible veins are present
Palpation
Soft, Non tender
Liver firm, smooth with distinct border
Palpable measuring about 2 fingers(2.5cm) from the lower costal margin
Spleen - non palpable
Percussion
Normal tympanic note heard
Shifting dullness absent
Auscultation-Normal bowel sounds heard
Haematological report: suggesting of Hepatitis A -On 25/3/19
Bilirubin(T)-11.6, Direct-10.2, Indirect-1.4, SGOT-380.SGPT-688, ALP-185
Bilirubin level before first nasya karma-31.7mg/dl
USG Abdomen& Pelvis revealed (26/04/19)

- Mild hepato- spleenomegaly.
- Minimal gallbladder wall thickening-non specific.
- No sonological evidence of biliary obstruction.

CT Abdomen & Pelvis revealed (15/05/19)

- Mild hepatomegaly.



- Minimal diffuse gallbladder wall thickening.
- No obvious evidence of obstructive causes of jaundice.

Based on the presentation, examination of the skin and haematological values, the

condition was diagnosed as *Koshta shakhashrita Kamala* (Hepatitis A).

TREATMENT

The details of internal medicine given are given in Table no 3

Table 3 Internal Medicine

Date	Medicine	Aushadhi kala	Symptoms
26/3/19	Nirocil <i>Patola Katurohinyadi kashaya</i> Tab Heptin Forte <i>Trikatu churna</i>	2-2-2 15ml bd 1-1-1 1 Tsp SOS	All the above symptoms -present
8/4/19	Syp.Ictrus <i>Arogyavardhini Rasa (Zandu)</i> <i>Laghu Soota Vati</i> <i>Gandharva Hastadi Eranda Taila</i>	15ml tid 2-2-2 2-2-2 15ml OD with <i>guda</i> and milk at morning 6.30 Am	Fever was relieved. All other symptoms were present and itching was worsening gradually.
15/4/16	Syp.Ictrus Nirocil <i>Raja PravartiniVati</i> <i>LaghuSootaVati</i> <i>Gandharva Hastadi Eranda Taila</i>	15ml tid 2-0-2 2-2-2 2-0-2 15ml HS	Symptoms persisted
8/5/19	NASYA		Burning sensation in nose, eyes, which subsided within 1 hour of procedure Watery discharge from nose eyes.
8/5/19	Syp. Ictrus <i>Bhringarajasava</i> <i>LaghuSootaMishrana</i>	20ml tid 4tsp tds 1 tsp tds	Itching, Appetite Yellowishness present as it is. Headache, body ache reduced slightly. Colour of the stool was
13/5/19	<i>Drakshadikashaya</i> <i>Arogyavardhini rasa</i> <i>Godantibhasma</i> <i>Triphalachurna 1 tsp bd</i>	2tsp bd 1-1-1 ¼ tsp tid with tender coconut water	Itching reduced slightly. Weakness reduced. Appetite increased. Colour of the stool was changing gradually.
14/5/19	NASYA		Burning sensation in nose, eyes, Mild headache, which subsided within 1 hour of procedure. Watery discharge from nose, eyes.
6/6/19- 23/7/19	<i>Drakshadi Kashaya</i> <i>Madhuyashti churna-100gm</i> <i>Pravala pishti-100gm</i> <i>Laghu Soota Mishrana-100gm</i>	2tsp bd 1tsp tds	Yellowishness reduced. Itching reduced significantly and Appetite increased and weakness was reduced. Colour of the stool was almost normal.
24/7/19	“ + <i>Makaradhwaja</i>	1-0-1	Yellowishness reduced and Itching reduced

**Intervention: Nasya procedure:
Purvakarma:**



Medicine preparation: Fresh leaves of *dronapushpi* were collected. After washing, it was grinded into a fine paste and filtered through a cloth and *swarasa*/juice was collected.

Patient preparation: After the digestion of the food, at around 11 AM procedure was done.

Pradhana karma: Patient was made to lie down in supine posture with neck hyper extended. With dropper, 12 drops of the *swarasa* was administered into each nostril. The patient was asked to spit out the secretion into the tray.

Paschatkarma: After 30 minutes of observation, patient was sent to the room and advised rest.

Observation of patient: burning sensation in eyes, nose and headache was present.

Watering of eyes and nose lasted for 3-4 hours. Headache lasted for 1 hour after the procedure. After that, patient was comfortable.

RESULTS

In this patient, *Nasya* has shown significant improvements both clinically and haematologically after 2 course of *nasya*. The severity of symptoms like *pitaneetra*, *nakha*, *twak*, *anana*, *mutra* and *varchas*, *avipaka*, *dourbalya*, etc in the patient, following the treatment. After second *nasya*, all the symptoms were reduced significantly. The itching, weakness reduced completely. Appetite is normal. Yellowishness reduced gradually. Liver Function Tests showed significant changes which are mentioned in Table 4

Table 4 Liver Function Tests report

Date	Bilirubin(T)	Direct	Indirect	SGOT (AST)	SGPT (ALT)	ALP
25/3/19	11.6	10.2	1.4	380	688	185
3/4/19	24.6	13.8	10.8	79	106	276
9/4/19	24.9	12.9	12	88	77	198
24/4/19	21	12.1	8.9	90	92	153
27/4/19	27.3	19.5	7.8	79	84	260
6/5/19	31.7	16.3	15.4	78	55	317
08/05/19	NASYA					
13/5/19	34.5	20.9	13.6	91	65	336
14/05/19	NASYA					
21/5/19	29	17.2	11.8	69	64	998
29/5/19	23.2	14.7	8.5	60	60	716
6/6/19	16.8	10.6	6.2	72	56	928
11/6/19	13.4	8	5.4	68	76	928
19/6/19	8.4	4.7	3.7	59	48	426
10/7/19	1.9	0.4	1.5	39	43	317
24/7/19	1.3	0.4	0.9	48	58	196
1/9/19	0.9	0.2	0.7	23	18	88



DISCUSSION

Discussion on intervention- In this case report, patient had the symptoms of kamala. The ideal treatment in this stage of the disease will be virechana chikitsa. But as the patient is *durbala* and the appetite was also less, the patient is not fit for virechana. Hence initially, the patient was prescribed with internal medications. When the condition was not responding and as the haematological reports started worsening, the alternate treatment was searched. In traditional folklore practice, the *shodhana nasya karma* is widely practiced in the management of kamala. Hence with that idea, *rechana nasya* was selected. *Dronapushpi swarasa* was selected due to its *ushna teeksha guna* and *rechana* action can be achieved through the same. After one *nasya karma*, patient was observed for any complications for 6 hours. As patient was comfortable, it was decided to administer second dose after 6 days. After this dose too, patient was comfortable and drastic, significant changes were seen clinically and haematologically.

Even though, *samhitas* advised *nasya karma* in the prevention and management of *jatru urdhwa* conditions, in folklore practice, *nasya* is commonly advised in the management of kamala. It is difficult to explain the mode of action of *nasya* in this

condition. Any published data is not available to explain the systemic action of the drug administered through the nasal route. But as the drug possessed *ushna teeksha* properties, definitely might have removed the *sanga* (as it is the *rudha patha kamala*), it eliminated the *doshas* to some extent. To explore this, further clinical studies with more sample size can be planned. The animal experiments may throw the lights on mode of action of drug instilled through nasal route and its action on hepatic pathologies. But there is a definite benefit achieved in the patient where drug is administered through the nasal route and benefit is seen clinically.

The possible explanation may be as:

Nervous stimulation-Nasal administration of drugs causes stimulation of brain matter resulting in stimulation of Parasympathetic nerves. All the abdominal organs are supplied by Parasympathetic nerves. The stimulation of Hepatic nerve plexus and Vagus nerve stimulates the hepatocytes and contributes in the hepatic repair. The *swarasa*, due to the high concentration of phytoconstituents, when administered in high dose, helps in more stimulation of nerves. The blood supply to Nerve is through *Vasa Nervosa*. Some amount of the medicine may enter the systemic circulation through this route also.⁷



Lymphatic pathway-From nose, it drains to Submental and Submandibular lymph nodes. From there, on the right side, it drains into the Right Lymphatic Duct and on the left side it drains into Thoracic duct. Thoracic duct and Right Lymphatic duct opens at the junction of Internal jugular vein and Subclavian vein, on either side of the body. Thus, joining to the Venous drainage. The lymphatic drugs thus enter the venous circulation. The larger plasma proteins or larger molecules passes / are better absorbed through the lymphatics.

The nasal cavity is covered by a thin mucosa which is well vascularised. Therefore, a drug molecule can be transferred quickly across the single epithelial cell layer directly to the systemic blood circulation without first pass hepatic and intestinal metabolism. The effect is often reached within 5 min for smaller drug molecules.⁸

CONCLUSION

Based on the common folklore practice of rechana nasya in the management of kamala, A case diagnosed as kamala was treated with *Dronapushpi swarasa nasya* (12 drops to each nostrils) of 2 sitting with a gap of 6 days. This treatment showed promising result in the management of kamala. The *Shodhana* effect of *Nasya*

along with the hepatoprotective nature of *Dronapushpi* helped in attaining the normalcy of the patient.



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