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Original Article

EFFECT OF AYURVEDIC TREATMENTON LIVER FUNCTION TESTS OF JAUNDICE PATIENT: A CASE STUDY

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Abstract

In the recent years, changes in lifestyle haveled to indulgence into fast food, addiction to spicy food, irregular eating habits and improper intake of food articles. Eating outside food is a new trend which increases the risk of accidental intake of contaminated food and water. Further, alcohol consumption is a fashion these days. All this contributes to increased risk of hepatic damage which clinically reflects as jaundice.Jaundice is a condition in which there is yellow discoloration of skin, sclera, mucous membranes, and excretions due to hyperbilirubinemia. In *Ayurveda*, this disease is described as *Kamala vyadhi*. Detailed description of *kamala* including its causespathogenesis, symptoms, management and complications can be found in various classical texts. Here is a case report of 24 years old male patient having *Koshthashrita kamala*. He was treated with ayurvedic medications, which showed excellent results and all his deranged liver functions tests were within normal limits after the treatment.

Keywords:*Kamala*, Jaundice, Liver disorders, Yellow skin, *Ayurvedic* management.

INTRODUCTION

Industrialization and urbanization has brought a lot of changes in our lifestyle and eating habits, thattook us far away from the nature. Now a days people have become used to the intake of spicy fast food, cold drinks and even alcohol on daily basis. This habit effects the digestive system and liver the most. Hence, the incidence of jaundice is also increasing.

Jaundice refers to the yellow discoloration of the body tissues, skin and sclera as a result of hyperbilirubinemia[1]. The word 'Jaundice' is derived from the French word*jaune*which means yellow[2]. When the serum bilirubin level is more than 1.3 mg/dl, the condition is known as jaundice and is clinically detected at sclera when bilirubin level reaches 3mg/dl[1]. It can be classified as Pre-hepatic jaundice, Intrahepatic jaundice and Post hepatic jaundice.Pre-hepatic or Haemolytic jaundice is due to over production of bilirubin either from haemolysis of RBC or ineffective erythropoiesis, causing unconjugated/indirect hyperbilirubinemia.Intrahepatic or Hepatocellular Jaundice is due to

hepatocellular dysfunction in handling bilirubin uptake, metabolism and excretion, causingconjugated and/or unconjugated hyperbilirubinemia. Post hepatic or Obstructive jaundice is caused byobstruction to bile flow either due to intrahepatic cholestasis or extrahepatic obstruction. Symptoms include yellowing of skin, sclera and mucous membranes (jaundice) along with darkening of urine, fatigue, anorexia and nausea. There is no specific treatment for jaundice in modern science. Use of phototherapy, phenobarbital, clofibrate and albumin infusion have been proved useful.

Kamala is the term used in *Ayurveda* to describe a disease resembling jaundice.Classical *Ayurvedic* texts describe *Kamala* as a *pitta-nanatmaja*and *raktapradosajavyadhi*, caused by *raktadushti* due to vitiated *pitta* and vice-versa.*Acharya Sharangdhar* has mentioned the vitiation of *ranjak pitta* in *kamla*[3].Basic causes of *Kamala*described in classics are the use of excessive *paittikaaahara-vihara*like*katu*(pungent), *amla*(sour), *lavana*(salt), *ushana*(hot), *tikshanaaahara*(spicy and junk food)etc. by the persons who have aggravation of *pittadosha* or by *Pandu rogi*(anemic persons)[4].*Acharya Charak* classified *kamala* as *koshthashrita* and *shakhashrita*[5].Symptoms of *koshthashritakamala*resemble with hepatocellular jaundice and *shakhashrita kamala* with that of obstructive jaundice.Principle of management of *kamala* can be broadly classified as *Sanshodhana*(purification) and *Sanshamana* (palliative)*chikitsa*(therapy).*Charakacharya* has stated "*kamalituvirechana*" as *chikitsa sutra* of *kamala,* hence,*virechana karma* with*mridutiktadravya*is primarymanagement of *kamala*[6]. Apart from this, various *shamanaaushadhi* are also mentioned for the management of *kamala*. This article represents a case of *koshthashrita kamala* treated with such *shamanaaushadhi*.

Aims and objectives: To estimate the efficacy of *Ayurvedic* medications in the management of *kamala*w.s.r. to jaundice.

Material and Methods:

Types of Study: Single case study without control group.

Study details:A 24 year old,unmarried, Hindu male patient visitedAyurvedic Herbal Healthcare Clinic in Delhi on 22ndAugust 2013, with the chief complains of *peetavarniyatwaka-nakha-netra* (yellowish discoloration of skin, nails and eyes),*peetavarniya mutra* (yellowish discoloration of urine), *jwara*(fever),*annadwesha* (loss of appetite) and*hrillhas* (nausea).The patient was suffering from fever, loss of appetite and nausea for past 10 days for which he had taken paracetamol tablet. After which he noticed yellow discoloration of skin, nails, eyes and urine.

Personal history revealed that the patient is non-vegetarian andis used to excessiveintake oily, spicyandjunk food.He had decreased appetite, frequency of micturitionwas5-6 timesperday, bowel habits were irregular with mild constipation (once/day, hard stool) and the patient had an addiction to alcohol.

On examination of the patient, his *nadi* was 96 bpm,mutra was *peetavarniya*, *malabadhta* was present, *jihwa* was *sama*, *shabda* was normal, *sparsha* was *kinchitushna*, *drik* was *peetavarniya*, *akriti* was *madhyam*, *bala* was *madhyam* and *raktadab* was 110/74 mm of Hg.

His Respiratory system examination, Cardiovascular examination, Central Nervous System Examination and Locomotor examinationdid not uncover any abnormality. On abdominal examination mild hepatomegaly was detected.Hisblood investigations on20thAugust 2013showedTotal bilirubin level as 14.8 mg/dl (0.1-1.2 mg/dl, Normal), SGOT as 233U/L (<50, normal), SGPT as 745 U/L (<50, normal), Malarial parasite: negative, Widal: negative and Typhi dot: negative. Based on this presentation, thepatient was diagnosed as a case of *Kamala*(Jaundice).

Treatment Plan:

The following oral medicines were administrated:

- A combination of *Godhanaarka*(10 ml) and *Triphalakwatha* (25 ml)in the morning, empty stomach.
- A combination of *Kasisbhasma* (125 mg), *Kapardakbhasma*(125 mg),*Pravalpishti* (125 mg),*Giloysatva*(500 mg) twice a day before meal with honey.
- A combination of *Sarvakalpakwatha* (25 ml) and *Giloykwatha*(25 ml) twice a day before meal.
- *ArogyavardhiniVati* (2tab) twice a day with lukewarm water,after meal.
- *Rohitakarishta*(20 ml) twice a day with equal amount of water after meal.

Results: Improvement was seen in subjective symptoms and signs long with reduction in Bilirubin levels, SGOT and SGPT levels. Table 1 shows the improvement in liver function tests of the patient.

Table 1: Liver Test Report of the patient

LFT/DATE	Before Treatment	After Treatment
Total Bilirubin	14.8 mg/dl	1.2 mg/dl
SGOT	233 U/L	25.8 U/L
SGPT	745 U/L	27.3 U/L

On first follow up (8th day) his total bilirubin reduced to 5.3 mg/dl, SGOT declined to 61.8 U/L and SGPT to 91.4 U/L. Patient also reported that his fever was gone, appetite was improved and he was no longer feeling nauseous. On second follow up his total bilirubin reduced to 3.0 mg/dl, while SGOT (24.4 U/L) and SGPT (41 U/L) were within normal limits. On last (third) follow up all this liver function test were within normal limits.

Discussion: *Agnimandhya* and vitiation of *pitta* is considered to be the main cause of *kamala*.Above mentioned etiological factors *like katu, amla, lavanaaahara* vitiate*jatharagni*, causing excessive production of *pitta* (*vridhi*) and this leads to *atipravritti* of *pitta* into *dhatus*, which is ultimately

manifested as *kamala*. Its managementincludes use of *kamalahara* drugs which are dominant in*madhura, tikta*and *kashaya rasa*.

*Godhanaarka*is purified *gomutra* (cow urine), which is very effective in the management of jaundice[7].*Triphala*again has proven to possess hepatoprotective properties and thus is effective in hepatocellular jaundice[8,9]. *Kasisbhasma, Kapardakbhasma,Pravalpishti* and*Giloysatva*are mentioned in classical texts for improving liver function.*Sarvakalpakwatha* contains *Punarnava, Bhumyamalaki, Aragvadha*and*Kakamachi*. All these ingredients are liver stimulant and this *kwatha* has *virechak* properties too. *Giloy*[10] and *Rohitaka*[11,12,13] are again hepatoprotective drugs and stimulate liver function.*Kutaki*is the main ingredient of*Arogyavardhinivati*, which has *tikta rasa*, *kaphahara*and *pitta virechaka*properties. *Arogyavardhini vati* itself possess hepatoprotective properties[14].Thus, all these ayurvedic drugs cured jaundice due to their hepatoprotective and liver stimulant properties.

Conclusion: From the above discussion it can be concluded that*koshthashrita kamala* (hepatocellular jaundice)can be successfully managed by *Shamanachikitsa*. Oral *Ayurvedic* drug viz-a-viz*Godhanaarka,Triphlakwatha,Kasisbhasma, Kapardakbhasma,Pravalpishti, Giloysatva,SarvakalpaKwatha,Giloykwatha, Arogyavardhini Vati* and*Rohitakarishta*were effective in relieving the signs and symptoms of *kamala* along with reduction in liver function test without any showing any harmful effects.

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