AYURVEDIC MANAGEMENT OF HEPATITIS B: A CASE REPORT

Minal. S.Vaidya¹, PravinG.Jagtap²

¹Professor & HOD, ²Assistant Professor,
Department of Kayachikitsa, Y.M.T. Ayurvedic Medical College, Kharghar, Maharashtra, India

Email: drminalsvaidya@gmail.com

ABSTRACT
Hepatitis B is an infectious disease caused by the hepatitis B virus (HBV) which affects the liver. It can cause both acute and chronic infections. The clinical features such as; Yellow discoloration of urine, sclera, mucous membrane and skin, are comparable to the clinical features of Kamala as described in Ayurvedic lexicon¹. Presently short and long acting interferon which boost up the immune system and improves the level of inflammation are the support of treatment, but these drugs do not cure the disease and their long term safety and efficacy is unknown. That’s why; biomedical researches are inclined towards alternative resources to solve this dread of disease. The treatment of Kamala includes pitta pacifying rasas and deepana-pachana guna, which convert sama-pitta to nirama-pitta⁵. It plays very important role in the samprapti vighatana of the Kamala disease. The case described in this article was managed with the same guideline of Kamala Chikitsa as described in Ayurvedic literatures¹⁻⁹ and results were obtained. Although this single case is not sufficient to prove the efficacy, author has tried to explore his idea through this article to state that Ayurvedic management of Hepatitis B is very effective and more efficacious than the modern medicines.

Keywords: Hepatitis B, Jaundice, Kamala, Sama-pitta, Antiviral drugs, Interferon

INTRODUCTION
In the present era, Hepatitis B is the common global health problem, caused by Hepato tropic virus B of Hepadanaviridea family¹⁰⁻¹⁴. It is characterized by the parenchymal liver cell damage¹⁵⁻¹⁹. On the basis of clinical features, Hepatitis B can be correlated with Kamala Roga in Ayurveda¹⁹. Kamala is caused by increased Pitta. Ayurveda offers reference points for managing treatment decisions specific to each and every case and to project a vision or goal for a whole state of health, again unique to each and every case. Ayurvedic management of Kamala including samshodhan and samshaman therapy leads to break the pathophysiology of the disease and hence provides complete cure. This case can be helpful for the Ayurvedic management of Hepatitis B.

CASE REPORT
A male patient of age 38 years presented with chief complaints of yellowish discoloration of urine with burning micturition and reduced appetite. He also had associated complaints like generalized weakness, nausea and mild pain in right upper abdomen.
CLINICAL EXAMINATION
Dashvidha Pariksha
Prakriti: Pitta-kaphaja
Vikriti:
Hetu: Pitta vardhak ahara vihara
Dosha: Tridosha
Dushya: Rasa, Rakta, Mamsa
Prakriti: Sukhasadhya
Desha: Anup
Bhumi Anup
Rog Adhisthan: Yakrit
Kaal: Adana kala and Vyakta awastha
Bala: Madhyama
Saaratah: Madhyam
Samhanan: Madhyam
Pramaantah: Sama
Satmyatah: Sarva rasa satmya
(madhur, katu rasa)
Sattwatah: Madhyam
Aahaar shakti:
Abhyaharan-Avara
Jaran-Avara
Vyayam shakti:
Vayatah:
Avara
vaya- (38 years)
Vayikarna- nearly 30 years
Astavidh Pareeksha
Naadi: 80 /min, pitta-kaphaja
Mutra: Vaikrit varna
Mala: Vaikrite
Jihwa: Niraama
Shabda: Prakrit
Sparsha: Ushna
Drik: Pitta
Aakriti: Prakrit
SAMPRAPTI GHATAK
Dosha: Tridosha
Dushya: Rasa, Rakta, Mamsa
Srotas: Anna, Rasa, Rakta, Mamsa, Mutra, Purisha
Srotodushhi: Ati pravritti, Sanga, Vimarga Gamana
Aam: Sama
Agni: Mandagni
Samuthan: Amashaya
Adhishthan: Netra,

General Physical Examination
BP 110/70 mmHg
PR 80 beats/min
RR 18/min
Temperature Afebrile
General condition Poor
Decubitus Sitting
Pallor Absent
Icterus Present
Cynosis Absent
Clubbing Absent
Lymph node Not palpable
Oedema Absent

Investigations
Complete Blood Count (CBC) 25/02/16
Hb % 11.5 gm%
TLC 13400 cells/mm3
DLC N58 L39 E2 M1 B0
Liver Function Test (LFT) (28/02/16)
ALT/AST 1010/790 U/L
T.BIL/D.BIL 9.1/7.9 mg/dl
ALP 134 U/L
T.P/ALB 8.2/4 gm/dl
Renal Function Test (RFT) (28/02/16)
UREA 27 mg/dl
CREAT 0.8 mg/dl
Na+/K+/Cl- 136/4.5/99 mmol/l
Viral Hepatitis Profile (02/03/16)
HBsAg Positive
Anti Hep C negative
Anti HAV IgM negative
Anti HEV IgM negative

Diagnosis – Hepatitis B

Treatment
Patient was treated with Arogyawardhini Vati 250 mg 2 tablets twice a day with Phalatrikadi Kwath 40 ml twice a day and Musta Nagarmustak Churna 5 mg with Bhumyamlaik Swarasa 20 ml twice a day.
Patient was kept in under observation for 10 days.
RESULTS
Patient experienced increase in appetite just within 3 days of treatment. Other complaints like yellowish discoloration of urine, nausea; icterus was reduced after 8 days of treatment. Serum Bilirubin and Direct Bilirubin was reduced from 9.1/7.9 mg/dl to 1.7/1.1 mg/dl and ALT/AST was reduced from 1010/790 u/l to 199/89 u/l after 8 days of treatment. After 10 days from starting the treatment, patient was having no complaints of abdominal pain, weakness and nausea. Yellowish discoloration of urine was disappeared and appetite was normal.

Hematological Investigations after 8 days of Treatment
Complete Blood Count (CBC) (07/03/16)
- Hb % 12.8 gm%
- TLC 9200 cells/mm3
- DLC N50.3 L37.9 E2.2 M9.6 B0.0
- PLT 372000 cells/mm3
Liver Function Test (LFT) (07/03/16)
- ALT/AST 199/89 U/L
- T.BIL/D.BIL 1.7/1.1 mg/dl
- ALP 101 U/L
- T.P/ALB 8.8/4.1 gm/dl

DISCUSSION
Drugs like Katuki, Kirattikta, Vasa, Kalmegha, Bhumyamlaki etc proved to be very effective in the samshamana chikitsa of Kamala Roga. These drugs are substantiated by various clinical and experimental trials and have shown the actions like Pitta hara / Tridoshahara Pitta rechana (Choleratic), Yakrit uttejaka (Liver stimulant), Hepatoprotective properties, Dipana (Appetiser), Rechana (Purgative), Sothahara (Anti-inflammatory), Jvarahara (Anti-pyretic), Rakta shodhana (Blood purifier), Rasayana (Geriatric), Sroto shodhana (Channel purifier) properties.
With this perspective, patient was treated with 4 drugs Phalatrikadi Kwath, Arogyawardhini Vati, Musta Nagarmustak Churna and Bhumyamlaki Swarasa.
Phalatrikadi Kwath contains 8 drugs; Triphala, Vasa, Amrita, Nimba, Kalmegha and Katuki as mentioned in the Siddhasara Nighantu in the treatment of Kamala Roga.
Triphala contains Haritaki, Vibhitaki and Amlaki. It has antioxidant properties. It is hepatoprotective in nature and protects liver from free radical damage.
Vasa (Adhatoda vasica) contains Vasicine as the major alkaloid available in the different parts of the herb. The research reveals that vasicine showed most potent anti-inflammatory effects. It also has anti-diabetic, antioxidant and hepatoprotective effects.
Amrita (Guduchi) (Tinospora cardifolia)Tinospora cordifolia has been studied for its actions like immunomodulatory, anti-allergic, hepatoprotective properties, neuroprotective properties.
Nimba (Azadirachta indica) Neem leaf and its constituents have been demonstrated to exhibit immunomodulatory, anti-inflammatory, antihyperglycaemic, antiulcer, antimalarial, antifungal, antibacterial, antiviral, antioxidant properties.
Kirattikta (Swertia chirayita) The bioactive constituents include the xanthone and secoiridoid glycosides consisting of mangiferin, amarogentin, amaroswerin, sweroside and swertiamarin used mainly in the treatment of infectious and inflammatory conditions like fever, skin diseases etc. and also used as a hepatoprotective and hepatostimulative agent.
Katuki (Picrorhiza kurroa), the plant has been described as very useful in jaundice, nausea, anorexia, dyspepsia and periodic fevers. “Picroliv” mainly a glycoside constitute an important component of Picrorhiza kurroa. The published literature and currently on-going work show the efficacy and safety of picroliv in (1) acute viral hepatitis (2) treatment of drug-induced liver damage e.g. antituberculous
drugs and (3) long-term prophylactic use in bronchial asthma.\textsuperscript{27-31}

*Kalmegh* (Andrographis paniculata) Active constituent: Andrographolide. It increases the viability percentage of the hepatocytes, stimulates hepatic regeneration and increases resistance to damage by toxins; activates reticuloendothelial system and enhances carcinogen detoxification by the regulation of antioxidant defense system and microsomal drug metabolism.\textsuperscript{36-37}

*Musta* and *Nagaramustaka* (Cyprus rotundus and Cyprus eleusinoides) is credited with antioxidant and anti-inflammatory properties that benefits the liver. It lowers the viral load on the liver and renormalizes liver functions. It has hepatoprotective activities which help in liver disorders and maintains overall liver health. It reverses the oxidative damage of hepatocytes and exerts overall hepatoprotective actions.

*Bhumyamalaki* (Phyllanthus niruri) It exhibit a hepatoprotective effect. It has ability to down regulate HBV messenger ribonucleic acid (mRNA) transcription and up-regulate HBV enhancer I activity. It also inhibit HBV polymerase activity and decreases episomal HBV DNA content.\textsuperscript{33}

*Arogyawardhini Vati* contains mainly *Katuki* (50%) which has choleretic properties. It has anti-inflammatory and antiviral properties. This drug is extensively used in the hepatic disorders.

**CONCLUSION**

In modern medicine, despite of recent medical advances, even at cellular and molecular level, there are no any liver protective medications which can be used in the treatment of Hepatitis B. But in the field of Ayurvedic research, many fruitful medicines have been found for the treatment, prevention and cure of Hepatitis B.\textsuperscript{38} Ayurveda offers holistic approach towards each disease and specific to each person. Further the antiviral drugs which are used in the treatment of Hepatitis B, have some common side effects including fever, headache, hair loss and mental problems. These drugs are costly and their safety profile is unknown. While the Ayurvedic medicines are free of these side effects, easily available and less costly than modern medicines. Thus these drugs can be used effectively in the management of Hepatitis B.

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