

Ayurvedic Management Of Hepatorenal Syndrome: A Case Study.

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ABSTRACT

Introduction: Hepatorenal Syndrome (HRS) is a serious complication of advanced liver disease characterized by functional renal failure without any structural kidney damage, typically occurring in patients with cirrhosis, severe liver failure or fulminant hepatic failure and marked by renal vasoconstriction and reduced renal perfusion. This article emphasizes the successful case study of Hepatorenal Syndrome which was treated at our hospital in a comprehensive manner both locally and systemically by utilizing the principles of Ayurveda in reducing the symptoms and thereby improving quality of the subject.

Methodology : A 48 year old male patient diagnosed with Hepatorenal syndrome, presenting with complaints of Massive Ascites, Swelling in both lower limbs, reduced urine output, reduced appetite, reduced sleep, Generalized weakness and itching all over the body with elevated creatinine and bilirubin levels and low Haemoglobin count was administered with comprehensive Ayurvedic management which included *Nithya Virechana*, *Ekanga Lepa* over Abdomen, *Basti* and *Shamanoushadhis* followed by *Pathya Ahara Sevana*.

Result : Marked improvements were observed in the patient's subjective symptoms, along with a reduction in creatinine and bilirubin levels and an increase in haemoglobin count.

Discussion: By utilizing the principles of Ayurveda case of Hepatorenal syndrome was successfully managed at our hospital. The combined effect of external therapies and Shamanoushadhis facilitated effective liver detoxification, reduced fluid accumulation, improved appetite and sleep, alleviated generalized weakness, and significantly enhanced the patient's overall well-being, thereby contributing to a better quality of life..

Keywords: Hepatorenal syndrome (HRS), Nithya Virechana, Basti, Ekanga Lepa, Shamanoushadhis...

1. INTRODUCTION

The Hepatorenal syndrome (HRS) is a form of functional renal failure without renal pathology that occurs in about 10% of patients with advanced cirrhosis or acute liver failure. There are marked disturbances in the arterial renal circulation in the patients with HRS; these include an increase in vascular resistance accompanied by a reduction in systemic vascular resistance. The diagnosis is made usually in the presence of a large amount of ascites in patients who have a stepwise progressive increase in creatinine. HRS is of 2 types. Type 1 HRS is characterized by a progressive impairment in the renal function a significant reduction in creatinine clearance within 1-2 weeks of presentation. Type 2 HRS is characterized by a reduction in glomerular filtration with an elevation of serum creatinine level, but it is fairly stable and associated with a better outcome than that of type 1 HRS[1]

Among patients with cirrhosis and ascites, approximately 18% develop HRS within one year and 39% by five years [2]. A recent observational study at Dr. D.Y. Patil Hospital, Pune (Sept 2022-June 2024), found 78% of HRS cases were due to alcoholic cirrhosis, with hepatitis B being the next leading cause, and a mortality rate of 12%[3].

2. CASE REPORT:

A 48 year old male patient approached Kayachikitsa OPD, JSS Ayurveda Hospital with complaints of abdominal distension, Swelling in both lower limbs, reduced urine output, Reduced appetite, Reduced sleep and generalized weakness since 1 week associated with itching all over body occasionally since 6 months. The patient was apparently healthy until approximately 1.5 years ago. However, he had a long-standing history of gastritis symptoms for several years, including abdominal bloating and sour belching as patient was having irregular food habits [He was consuming only hotel food between the years 2003–2022 and also patient was alcoholic since the age of 25 yrs].

1.5 years ago, he developed yellowish discoloration of the eyes and urine. He consulted a local physician and was diagnosed with jaundice, For which he was prescribed with oral medications for 4 months (details not known), As he was relieved from symptoms pt discontinued those medicines after 2 months.

In late 2023, the patient suddenly developed hematemesis, which was preceded by nausea and loss of appetite 2 days before. He was immediately taken to a hospital in Mandya, where endoscopy revealed ruptured esophageal varices. Banding was done as part of the emergency management, and he was hospitalized for one week. At that time, he was diagnosed with liver cirrhosis, and oral medications were started. He was advised regular follow-up under a gastroenterologist.

6 months later patient started noticing swelling in his umbilical region which was diagnosed as Umbilical hernia but was not operated. In the due course pt used to have bloating of abdomen, sour belching, loss of appetite and itching all over the body whenever he was skipping the medicines.

2 months ago, Again pt developed similar complaints like nausea, loss of appetite and 1 more episode of hematemesis, hence he was re-admitted to the same hospital where pt was advised to undergo USG of Abdomen and pelvis and Endoscopy and again the banding was repeated. 3 days later pt was discharged with oral medications.

But now since 1 week pt developed Abdominal distension, Bilateral pedal oedema, Oliguria, Anorexia and reduced sleep. Hence for all these complaints he approached the same doctor where he was advised for Paracentesis, but on investigations it was found that his Sr. creatinine level was high (3.25 mg/dl), hence he was advised to undergo haemodialysis. For which the patient refused and approached our hospital for further management

PURVA VYADHI VRITTANTA:

K/C/O DMT2 since 2 years

H/O Jaundice 1 and half years ago

K/C/O Liver cirrhosis, Portal hypertension since 1 and half years

K/C/O Umbilical hernia since 6 months

CHIKITSA VRITTANTA : Patient was on following medications.

Tab. Dytor plus (1-0-1) A/F

Tab. Inderal 20 (1-0-0) (A/F)

Tab. Thiotres (1-0-1) (A/F)

Tab. Actbile 300 (1-0-1) (A/F)

Tab. Vildapride M 50 mg (0-0-1) (A/F)

Tab. Cirrosam 400 (1-0-1) (A/F)

VAYAKTIKA VRITTANTA:

Ahara: Diet type was mixed diet (chicken/mutton/fish- once in a week). Patient used to consume only 2 meals per day at improper timings. Patient regularly consumed hotel food for a duration of 19 years from 2003-2022, with a dietary pattern predominantly consisting of spicy and oily preparations.

Vyasana : Alcohol history: 1 and half quarter (270ml) daily from the age of late 20 years. Stopped since 2 months

Patient had history of *Mutra*, *Puresha* and *Kshut Vega Dharana* during 2018-2022 due to his work pattern.

3. CLINICAL FINDINGS:

General condition was fair and afebrile, Pulse rate was bpm, Blood pressure was mmHg, Respiratory rate was 20 cycles/min, BMI was 27.6 Kg/m² (over weight), Pitting oedema-grade 3 was present in bilateral lower limbs. There were no signs of lymphadenopathy. On Gastrointestinal system examination, Per abdomen on inspection skin was shiny and had scaly

appearance associated with small spider angiomas. Shape of the abdomen was distended, Umbilicus was herniated measuring 11 X 11 cms, No any visible pulsations or peristalsis. On Auscultation hyperactive bowel sounds were heard. On palpation fluid thrill was positive and there was no tenderness. On percussion horseshoe dullness was noted. There were no significant clinical findings on the examination of the respiratory and cardiovascular systems. He was conscious and oriented to time, place and person.

ASHTA STHANA PAREEKSHA :

Nadi- Pitta-Kaphaja, Jihwa- Lipta (Peeta Varna), Mala- Prakruta, Mootra- Vikruta (Alpa mootrata), Shabda- Prakruta, Sparsha- Sheeta Sparsha over Urdhwa and Adho Shaka, Drik- Peeta Varna, Akriti- Madhyama

DASHAVIDHA PAREEKSHA :

Prakruti- Pitta-Kaphaja, Vikruti- Vata Pradana Tridosha, Sara- Avara, Samhanana- Madhyama, Pramana- Pravara, Satva- Pravara, Satva- Pravara, Satmya- Pravara, Ahara Shakti- (Abyavaharana Shakti- Avara, Jarana Shakti- Avara), Vyayama Shakti- Avara, Vaya- Madhyama

DIAGNOSTIC ASSESSMENT:

Patient was already known case of Liver cirrhosis associated with Portal Hypertension since one and a half years and based on the presenting complaints such as gross ascites, Bilateral pedal oedema, oliguria and other associated symptoms, case was clinically diagnosed as Hepatorenal syndrome and based on the clinical presentations *Jalodara* line of treatment was followed.

THERAPEUTIC INTERVENTION:

Acharya Charaka while explaining Udara Chikitsa has quoted “*Doshatimatropachayaat srotomarganirodhanaat sambhavatyudaram tasmaat Nityameva Virechayet*”[4]

So patient was initially administered with *Nitya Virechana* for 7 days with *Trivrut lehya* (10gms)+*Triphala Kashaya* (50ml) along with other oral medications like Tab. *Gokshuradi Guggulu DS*, Tab. *Arogyavardhini*, *Punarnavadi Kashaya*+*Patolamooladi Kashaya*, *Dashamoola Haritaki Lehya* . *Ekanga Lepa* with *Dashanga Lepa* + *Gomutra Arka* was applied externally over the abdomen. Following the initial phase, the patient was treated with *Basti Chikitsa*, *Anuvasana* with *Moorchita Tila Taila* and *Niruha* with *Dashamoola Kashaya* + *Vaishwanara churna* and throughout the course of treatment, *Dashamoola Siddha Yavagu* was given as *Pathya*.

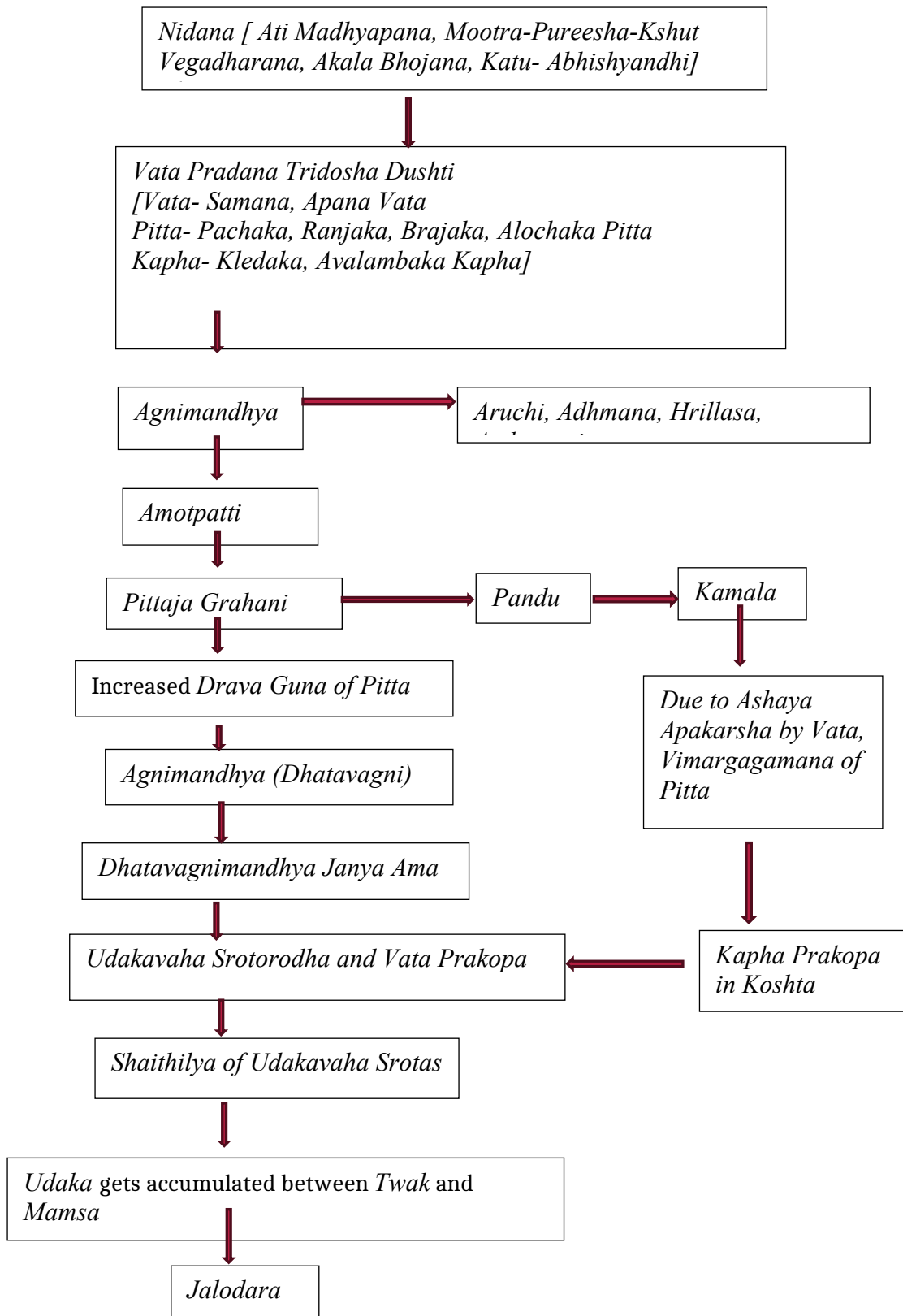
PATHYA-APATHYA:

Throughout the treatment patient was given only *Dashamoola Sidha Yavagu* and *Ganji*, Total water intake was restricted to only 1 litre per day and the same diet was advised to follow even after the discharge.

RESULTS :

The patient had significant symptomatic relief, accompanied by notable improvement in biochemical parameters and an enhanced quality of life.[Table]

SAMPRAPTI:



4. DISCUSSION:

Hepatorenal syndrome is applied to patients of both acute and chronic hepatic failure who develop renal failure as well, in the absence of clinical, laboratory or morphologic evidence of other causes of renal dysfunction. The acute renal failure is usually associated with oliguria and uraemia but with good tubular function. The histology of kidney is virtually normal,

suggesting functional defect for the renal failure. The pathogenesis of the syndrome is poorly understood but appears to be initiated by effective reduction of the renal blood flow (effective hypovolaemia) as a consequence of systemic vasodilatation and pooling of blood in portal circulation. The renal failure in the hepatorenal syndrome is reversible with improvement in hepatic function.[5]

In the present case as there is no direct reference of HRS in Ayurveda, based on the presenting complaints case was treated on the basis *Jalodara*. Initially *Nitya Virechana* was started with Tab. *Ichhabedi Rasa* which is mentioned in *Bhaishajya Ratnavali Udara Rogadhikara*. [6] Due to its *Ushna, Teekshna, Sookshma, Vyavayi* and *Vikasai Gunas* it acts as *Agni Deepana* and *Anulomana* and thus acts *Shodhana Dravya* primarily for *Ruksha Virechana Karma* also it has its main indication in *Uadra Roga*. On first day patient had 13 vegas, Hence from the second day *Nitya Virechana* was administered with *Trivrut lehya* along with *Triphala Kashaya*. *Trivrut Lehya* which is mentioned in *Ashtanga Hridaya Virechana Kalpadhyaya* is said to be *Sukha Virechaka* [7]. *Triphala Kwata* mentioned in *Bhaishajya Ratnavali Shotha Rogadhikara* is beneficial in *Vata-Kaphodbhava Shotha* [8]

Along with *Nitya Virechana* oral medications were started which included Tab. *Gokshuradi Guggulu* which is mentioned in *Sharangadhara Samhita Madhyama Khanda, Vati Kalpana Prakarana*. [9] Key ingredients being *Gokshura* and *Guggulu* having other ingredients like *Trikatu, Triphala* and *Musta*, *Gokshuradi guggulu* acts on *mutravaha srotas* and is *Mutrala(micturation)* and *Kledahara(removal of kleda)*. Anti-inflammatory and diuretic action of these promote microcirculation and reduce renal fibrosis. [10]

Tab. *Arogyavardhini Rasa* mentioned in *Rasarathna Samuchaya Kushta Prakarana* [11] having its key ingredients like *Katuki*, which possess hepatoprotective, antioxidant properties and promotes the regeneration of damaged cells [12] other ingredients being *Shudha Guggulu, Shudha Shilajatu, Triphala Churna, Sdhudha Parada, Shudha Gandhaka, Loha Bhasma, Abraka Bhasma, Tamra Bhasma* etc having properties like *Deepana, Pachana, Malashodhana* and is highlighted as *Sarvaroga Prashamana*.

Punarnavadi Kashaya mentioned in *Bhaishajya Ratnavali, Udara Roga Prakarana* [13] having ingredients like *Punarnava moola, Devadaru, Haridra, Katuki, Patola patra, Nimba Twak, Nagara, Guduchi, Shudha Guggulu, Go-mutra* and other ingredients is directly indicated in *Sarvanga Shotha, Udara, Pandu, Kasa, Shwasa* etc. *Patolamooladi Kashaya* mentioned in *Ashtanga Hridaya Chikitsa Sthana* [14], *Kushta Chikitsa* has its therapeutic benefits of *Dosha Vishodhana* and also indicated in *Haleemaka*.

Dashamoola Haritaki Lehya mentioned in *Chakradatta, Shotha Prakarana* [15] has key ingredients *Dashamoola* and *Haritaki* along with other ingredients such as *Trikatu, Trijata, Yavakshara* etc, has its main indication even in *Dharuna Shotha, Udara, Arochaka* and *Pandu*. *Madhiphala Rasayana* [16] is an Ayurvedic proprietary medicine having key ingredient *Matulunga* along with *Trikatu, Chitraka, Saindhava* etc, has therapeutic benefits to treat indigestion, loss of appetite, nausea, vomiting, acidity and so on. The combined synergistic effect of these medicines helped in effectively achieving comprehensive management of the condition.

Therapeutic procedures like *Ekanga Lepa* with *Dashanga Lepa* along with *Gomutra Arka* was applied over the abdomen for 10 days as there is direct indication of *Dashanga Lepa* application in *udara* in the context of *Charaka Samhita Udara Chikitsa*. [17]

Basti Chikitsa:

A total of five *Basti* procedures were planned, comprising two *Anuvasana Bastis* administered at the beginning and end of the schedule, and three *Niruha Bastis* in between; *Anuvasana Basti* was given with *Murchita Tila Taila* (100 ml), while *Niruha Basti* was administered using *Dasamula Kasha* (300 ml) along with *Vaisvanara Churna* (20 g). According to Acharya *Sushruta*, a properly administered *Basti*, remains in the *Pakwashaya, Shroni*, and below *Nabhi* and through the *Srotases*, the *Veerya* of *Basti Dravya* is spread to the entire body. Similarly, though *Basti* remains in the body only for a short time and it is excreted along with *Mala* by the action of *Apana Vayu*, due to the *Veerya* the morbid *Doshas* situated from the head to foot are also forcibly thrown out of the body. In the words of *Acharya Sushruta*, it is like the sun which though situated light years away, due to its *Ushna, Teekshna Prabhava* absorbs *Rasa* of *Prithvi* [18]. Thus, *Basti Chikitsa* proved effective in this condition as the combined use of *Dashamoola Kwata* and *Vaishwanara Churna* facilitated *Amapachana, Kleda Shoshana, Vata-anulomana*, and *Srotoshodhana*, leading to significant clinical improvement.

5. CONCLUSION:

This case study highlights that a comprehensive Ayurvedic management approach, incorporating *Shodhana, Shamana*, and *Pathya Ahara*, was effective in reducing the severity of clinical symptoms, improving biochemical parameters, and enhancing the overall quality of life of a patient with *Hepatorenal Syndrome*. The integrative application of *Nitya Virechana, Basti Chikitsa*, external therapies, and internal medications addressed the condition holistically by correcting *Dosha* imbalance and improving *Agni* and *Srotas* function. The observed outcomes suggest the potential role of *Ayurveda* in managing complex systemic disorders like *HRS*. However, the absence of long-term and repeated follow-up limits assessment of sustained

benefits. Moreover, conclusions drawn from a single case cannot be generalized. Nevertheless, this treatment protocol provides a valuable clinical insight and serves as an inspiration for managing similarly challenging cases through Ayurvedic principles.

ORAL MEDICATIONS

Table 1: Oral medicatons

SL.NO	THERAPEUTIC PROCEDURE	DURATION
1.	Tab. Icchabedi Rasa	1 tablet in the morning at empty stomach Observation: Patient had totally 13 vegas
2.	Trivrut Lehya + Triphala Kashaya	Trivrut Lehya (10 gms) + Triphala Kashaya (50ml) at 7:30 am empty stomach
3.	Ekanga Lepa over abdomen with Dashanga Lepa + Gomutra Arka over abdomen	For 10 days [2/6/25 to 11/6/25]
4.	Sarvanga Kashaya Seka with Dashamoola Kashaya	For 3 days [2/6/25 to 4/6/25]
5.	Basti Chikitsa Anuvasana Basti with Moorchita Tila Taila-100ml Niruha Basti with Dashamoola Kashaya-300ml + Vaishwanara Churna – 20 gms	For 4 days [7/6/25 to 10/6/25] 7/6/25- Morning -Niruha Afternoon-Anuvasana 8/6/25 } 9/6/25 } Niruha 10/6/25- Morning- Niruha Afternoon- Anuvasana

Table 2: Treatment procedures

SL.NO	INTERVENTION	DOSAGE AND TIMINGS	DURATION
1.	Tab. Gokshradi Guggulu DS	(2-2-2) After food with water	For 10 days
2.	Punarnavadi Kashaya + Patolamooladi Kashaya (15ml+15ml)	(30ml-0-30ml) Before food	For 10 days
3.	Dashamoola Haritaki Lehya	(0-0-2tsp) at Bedtime	For 10 days
4.	Tab. Arogyavardini Vati	(1-1-1) After food with water	For 7 days
5.	Madhiphala Rasayana	2tsp SOS	

Table 3: Anthropometric Measurements before and after the treatment:

ANTHROPOMETRIC MEASUREMENT	BEFORE TREATMENT [2/6/25]	AFTER TREATMENT [11/6/25]
Above Umbilicus	114 CMS	100 CMS
At Umbilicus	116 CMS	99 CMS
Below Umbilicus	106 CMS	97 CMS
Xiphisternum to Umbilicus	27 CMS	25 CMS
Umbilicus to Pubic symphysis	15 CMS	13 CMS
Umbilicus to Right anterior superior Iliac Spine	24 CMS	23 CMS
Umbilicus to Left anterior superior Iliac Spine	24 CMS	24 CMS
At Mid-Calf region	Right- 33 CMS Left- 35 CMS	Right- 23 CMS Left- 22 CMS
At Ankle region	Right- 23 CMS Left- 22 CMS	Right- 35 CMS Left- 33 CMS
At Dorsum of Foot	Right- 24 CMS Left- 23 CMS	Right- 24 CMS Left- 24 CMS
Umbilical Hernia	11 X 11 CMS	8 x 8 CMS
Weight	77.9 Kgs	73 Kgs



Before Treatment
[2/6/25]



After Treatment [11/6/25]



Dr. Sudarshan Surgical & Gastro Care
Ashoknagar, 100 feet Road, Mandya-571401
9686074383, 9686074356

Patient Name: Mr. Umesh
Registration No: 3020
Diagnosis: Dyspepsia
Age/Sex: 48 Yrs/M
Ref By: DRM HOSPITAL
Date: 02-04-2025-05:03:00 PM
Procedure: UGI


UPPER GLENDOSCOPY REPORT

Premedication :10% Lox Spray

FINDINGS
Vocal Cords : Normal
Cricopharynx : Normal
Esophagus : grade3x4 columns of varices at the lower end with spurter.
GE Junction : 38Cms
LES : Normal
Stomach
-not assessed filled with dark fluid-acid hematin

IMPRESSION
Esophageal grade3x4 columns of varices
Note: 4 bands EVLdeployed

Dr.Sudarshan N
MBBS..MS..MCh
Surgical Gastroenterologist



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Request No: 164529
Name: Mr UMESH M.
Age / Gender: 48 Years / Male
Ward / Bed No: SEMI SPL WARD / SSPL-FF-04-A
Ref. By Dr.: Dr ANU KRISHNA P
Reg No: 194874 / IP 60199
Req.Date: 11-06-2025/10:48
Received Date/Time: 11-06-2025/10:49
Dept Receive: 11-06-2025 / 10:49
Reporting Date: 11-06-2025/12:31

Specimen	Results	Normal Range	Units	SI Units
BIOCHEMISTRY				
TOTAL BILIRUBIN	3.3 (High)	0.1	1	mg/dl
Direct Bilirubin	2.0 (High)	Upto	0.2	mg/dl
PROTEIN	6.3	6	8	gm/dl
SERUM ALBUMIN	4.0	3.5	5.5	gm/dl
GLOBULIN	2.0 (Low)	2.5	3.5	gm/dl
AST	47 (High)	Upto	40	U/L
ALT	23	Upto	40	U/L
ALP	93	37	147	U/L
A/G RATIO	2:1			
HAEMATOLOGY				
Hb%	8.5 (Low)	13	18	gm/dl
WBC (TC)	3700 (Low)	4000	11000	Cells/Cumm
PC	60	75		%
H	31	37		%
E	08	3		%
M	05	1		%
PCV	22.7 (Low)	40	54	%
MCV	96.1 (High)	77	93	fL
MCH	35.9 (High)	27	32	pg
MCHC	37.4 (High)	30	35	gm/dl
PLATELET COUNT	0.40 (Low)	1.5	5	Lakhs/Cumm
RBC COUNT	2.27 (Low)	4.5	6.5	MILLIONS/CU.MM

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Ward / Bed No: SEMI SPL WARD / SSPL-FF-04-A
Ref. By Dr.: Dr ANU KRISHNA P
Reg No: 194874 / IP 60199
Req.Date: 11-06-2025/11:08
Received Date/Time: 11-06-2025/11:09
Dept Receive: 11-06-2025 / 11:09
Reporting Date: 11-06-2025/12:36

Specimen	Results	Normal Range	Units	SI Units
BIOCHEMISTRY				
UREA	55 (High)	20	40	mg/dl
CREATININE	4.1 (High)	0.8	1.4	mg/dl
URIC ACID	5.6	2	7	mg/dl
HAEMATOLOGY				
PLATELET COUNT	0.94 (Low)	1.5	5	Lakhs/Cumm

Reports: Before treatment

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Reporting Date: 11-06-2025/12:31

Specimen	Results	Normal Range	Units	SI Units
BIOCHEMISTRY				
UREA	34	20	40	mg/dl
CREATININE	1.5 (High)	0.8	1.4	mg/dl
LFT				
TOTAL BILIRUBIN	2.6 (High)	0.1	1	mg/dl
Direct bilirubin	1.6 (High)	Upto	0.2	mg/dl
PROTEIN	6.1	6	8	gm/dl
SERUM ALBUMIN	4.0	3.5	5.5	gm/dl
GLOBULIN	2.1 (Low)	2.5	3.5	gm/dl
AST	36	Upto	40	U/L
ALT	12	Upto	40	U/L
ALP	108	37	147	U/L
A/G RATIO	1.9:1			
HAEMATOLOGY				
Hb%	8.1 (Low)	13	18	gm/dl

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Reporting Date: 11-06-2025/12:27

Specimen	Results	Normal Range	Units	SI Units
HAEMATOLOGY				
PLATELET COUNT	0.94 (Low)	1.5	5	Lakhs/Cumm

Reports: After treatment

Conflict of interest: None

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