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Effectiveness of *Hareetakyadi Kashaya* in the treatment of Urolithiasis- A Single Case Study

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ABSTRACT:

Urolithiasis is a common and painful human illness that typically occurs in middle life during one's most productive years. Diet, excess body weight, some medical conditions, and certain supplements and medications are among some of the causes of Urolithiasis. The typical symptoms of Urolithiasis are radiating pain from loin to groin, dysuria, burning micturition, hematuria, nausea. The features of urolithiasis can be co-related to the *Lakshana* of *Mutrashmari*. This is a case report of a 28 years old female patient, with the complaint of radiating pain from right loin to groin, and nausea since 3 months associated with low back ache since 2 months and dysuria, frequency and urgency of micturition present since 2 days; came with USG abdomen & pelvis showing the presence of calculus of 5mm in middle calyx of right kidney. Patient was advised to take freshly prepared *Hareetakyadi Kashaya* 48ml twice daily with 12 ml honey as *Anupana* before food for 30 days and follow up was done after 30 days of completion of treatment. *Hareetakyadi Kashaya* is mentioned in *Chakradatta Mutrakrichra Chikitsa Adhyaya;* As *Tridoshas* are involved in the *Samprapti* of this disease, drugs having *Madhura*(sweet)*, Tikta* (Bitter) *and Kashaya Rasa* (Astringent), *Tridosha Shamana* properties are the ideal choice for the treatment. In *Hareetakyadi Kashaya,* the drugs are having *Ashmarihara* and most of the drugs are having *Mutrala* action which in turn helps in removing the calculus. After treatment, the USG abdomen & pelvis showed no presence of calculus. *Hareetakyadi Kashaya* is effective in managing Urolithiasis.

KEYWORDS: *Hareetakyadi Kashaya*, *Mutrashmari,* Urolithiasis.

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INTRODUCTION:

Urolithiasis is formation of urinary calculi at any level of the urinary tract. It is estimated that approximately 2% of the population experiences renal stone disease at some time in their life with male-female ratio 2:1. [1]. The recurrence rate ranges from 21% to 53% after 3-5years. [2] Urolithiasis occurs when crystals that the stone is composed of supersaturate the urine due to being present in a high concentration and begin to collect and crystallize within the

parenchyma of the kidney, forming the renal calculi. These crystals will aggregate together and continue to enlarge with the potential to migrate into the ureter and become symptomatic. If the stone causes an obstruction and does not allow for the passage of urine through the ureter, hydronephrosis can occur secondary to upstream dilation of the ureter and renal pelvis. The most common location for a stone to obstruct is near the pelvicuretero junction (PUJ) because in this region the diameter of the ureter is very narrow. There are two other areas of ureteral narrowing, the first being where the ureter crosses over the iliac vessels and the second at the vesicoureteric junction (VUJ). Stones are painful within the ureter because as they pass through the ureter, increased luminal tension and hydronephrosis will lead to prostaglandin release, resulting in colicky pain associated with the condition.

Crystal nucleation and growth are key factors in the production of all types of kidney stones. Nucleation is when crystals begin to compound together to initiate stone formation. Supersaturation of the urine with organic materials contributing to stone formation is a driving force of this mechanism.

There are two theories, free particle vs. fixed particle, that describe the growth and aggregation of crystals. The free particle mechanism states that the crystals will increase in size and aggregate within the urine of the tubules. These aggregates enlarge and block urine outflow from tubular openings, which promotes the formation of smaller stones. The fixed particle mechanism states that stones formed attached to calcific plaques called Randall plaques. These plaques are rooted deeply within the basement membrane of the loop of Henle. The cause of the initial formation of Randall's plaque is unknown.

A kidney stone usually will not cause symptoms until it moves around within the kidney or passes into the ureters. If it becomes lodged in the ureters, it may block the flow of urine and cause the kidney to swell and the ureter to spasm, which can be very painful and leads to the symptoms like severe, sharp pain in the side and back, below the ribs, pain that radiates to the lower abdomen and groin, pain that comes in waves and fluctuates in intensity, pain or burning sensation while urinating. Renal calculi are characterized clinically by colicky pain (renal colic) as they pass down along the ureter and may be manifested by hematuria. Ureteral stone formation leads to obstruction of ureteral passage resulting in acute flank pain. [3]

Ureterolithiasis is reported when obstruction of the urinary tract by calculi occurs at the pelviureteric junction (PUJ) which is considered to be the narrowest anatomical area of the ureter. Ureteral stones are treated based on the size, number and location. Shock wave lithotripsy and open surgery are widely being performed, while medical expulsive therapy can be applied when the size of stone is small. Bladder stones, also known as vesical calculi accounts for nearly 5% of urinary system calculi. Pain during urination, incontinence, bladder bleeding, lumbar pain and recurrent urinary tract infection are observed in bladder stones. [4]

In *Ayurveda* it can be co-related with the *Lakshana* of *Mutrashmari.* [5] It is one among the eight *Mahagada*. The reason for considering the disease as *Mahagada* is because, this disease is *Tridoshaja,* it is *Marmashrayee* and *Vyakthasthana* of *Ashmari* is *Basti* which is one among the *Dashavidha Pranayatana*. In *Ashmari,* the *Mutravaha Srotas* is mainly involved. The *Mula* of *Mutravaha Srotas* are *Basti* and *Vankshana.* [6] *Basti* here to be taken as the entire urinary system. This is the place where *Dosha Dushya Sammurchana* takes place and according to the site of *Khavaigunya,* the *Doshas* gets lodged and

ultimately *Ashmari* formation takes place. In the persons who do not undergoes *Shodhana* procedures and uses unwholesome diet, either *Tridosha* or *Kapha* gets aggravated and mixes with *Mutra*, enters into *Basti* and takes the shape of an *Ashmari*. *Acharya Susruta, Charaka* and *Vagbhata* have the similar opinion. As clear water kept in a new pitcher gets muddy in due course of time, similarly calculus is formed in *Basti.* [7] *Acharya Susruta* has given another example to explain the *Ashmari* formation. The way, in which the air and electricity produced by thunders during rain freezes the water, similarly *Pitta* located in the bladder, in conjugation of *Vayu* consolidates *Kapha* to form *Ashmari.* [8] *Hareetakyadi Kashaya* mentioned in *Chakradatta Mutrakrichra Chikitsa Adhyaya.* [9] The ingredients of the *Kashaya* are *Hareetaki* (*Terminalia chebula*), *Gokshura* (*Tribulus terrestris*), *Aragwadha* (*Cassia fistula*), *Pashanabheda (Rotula aquatica), Dhanvayavasa (Fagonia cretica).*

CASE PRESENTATION:

Presenting complaints with history:

A 28 year old female patient, reported to Kayachikitsa OPD, on 21/10/2021 with complaints of radiating pain from right loin to groin, and nausea since 3 months,associated with low back ache since 2 months. She also had the complaints of urgency of micturition along with increased frequency of micturition and dysuria since 2 days She had a history of recurrent UTI.

Patient had no H/O past illness. In personal history, Appetite: Poor, Nature of diet: Mixed, Bowel Habits: Irregular, Stool Consistency: Constipated, Urine Output: Frequency & Urgency of micturition, Physical Exercise: Heavy labour, Sleep: Normal, Allergies: not detected, Emotional Stress: Nil, Menstrual Cycle: Regular, 3-4 days/45 days, Obstetric history: G1P1L1A0.

THERAPEUTIC INTERVENTION:

Patient was advised to take freshly prepared *Hareetakyadi Kashaya* 48ml twice daily with 12 ml honey as *Anupana* before food for 30 days and follow up was done after 30 days of completion of treatment. The assessment of result was done before and after treatment and after follow-up as per subjective and objective criteria adopted (table – 3, 4). Also, Blood routine examination was done before treatment (only) and the results are: Hb – 11.8gm% Total WBC count – 11,300 cells/cu mm, Neutrophils – 71%, Lymphocytes – 24%, Eosinophils – 03%, Monocytes – 02%, Basophils – 00% & ESR – 12 mm/hr. RFT- Urea- 20 mg/dl, Creatinine- 0.7 mg/dl, Uric acid- 5.0 mg/dl.

Table-1: Grading of subjective parameters:

Subjective parameters	Grade 0	Grade 1	Grade 2	Grade 3
Pain	No pain	Bearable pain	Bearable pain and require oral medications	Unbearable pain and require injectable medication
Dysuria	No dysuria	Occasional dysuria	Regular dysuria, medication not required	Regular dysuria, requires medication
Hematuria	Nil	Smoky colour urine	Blackish colour urine	Bright red colour urine
Burning micturition	No burning micturition	Occasional burning micturition	Regular burning micturition, medication not	Regular burning micturition, requires

			required	medication
Nausea	Absent	Present		
Low back ache	Absent	Present		
Frequency of micturition	Absent	Present		
Urgency of micturition	Absent	Present		

Table-2: Grading of Objective parameters:

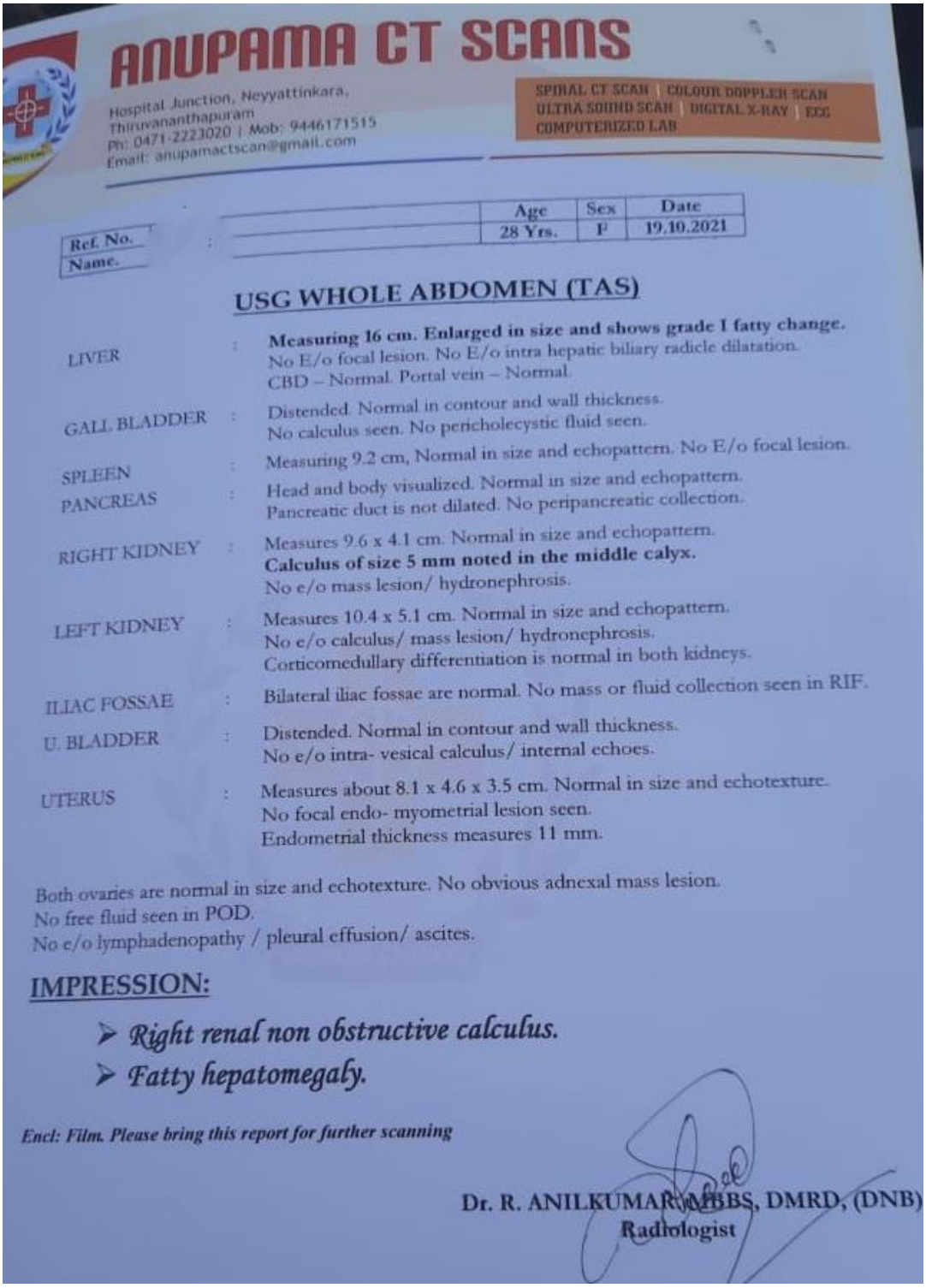
Objective parameters	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
Size of calculi	No calculi	0 to 3mm	3 to 6mm	6 to 8mm	
Number of calculi	No calculi	One calculus	Two calculi	Three calculi	More than 3 calculi

Table-3: Assessment of result as per subjective parameters:

Subjective parameters	Before treatment	After treatment	After follow-up
Pain	Grade 1	Grade 0	Grade 0
Hematuria	Grade 0	Grade 0	Grade 0
Dysuria	Grade 2	Grade 0	Grade 0
Burning micturition	Grade 0	Grade 0	Grade 0
Nausea	Grade 0	Grade 0	Grade 0
Low back ache	Grade 1	Grade 0	Grade 0
Frequency of micturition	Grade 1	Grade 0	Grade 0
Urgency of micturition	Grade 1	Grade 0	Grade 0

Table-4: Assessment of result as per objective parameters:

Objective parameters	Before treatment	After treatment	After follow-up
Size of calculi	Grade 2	Grade 0	Grade 0
Number of calculi	Grade 1	Grade 0	Grade 0
RBC	0-1 cells/hpf	Nil	Nil
Pus cells	10-15 cells/hpf	2-4 cells/hpf	6-8 cells/hpf
Crystals	Nil	Nil	Nil



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SPIRAL CT SCAN | COLOUR DOPPLER SCAN
ULTRA SOUND SCAN | DIGITAL X-RAY | ECG
COMPUTERIZED LAB

Ref. No. / Name.	Age	Sex	Date
	28 Yrs.	F	19.10.2021

USG WHOLE ABDOMEN (TAS)

LIVER : **Measuring 16 cm. Enlarged in size and shows grade I fatty change.** No E/o focal lesion. No E/o intra hepatic biliary radicle dilatation. CBD – Normal. Portal vein – Normal.

GALL BLADDER : Distended. Normal in contour and wall thickness. No calculus seen. No pericholecystic fluid seen.

SPLEEN : Measuring 9.2 cm, Normal in size and echopattern. No E/o focal lesion.

PANCREAS : Head and body visualized. Normal in size and echopattern. Pancreatic duct is not dilated. No peripancreatic collection.

RIGHT KIDNEY : Measures 9.6 x 4.1 cm. Normal in size and echopattern. **Calculus of size 5 mm noted in the middle calyx.** No e/o mass lesion/ hydronephrosis.

LEFT KIDNEY : Measures 10.4 x 5.1 cm. Normal in size and echopattern. No e/o calculus/ mass lesion/ hydronephrosis. Corticomedullary differentiation is normal in both kidneys.

ILIAC FOSSAE : Bilateral iliac fossae are normal. No mass or fluid collection seen in RIF.

U. BLADDER : Distended. Normal in contour and wall thickness. No e/o intra- vesical calculus/ internal echoes.

UTERUS : Measures about 8.1 x 4.6 x 3.5 cm. Normal in size and echotexture. No focal endo- myometrial lesion seen. Endometrial thickness measures 11 mm.

Both ovaries are normal in size and echotexture. No obvious adnexal mass lesion.
No free fluid seen in POD.
No e/o lymphadenopathy / pleural effusion/ ascites.

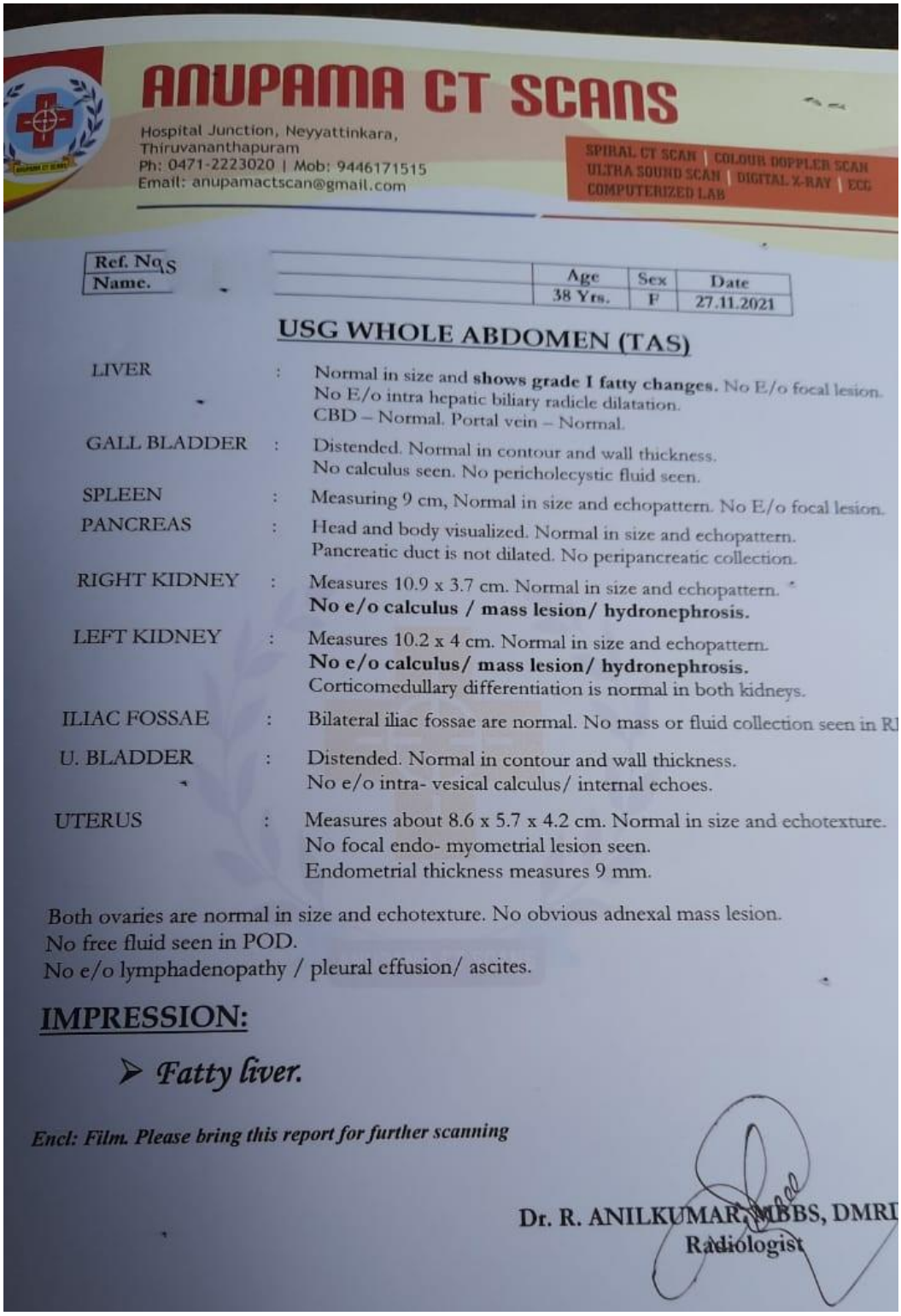
IMPRESSION:

- *Right renal non obstructive calculus.*
- *Fatty hepatomegaly.*

Encl: Film. Please bring this report for further scanning

Dr. R. ANILKUMAR, MBBS, DMRD, (DNB)
Radiologist

Fig-1: USG report before treatment



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COMPUTERIZED LAB

Ref. No. S
Name.

Age	Sex	Date
38 Yrs.	F	27.11.2021

USG WHOLE ABDOMEN (TAS)

LIVER : Normal in size and **shows grade I fatty changes.** No E/o focal lesion.
No E/o intra hepatic biliary radicle dilatation.
CBD – Normal. Portal vein – Normal.

GALL BLADDER : Distended. Normal in contour and wall thickness.
No calculus seen. No pericholecystic fluid seen.

SPLEEN : Measuring 9 cm, Normal in size and echopattern. No E/o focal lesion.

PANCREAS : Head and body visualized. Normal in size and echopattern.
Pancreatic duct is not dilated. No peripancreatic collection.

RIGHT KIDNEY : Measures 10.9 x 3.7 cm. Normal in size and echopattern.
No e/o calculus / mass lesion/ hydronephrosis.

LEFT KIDNEY : Measures 10.2 x 4 cm. Normal in size and echopattern.
No e/o calculus/ mass lesion/ hydronephrosis.
Corticomedullary differentiation is normal in both kidneys.

ILIAC FOSSAE : Bilateral iliac fossae are normal. No mass or fluid collection seen in RI

U. BLADDER : Distended. Normal in contour and wall thickness.
No e/o intra- vesical calculus/ internal echoes.

UTERUS : Measures about 8.6 x 5.7 x 4.2 cm. Normal in size and echotexture.
No focal endo- myometrial lesion seen.
Endometrial thickness measures 9 mm.

Both ovaries are normal in size and echotexture. No obvious adnexal mass lesion.
No free fluid seen in POD.
No e/o lymphadenopathy / pleural effusion/ ascites.

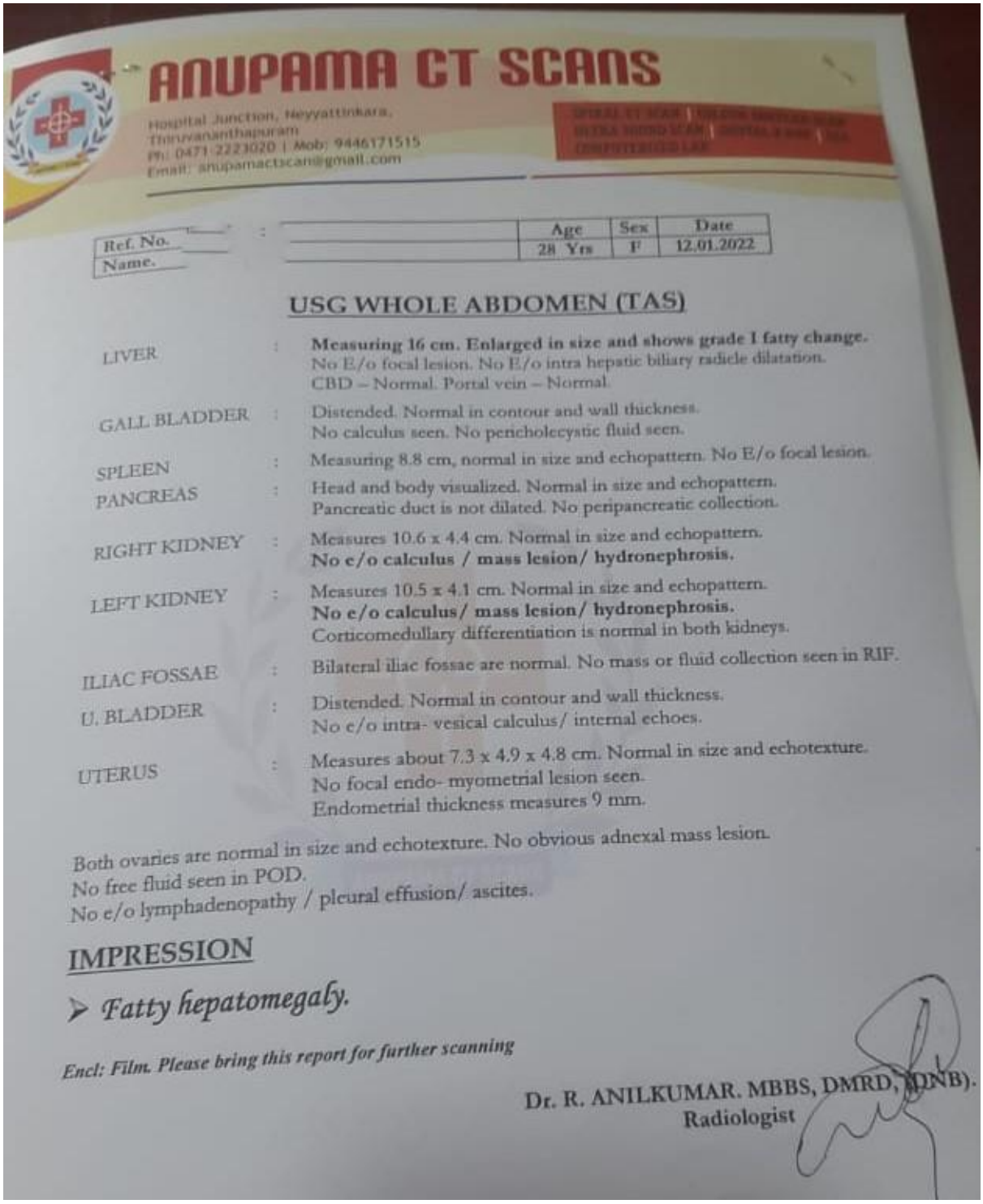
IMPRESSION:

➢ *Fatty liver.*

Encl: Film. Please bring this report for further scanning

Dr. R. ANILKUMAR, MBBS, DMRI
Radiologist

Fig-2: USG report after treatment



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Ref. No.	Age	Sex	Date
Name.	28 Yrs	F	12.01.2022

USG WHOLE ABDOMEN (TAS)

LIVER : **Measuring 16 cm. Enlarged in size and shows grade I fatty change.** No E/o focal lesion. No E/o intra hepatic biliary radicle dilatation. CBD – Normal. Portal vein – Normal.

GALL BLADDER : Distended. Normal in contour and wall thickness. No calculus seen. No pericholecystic fluid seen.

SPLEEN : Measuring 8.8 cm, normal in size and echopattern. No E/o focal lesion.

PANCREAS : Head and body visualized. Normal in size and echopattern. Pancreatic duct is not dilated. No peripancreatic collection.

RIGHT KIDNEY : Measures 10.6 x 4.4 cm. Normal in size and echopattern. **No e/o calculus / mass lesion/ hydronephrosis.**

LEFT KIDNEY : Measures 10.5 x 4.1 cm. Normal in size and echopattern. **No e/o calculus/ mass lesion/ hydronephrosis.** Corticomedullary differentiation is normal in both kidneys.

ILIAC FOSSAE : Bilateral iliac fossae are normal. No mass or fluid collection seen in RIF.

U. BLADDER : Distended. Normal in contour and wall thickness. No e/o intra- vesical calculus/ internal echoes.

UTERUS : Measures about 7.3 x 4.9 x 4.8 cm. Normal in size and echotexture. No focal endo- myometrial lesion seen. Endometrial thickness measures 9 mm.

Both ovaries are normal in size and echotexture. No obvious adnexal mass lesion.
No free fluid seen in POD.
No e/o lymphadenopathy / pleural effusion/ ascites.

IMPRESSION

➢ *Fatty hepatomegaly.*

Encl: Film. Please bring this report for further scanning

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Radiologist

Fig-3: USG report after follow up

RESULTS AND DISCUSSION:

Acharya Susruta explained two main causes of *Ashmari* as *Asamshodhanasheela and Apathya Sevana* . Improper purificatory procedures result in the accumulation of *Malarupa Doshas* in *Basti. Apathyasevana* like *Samashana, Adhyashana, Vishamashana* and indulging in food rich in *Madhura, Snigdha Guna, Guru Ahara, Sheeta Ahara, Tikshna and Ushna Ahara* alter the biochemical properties of urine. Animal protein (*Mamsasevana)*, dairy products or high fat diet can be considered as *Guru*, *Snigdha Ahara* which produces acidic urine.

Ati Vyayama is another important *Nidana for Ashmari*, as it leads to *Vata Prakopa*. *Mutra Vegadharana* which is one of the most important *Nidanas* for the formation of *Ashmari*, causes *Apanavayu Prakopa* and also at the same time results in stasis of urine leading to supersaturation of solutes resulting in *Ashmari*. *Madya Sevana* leads to vitiation of all *Tridoshas. Divaswapna* is also a *Nidana* of *Ashmari* which causes *Kapha Prakopa.*

As per the etiopathogenesis of *Ashmari*, it is mentioned in the classics that the person who does not undergo proper *Shodhana* and those who indulge in *Apathya Sevana*, the *Doshas* get aggravated in the *Mutravaha Srotas*. The site of *Mutravaha Srotas* being *Apana Sthana*, *Apana Vata* vitiation happens. So the normal function of *Apana Vata* like elimination of *Mutra* and *Mala* gets hampered leading to stasis of Urine in *Basti.* The *Tridoshas* which are already in a vitiated state act on the stagnated *Mutra* thereby altering the biochemical properties of urine. The *Kapha* is the *Samavaya Karana* for the formation of *Ashmari*. This *Kapha* present in *Mutra* can be considered as the matrix component told in modern science. *Vata, Pitta* and *Kapha* act upon the *Kledatwa* of urine and urine gets solidified by the action of *Shoshana Guna* of vitiated *Vayu*. *Sleshma* forms the nidus for the formation of *Ashmari* which has adhesive character and forms the ground substance for the formation of *Ashmari*. For the formation of stone, nidus serves as for crystal aggregation, which is said, as *Kapha Sangatana* in our classics. Crystal aggregation and retention within the kidney are prerequisites for urinary crystals to be converted to urinary calculi. Stone formation requires Super saturation of urine, this super saturation may result from any cause like decreased urinary output, excessive perspiration - all these can be put into one word *Vishoshana* which brings about the concentration and supersaturation of urine.

Hareetakyadi Kashaya is mentioned in *Chakradatta, Mutrakrichra Chikitsa Adhyaya*. It consists of 5 drugs and they are *Hareetaki, Gokshura, Aragwadha, Pashanabheda* & *Dhanvayavasa* and it is administered with *Madhu* as *Anupana*. It is formulated in a fruitful combination of potential herbs having the properties like *Ashmarihara, Mutrala, Mutrakrichrahara* and thereby will act on urinary system and helps in breaking the stone in Urolithiasis. Most of the drugs possess *Madhura, Tikta* and *Kashaya Rasa* which helps in pacifying all the *Tridoshas. Ashmari* is a *Tridoshaja* disease. In the formation of *Ashmari* each *Dosha* plays a significant role. *Kapha* which is the main cause initiates the formation of *Ashmari* by consolidation of *Mutra. Pitta* is responsible for *Ghanata* or compactness by its *Ushmaguna.* Ultimately *Vata* dries the formed material by its *Rukshaguna* and also harden the mass resulting in the ultimate formation of *Ashmari*. The drugs in the formulation act in this condition by its *Tridoshahara, Ashmarihara, Vedanasthapana, Anulomana* and *Mutrala* properties. *Hareetaki* is *Mutrajanana, Ashmarinashana, Anulomana, Vedanasthapana, Shothahara*. *Aragwadha* due to its *Madhura ,Tikta Rasa* and *Sheeta Virya* increase the urine output, acts as *Mutrala and Pittashamaka*. *Gokshura* is *Ashmarinashana, Vatahara, Vastishodhana* and *Mutrala*. *Pashanabheda* due to its *Teekshna Guna* is helpful in *Ashmarinashana* and *Kapha Pitta Shamana*. *Dhanvayavasa* is *Kaphanisaraka* and *Mutrala*. *Madhu* is *Sookshma* and *Srotovishodaka*, removes *Sthanika Sanga* and does *Lekhana.* It is *Yogavahi* and it enhances the properties of *Kashaya* and does S*rotoshodhana.* All these properties of the formulation help to reduce the size of the stone and expel it out from the body. It also corrects *Agni* by *Deepana*

and *Pachana*, therefore it prevents formation of *Ama* as well as breaks the pathogenesis of *Ashmari* and helps to prevent further *Ashmari* formation. Thus in total, this formulation has the capacity to disintegrate the pathogenesis of the disease *Ashmari* and due to its diuretic action it flushes out the disintegrated *Ashmari* by the process of Diuresis

The outcome of this case study was the absence of calculus in USG abdomen & pelvis and in urine analysis also there was reduction in RBC and pus cells. Also, the patient showed significant changes in the subjective parameters. *Hareetakyadi Kashaya*, it can be considered as *Ashmarihara, Mutrakrichrahara* and thereby will act on urinary system and helps in breaking the stone in urolithiasis. The *Mutrala* property of the formulation helps in increasing the urine output and thereby reducing the urine concentration.

Pain radiating from loin to groin is the cardinal symptom of urolithiasis. Vitiated *Apana Vayu* is the result of pain in *Ashmari*. The formulation will help in *Vatanulomana* and also act as *Vedanasthapana* hence will help in reducing the pain.

Dysuria refers to painful urination, often described as burning, scalding or stinging. It is often associated with increased frequency of micturition and a feeling of incomplete emptying of the bladder. *Sashula Mutra Pravruthi* is a feature of Urolithiasis. Relief in symptoms may be due to *Anulomana, Vedanasthapana* and *Mutrala* properties of the drug.

Nausea is caused by the common innervation pathway of the renal pelvis, stomach, and intestines through the celiac axis and vagal nerve afferents. Stones in the kidneys can trigger nerves in the GI tract, which can upset stomach. Nausea and vomiting is also the body's way of responding to intense pain. As one of the innervation pathway for nausea is renal pelvis, which can be considered as *Apana Vata* vitiation which causes *Vaigunya* of *Samana Vayu* present in *Koshta* and leads to nausea. *Hareetakyadi Kashaya* is having *Deepana, Pachana* and *Anulomana* properties which might have helped in reducing the symptom nausea.

Low back ache in Urolithiasis is the type of pain that prevents patients from finding a comfortable position. Usually this pain is differentiated from other causes of low Back ache by the pain which do not get relieved even by changing of the position. Depending on its size, the stone may be lodged somewhere between the kidney and bladder. The pain can come in waves, be a stabbing pain or throbbing pain. *Shoola* in *Kati Pradesha* is one of the *Lakshana* of *Pakwashaya Gata Vata.* Also in *Pakwashaya Gata Vata* the mentioning of *Ashmari* has also been found which will be due to increase in *Vata Dosha.* The *Shoola* may be of various types which occurs by provoked *Vata Dosha,* thus here the vitiated *Vata Dosha* causes the pain in low back. *Vatahara* property of the *Kashaya* helps in *Vatanulomana* hence helps in reducing the pain. Urinating more frequently than usual or feeling the need to urinate more frequently is the main symptom seen in *Mutravaha Sroto Dusti* and *Ashmari is a Mutravaha Sroto Vikara.* The primary cause of frequency of micturition is decreased bladder capacity with a resultant decrease in the volume of urine per voiding. It can be due to inflammation of the bladder due to infection or altered pH. This symptom is seen in Urolithiasis. There is vitiation of *Apana Vayu* which causes the *Pratiloma Gati* of *Apana Vayu* and vitiated *Pitta Dosha* due to its *Ushna* and *Tikshna Guna* irritates the urinary pathway which decreases the urine volume and results in change in urinary pH resulting in *Muhur Muhur Mutra Pravrutti*. The drugs in *Hareetakyadi Kashaya* like *Gokshura* and *Hareetaki* have got diuretic, antimicrobial activity and also *Balya*

property of these drugs will help in enhancing the bladder capacity. All together it will help in flushing out the bacteria that causes infection and also helps in the production of a good amount of urine and thus helping in maintaining the pH of urine.

Urgency of micturition is a sudden and uncontrollable need to urinate. This sudden impulse stems from a spontaneous contraction of bladder muscles. Urinary urgency occurs when suddenly the pressure in the bladder builds up and it becomes difficult to hold the urine. Urinary urgency can occur regardless of whether the bladder is full or not. It can also cause increased frequency of micturition. This comes under the symptoms of Urolithiasis in which the inflammation of the urinary bladder causes increased pressure in the bladder and results in the urgency of micturition. The vitiated *Apana Vayu* causes abnormal *Mutra Pravruthi* and it can be considered as the cause for urgency of micturition. *Madhura Rasa, Sheeta Virya, Pittashamana* property helps in reducing the inflammation of the bladder and *Vatahara* and *Anulomana* property corrects the *Apana Vayu.* Thus it corrects the urgency of micturition and leads to proper *Mutra Pravruti*

CONCLUSION:

The patient underwent treatment for 30 days showed marked relief in the symptoms and absence of calculus in USG. Hence, *Hareetakyadi Kashaya* has a significant role in the management of urolithiasis of small size stones.

LIMITATION OF THE STUDY:

As it is a single case study, the efficacy of *Hareetakyadi Kashaya* cannot be generalized. Time period is of short duration to observe its reoccurrence. The study was conducted in all types of urolithiasis and hence the effectiveness on specific type of stone was not analyzed.

PATIENT CONSENT:

A written consent was obtained from the patient before starting the treatment and consent also taken for publication.

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