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Clinical interpretation of Kub with Ayurvedic diseases

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Abstract

Illness diagnosis primarily focuses on identifying and treating the illness's underlying cause and putting various diagnostic instruments to work in order to treat that specific condition. The basis of an ayurvedic diagnosis includes the patient's Prakriti, Hetu (etiological factors), Dosha-Dhatu-Mal, Srotodusti/Srotoviddha, and Agni state. Different sorts of diagnostic methods, such as Trividha, Shadavidha, Astavidha, and Dashvidha, are detailed in Ayurveda. The foundational elements of all Ayurvedic Pariksha are Aptopdesh (authoritative assertions), Pratyaksha (examination through the five sense organs), Anuman (act of drawing conclusions from what is learned), and Yukti (planning, implementing, and putting knowledge into practise using one's intellect and reasoning) Pramana. Similar to this, current medical research uses a wide variety of diagnostic techniques to identify anomalies in various organs. For the disease in question, they gather information from the patient's medical history, clinical examination, laboratory investigation, and radiographic study. One of these, known as KUB, is used to assess the anatomical health of the kidney, ureter, and bladder. The clinical interpretation of a KUB radiograph with Mutravaha-Sukravaha srotas, Vrikka, and various Uadargat organ disorders is presented in this article.

Keywords: KUB, Mutravaha-Sukravaha srotas, Vrikkagat vikara, Pariksha, Diagnosis, Interpretation, Pramana

Introduction

According to Ayurveda, there are four main categories of Pramana: Aptopdesh (authoritative statements), Pratyaksha (Examination using the five senses), Anuman (Drawing conclusions from what is known), and Yukti (planning, applying, and putting knowledge into practise using one's intellect and reasoning). Trividha 2, Shadavidha 3, Astavidha 4, and Dashvidha 5 are additional Parikshas that fall under the umbrella of Aptopdesh Pratyaksha Anuman Yukti Pramana. Numerous diagnostic methods are available to identify the anomalies of various organs in the current medical diagnostic system. For the diagnosis of the relevant disease, they use a history, clinical examination, laboratory investigation, and radiographic investigation. KUB is one of the diagnostic tools for abnormalities of the kidneys and the urinary tract. It aids in managing crises and stabilising patients' critically ill health conditions.

The KUB reporting is used to interpret the anatomical states of the Mutravaha 6 and Sukravaha 7 srotas, Vrikka, and several Uadargat organs (Pakvashaya, Grahani, Yakrit, and Pleeha). Making a prediction for an Ayurvedic disease is beneficial. We can create a new horizon to make a Samprapti and Sadhya-Asadhyata of Mutravaha-Sukravaha srotas, Vrikka, and some Uadargat organs vikar by employing KUB as an Ayurvedic diagnostic tool. It will serve as a better illustration of Yukti Pramana (planning, implementing, and acting upon information utilising one's intellect and reasoning skills).

Uric acid is the byproduct of purine metabolism in humans. Humans obtain purines from three different sources: dietary consumption of foods high in purines, metabolic hepatic production, and cellular RNA through cell turnover.

Purine metabolism generates xanthine, which xanthine oxidase then converts to uric acid. Allopurinol functions in this situation by inhibiting the activity of xanthine oxidase, which reduces the synthesis of uric acid in favour of xanthine, which is far more soluble than uric acid. Uricase further breaks down uric acid in the majority of other animals into the extremely soluble compound allantoin, which has no negative health effects.

At between 300 and 400 mg per day, endogenous uric acid production is comparatively steady. Naturally, the proportion of food sources varies, but in average, nutrition accounts for 50% or less of the total daily generation of uric acid. On a typical Western diet, daily excretion of uric acid is often estimated to be around 10 mg/kg of body weight. However, dietary factors, such as a high purine diet, can substantially increase urinary uric acid excretion by 50% or more.

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While a high purine diet can increase uric acid production, since ammoniogenesis is intact there is adequate urinary pH buffering so uric acid stone formation is limited. However, the hyperuricosuria leads to increased calcium oxalate urolithiasis.

The etiology of uric acid stones can be diverse and is classified as follows [14]

Materials and Methods

This study is done under following steps-

- Indication of test
- Explain the test under following points
- Preparation of the patient.
- Procedure
- Risk factors
- Precautions
- Interpretation of test report with Ayurvedic diseases
- How to check clinically on patient by Ayurvedic method
- Related matter is compiled from different Ayurvedic and Modern medical literatures. Discussion is done after reorganized and critically analyzed all matters and finally a productive conclusion has been made.

KUB

To check for obstructions or abnormalities caused by mass, trauma, hemorrhage, organomegaly, stones, or congenital anomalies in the kidney, ureter, or bladder, as well as other abdominal organs, it is helpful to see and access the abdominal organs. It is recommended for people with acute pelvic and thoracic discomfort, intestinal blockages, abdominal tumors, foreign bodies, kidney stones, gall stones, etc. USG, CTscan, and KUB X-ray have all been performed.

KUB X-RAY [8]

Acute abdominopelvic pain, an intestinal blockage, foreign bodies tumours in the abdomen, kidney stones, gall stones.

Preparation of the patient

No prior preparation will be required. Radio-opaque objects like –clothing, jewelry, accessories and metels may need to be removed. Patient may be asked to empty their bladder.

Procedure

The patient will be instructed to remove any clothing, jewelry, belts, or other items from the area around their abdomen. On a dedicated radiology table, the patient may be instructed to stand or lie on their back in the supine position. A sheath with a specific tape carrying the film will be positioned behind the patient's back, and an X-ray generating apparatus will be positioned in front of the patient's belly. The lab technician will go behind a unique security screen. The patient is required to hold their breath when prompted. You will be told when the treatment is finished a short while later. There is zero discomfort involved with the operation. After the test is over, the patient can change into clothes and exit the lab.

Risk factor-

- ❖ A person is exposed to low levels of radiation so risk will be minimal.
- ❖ Pregnant women are in risk.
- ❖ Some patient may complaint of allergy to contrast media if it is used.

- I. **Precautions-** The exposure of radiation will be minimal. While taking the image, the radiologic technologist will step behind a protective window and to ask the patient remain completely still otherwise any movement can distort the image.

KUB Scan [9]

As KUB X-Ray, Cyst-Abscess-Tumour, Bladder distension, Congenital renal anomaly, Hydronephrosis, Organomegaly, Renal hematoma, Trauma to liver –spleen –kidney-bladder.

Preparation of the patient

No prior preparation will be required. Radio-opaque objects like –clothing, jewelry, accessories and metels may need to be removed.

Procedure

The patient could be required to put on a lab or hospital gown. be asked to lay down on the CT table before being put into the scanner. The machine will be turned on by the technician in the control room. A CT scanner rotates around the patient while using X-rays to capture pictures. Cross-sectional photographs of the KUB area are created using these photos after computer processing. After the patient is taken out of the scanner, they could call them again to give them the report, films, or CD. There is zero discomfort involved with the operation. After the test is over, the patient can change into clothes and exit the lab.

Risk factor-

- A person is exposed to low levels of radiation so risk will be minimal.
- Pregnant women are in risk.
- Some patient may complaint of allergy to contrast media if it is used (CECT KUB).

Precautions

Does not call for any special safety measures. Not recommended for pregnant women. The patient should refrain from eating or drinking anything for at least 4 hours before to the scan as an extra precaution for the CECT KUB procedure. The patient might be allergic to the contrast medium. Before beginning the operation, blood test results for urea and creatinine are required.

KUB USG [10]

To examine the urinary tract for diagnosis of renal- pelvic pain or discomfort, Abscess Cyst-Tumour in KUB, Bladder distension, Congenital renal anomaly, Hydronephrosis, Organomegaly, Renal hematoma, Trauma to kidney- ureter-bladder or lower abdomen, To examine Seminal vesical and Prostate gland in males.

Preparation of the patient

No prior preparation will be required. Patient may be asked empty or full the bladder as per need.

Procedure

The patient could be required to put on a lab or hospital gown. On the examination table, the patient will be requested to lie down and expose his or her lower abdomen. Apply a gel to the region that will be investigated, then pace and push a transducer over it. It emits inaudible high frequency sound waves, produces and records echoes, and then projects the recorded echoes as pictures. After the gel is removed, the

patient can change into clothes. After 30 minutes, the patient can obtain a report. There is zero discomfort involved with the operation.

1. *Risk factor* It is painless, non invasive, safe and accurate procedure to diagnose the area of concern.
2. *Precautions* Does not require any specific precaution. It is safe for pregnant woman.

Interpretation

KUB X-ray

Udar Rog^[11], Mutrakriccha^[12], Mutraghat^[13], Ashamari^[14], Prameha^[15], Granthi & Arbuda^[16] (Udarasth), Koshtagatashalya^[17], Arbuda-granthi-vidradhi in Vrikka, Pakvashayagat vata^[18], Gudasthitavata^[19], Tuni & Pratituni^[20], Ashtheela & Pratyshatheela^[21] to evaluate Purishavaha – Mutravaha – Shukravaha srotogata dushti & vidha nidana.

KUB Scan

As KUB X-Ray, Abhyantar vidradhi^[22], Arbuda-granthi-vidradhi in Vrikka, to evaluate Raktavaha srotovidha nidana in related organ also.

KUB USG

Mutrakriccha, Mutraghat, Ashamari, Prameha, Granthi & Arbuda (mutravaha-shukravaha srotas), Arbuda-granthi-vidradhi in Vrikka, to diagnose mutravaha- shukravaha srotodushti and viddha nidana.

How to check clinically on patient

If the patient presenting any abdominopelvic discomfort and having any abnormal finding in the lab test which is related to the above indications, these tests will be advised. It can be checked by Darshana- Sparshana- Parashana Pariksha^[23] and by Yukti Pramana on patient.

Darshana Pariksha— Inspection of abdomen & pelvic

Sparshana Pariksha - Palpation of abdomen & pelvic

Prashana Pariksha - Interrogation (asking question)

Yukti Pramana – Percussion & Auscultation of adomen & pelvic

Ashtavidha Pariksha (mutra, mala, shabda, sparsha, akriti) will be useful to diagnose the patient of concerned srotas abnormalities.

Mutra Pariksha - Abnormal findings of urine

Mala Pariksha - Abnormal findings of stool

Shabda Pariksha - Abnormal findings in Auscultation and Percussion of Abdomen

Sparsha Pariksha - Abnormal findings in Palpation

Akriti Pariksha - Abnormal findings in Abdominal shape

All Parikshas are conducted under *Aptopadesh-Pratyaksha-Anuman- Yukti Pramana*.

Clinically finding should be correlated with laboratory investigation.

Discussion

KUB investigation is recommended for any form of abdominopelvic pain or discomfort, abcess-cyst, or cancer. It is beneficial to address crises and maintain patient control in a critical situation. This study demonstrates that Vrikkagat vikara and some Uadargat vikara are readily visible and accessible through KUB Mutravaha-Sukravaha srotodusti/srotovidha. The patient's severe state can be stabilised with the aid of the sadhya-asadhyatva of Mutrakriccha, Mutraghat, Ashamari, Prameha, Granthi, and Arbuda (mutravaha-shukravaha srotas, Pakvashaya, etc.). Arbuda-granthi-vidradhi in Vrikka are also made swiftly. The

Trividha, Chaturvidha, Shadaviddha, Astaviddha, and Dashvidha Pariksha are linked to it.

Conclusion

In present era infinite diagnostic tools are used for diagnosis of Modern diseases. Similarly in Ayurveda well mentioned diagnostic tools are available. By using KUB we are significantly more capable to diagnose the diseased organ and treat the patient more promptly.

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