

Nephrolithiasis and Its Homoeopathic Management

Introduction

Renal stone or calculus or lithiasis is one of the most common disease of urinary tract. The condition of having renal calculi is known as Nephrolithiasis while having stone anywhere in the urinary tract is known as Urolithiasis. It occurs more frequently in men and does show a familial predisposition. Urinary calculus is a stone-like body composed of urinary salts bound together by a colloid matrix of organic materials. It consists of a nucleus around which concentric layers of urinary salts are deposited. In recent years technological advancements has greatly facilitated the easy diagnosis of this condition. Thus the management of nephrolithiasis has increasingly become well defined. But this requires a complete detail knowledge on all the clinical aspects of the condition. Homoeopathic medicines show great efficacy for treatment of renal stone and prevent its recurrence.

Historical Perspective

The existence of kidney stones has been recorded since the beginning of civilization, and lithotomy for the removal of stones is one of the earliest known surgical procedures. In 1901, a stone was discovered in the pelvis of the ancient Egyptian mummy and was dated to 4800 BC. Medical text from ancient India, China, Greece, Mesopotamia all mentioned as calculus disease. Part of Hippocratic Oath contains an admonition about the dangers of operating on the bladder for stones. The famous personalities who suffered from renal calculus were Sir

Issac Newton Emperor Napoleon Bonaparte, Benjamin Franklin, Philosopher Lord Francis Bacon.

Aetiology and Pathogenesis

In majority of cases multiple factors are involved and influence the formation and growth of uroliths which are as follows :-

Hyperexcretion of relatively insoluble urinary constituents

- Oxalate : causes include pyridoxine deficiency, ethylene glycol poisoning, small bowel disease with hyper absorption of dietary oxalate [Cabbage, rhubarb, spinach, tomatoes, cocoa, ingestion of excess amounts of ascorbic acid and orange juice which contains large amount of oxalate]
- Calcium : In hypercalciuric conditions like multiple myeloma, paget's disease, metastatic cancer, primary hyperparathyroidism, renal tubular acidosis and hypervitaminosis D
- Uric acid : Many patients with gout form uric acid calculi particularly under treatment.
- Cystine : Cystinuria is a hereditary disease with stone formation in small percentage of cases in infants and children
- Drug induced stones : Long term use of magnesium trisilicate in peptic ulcer produces radio-opaque silicon stones.



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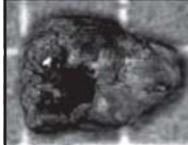
Physical changes in the urine :

- **Urinary pH :** The mean urinary pH is 5.85. When the urine becomes infected with proteus mirabilis, it makes the urine strongly alkaline by liberating ammonia leading to the formation of triple phosphate urinary stones.
- **Decreased concentration of crystalloids :** this may be due to low fluid intake, excessive water losses in febrile diseases, in hot climates, in excessive perspiration, diarrhoea and vomiting.
- **Altered urinary crystalloids and colloids :** In urine there are a number of crystalloids of different types [oxalate, uric acid, calcium cystine] which are kept in solution by the presence of colloids [mucin and sulphuric acid] in the urine by the process of absorption. When there is imbalance in the crystalloid-colloid ratio, i.e., increase in crystalloid and fall in colloid level leading to formation of renal stones or when the colloid lose the solvent action or adhesive property, urinary stones are formed.
- **Decreased urinary output of citrate :** Presence of Citrate keeps insoluble calcium phosphate and carbonate in solution, decreased during menstruation.
- **Vitamin a deficiency :** Causes desquamation of the epithelium forming nidus for stone formation. This is more applicable to bladder stones.
- **Urinary infection :** In 80% cases of renal stones there is infection of urinary tract, which disturbs the colloid content of the urine and urinary pH leading to stone formation
- **Urinary stasis :** Obstruction to free passage of urine provides a fertile field for bacterial growth, causes shifting of pH of urine to alkaline side and allows the crystalloids to precipitate leading to stone formation.
- **Hyperparathyroidism :** Due to overproduction of parathormone the bones become decalcified and calcium concentration in the urine is increased which is deposited in renal tubules leading to formation multiple and recurrent stones.

Types of renal calculi :

PRIMARY STONES	SECONDARY STONES
Appear in healthy urinary tract without any antecedent inflammation	Formed as a result of inflammation and urinary tract infection.
Acidic urine	Alkaline urine as urea splitting organisms are the causative organisms
Consists of calcium oxalate, uric acid, urates, cystine, xanthine stones	Composed of calcium, ammonium and magnesium phosphate (triple phosphate stones)

Types of renal calculi :

TYPES OF STONE	PICTURE	CHARACTERISTIC
Oxalate calculus / Mulberry stone		Single, extremely hard, irregular in shape, spiky covered with sharp projections causing bleeding, radioopaque due to high calcium content.
Triple phosphate calculus / Staghorn calculus		Smooth, soft, friable, dirty white in colour, takes the shape of renal pelvis, asymptomatic, silent stones signals its presence by causing haematuria, and radioopaque (due to Calcium content).
Uric acid and urate calculi		Pure uric acid stones are radiolucent, while majority contain

		calcium to be radioopaque, occur in multiples, typically faceted, yellow or dark brown.
Cystine calculi		Appear in patients with cystinuria. Cystine is an amino acid rich in sulphur. Multiple, soft, yellow or pink in colour and radioopaque due to presence of sulphur. Cystine crystals found in urine in cystinuria, is an inborn error of metabolism and are hexagonal, white and translucent.
Xanthine calculi		Rare, smooth, brick red, cut surface shows lamellar appearance.

Clinical features of renal stone

Symptoms

1. Quiescent / Silent calculus : Especially phosphate stones remain dormant unless discovered accidentally in X-ray or some other reasons.
2. Pain :- leading symptom, three types

Fixed renal pain : Dull aching or boring pain in the renal angle posteriorly and corresponding hypochondrium anteriorly as the stone obstructs a calyx or ureteropelvic junction, esp. in big phosphate calculus, < movement, jolting

Ureteric colic : Agonising pain radiating from loin to groin, sudden onset with nausea, vomiting, tachycardia, profuse sweating and strangury. Occurs when stone attempts to pass down the ureter, temporarily blocks the pelviureteric junction.

Referred pain: to all over the abdomen simulating peptic ulcer or gallbladder disease. When to opposite kidney – renorenal reflex.

3. Haematuria
4. Hydronephrosis : a lump in loin with a dull ache.

Signs

1. Tenderness : in the renal angle posteriorly and an inch below and medial to the tip of 9th costal cartilage anteriorly.
2. Muscle rigidity.
3. Swelling : when there is hydronephrosis or pyonephrosis associated with renal calculus, a swelling is felt in the flank
4. Abdominal distension and diminished peristalsis accompany ureteric colic.

Diagnosis of renal stones

Laboratory investigations

- a. Blood examination – increased WBC count, blood urea, N.P.N., and creatinine, increased calcium level (hyperparathyroidism and disseminated malignancy)
- b. Urine analysis – physical examination (smoky urine due to haematuria), microscopic study shows R.B.C., pus cells and casts, culture and sensitivity test (UTI) and renal function tests to be performed to rule out renal failure.

Imaging examination

1. Straight X-ray of the KUB will reveal 90% of the renal stones except the pure uric stones.
2. USG – helpful to distinguish between opaque and non-opaque stone.
3. CT scan – for diagnosis of non-opaque stone.

Diagnosis of renal calculus cannot be made on clinical history alone and for confirmation requires the diagnostic imaging techniques which help in detection of size and location of stone. In lateral view the renal stone lies superimposed on the shadow of the vertebral column [gallstones are seen in front of the vertebral bodies], ureteric stone is

usually oval and lies in the line of the ureter, Vesical calculi are seen just above the symphysis pubis while the Prostatic calculi appear as small dots behind the symphysis pubis.

Suspected renal colic

With confirmed diagnosis of renal stone the first step is to rule out emergency conditions like sepsis, anuria and renal failure. In extremes of age and debilitated patient, require immediate hospital admission and intensive care. The rest cases may be subjected to medical management.

Management of a case of renal stone

General management / Dietary restrictions

The fundamental principle is adequate fluid intake of at least 2-3 litres to keep urine dilute and it may increase depending on climate and patient's occupation which causes much sweating to avoid dehydration. In patients with hypercalciuria dairy products like milk, cheese, egg should be restricted. Persons with oxalate stones should avoid food rich in oxalates as mentioned in aetiology. Non-veg foods like eggs, meat, fish are rich in sulphur containing aminoacid so should be avoided in patients with cystinuria. Persons with uric acid stones should avoid food rich in purines i.e., high proteinous diet like red meat and alcohol. The diet should have sodium restriction with intake of 100 mEq / day. Also patients should avoid taking large doses of vitamin tablets.

Homoeopathic management

Homoeopathy is a unique system of medicine based on individualistic and holistic approach to the disease centred on the law of similia. There is no medicine for any particular disease, but there is a medicine for the patient suffering from the disease. The present problem of the patient is not usually an isolated occurrence. It is part of a sequence. A good homoeopath learns how to perceive disease as a continually evolving process which begins in the womb and, unless arrested and cured, ends in the tomb. Selection of medicine in Homoeopathic prescription especially in chronic cases is an art. An expert by virtue of his experience and intuitive keenness is able to prescribe the desired remedy successfully. Only a reason gifted mind can adopt a logical procedure of deductive and inductive path in an integrated way to accomplish the

task. The art of constitutional homoeopathic prescribing involves the ability to recognize and deal appropriately with all such symptom patterns, including recognizing and removing any obstacles to recovery and determination of the dose, potency and frequency of repetition of that remedy that will, over time, best arouse the curative powers of the patient and evoke the most gentle, complete and permanent healing response.

Master Hahnemann in Aph.80 of Organon of Medicine mentioned that the chronic miasm of Psora is the real fundamental cause and producer of urinary calculus. He also mention in footnote of Aph.7 of Organon of Medicine that every intelligent physician will first remove the maintaining cause of the disease, so that the indisposition will cease spontaneously. Now if the calculus causes mechanical obstruction in the urinary tract then he advices to crush the vesical calculus by resorting to surgical method.

Again Dr. J.H.Allen mentioned that throughout the whole urinary tract, we find latent symptoms of all miasms. Of the true chronic miasms, psora and sycosis take an active part in the production of diseases in these organs. Sycotic expressions include the painful spasmodic symptoms i.e., the renal colic pain which we can find affecting the urethra and bladder. Haematuria will be found more frequently under the tubercular diathesis. But basically the Sycotic patients suffer from renal calculi with stitching and wandering character of pain.

Homoeopathic medicines have immense scope in treating the case of renal stone. We can find a long list of homoeopathic medicines in our literature books. Now cases of renal calculi which are very much frequent in our daily OPDs require constitutional antimiasmatic treatment of achieving complete cure. To decide miasmatic involvement it is necessary to analyze the peculiar nature of the disease including its cause, clinical features and pathogenesis i.e., the pathopoiesis of the disease condition. Even recurrence of stone can only be limited and prevented by such treatment. But large stone like the staghorn stone require surgical procedures like Extra corporeal shock wave lithotripsy (ESWL) or percutaneous nephrolithotomy or open surgery may be resorted to relieve the patient of death like pain. After crushing the stone plenty of water and homoeopathic medicine may be prescribed to expel the stone from urinary tract.

I am discussing a case of renal stone in brief from N.I.H. OPD which was successfully treated by such procedure.

Mr. B.B., aged 30 yrs, married, consulted for impacted stone in the right ureter, detected one and half years back with hydronephrotic changes.

P/C : The patient complained of recurrent attacks of colicky pain which persisted for about 3 days, with collapsed and coldness of body. During the attack of pain, he had to strain much for urine. Also the patient complained of excessive flatulence especially in the lower abdomen, since 2 yrs, frequently passes flatus which relieves the trouble for the time being.

Past history : Scabies and ringworm in early childhood days, treated by local application of ointments. Typhoid 15yrs back. Chicken pox 5yrs back. Repeated vaccination of Hepatitis B, last one about 2 yrs back. Frequent nocturnal emission 3-4 yrs back, now better by Homoeopathic treatment.

Family history : Father suffered from Cholelithiasis and most of the family members suffered from gastric derangements.

Generalities : Patient is very thirsty even gets up at night to take water. He desires salt, fried food egg and has aversion for sweet. Sweet and milk causes gastric symptoms like nausea. His sweat is very offensive though scanty in amount, does not feel better or worse from sweat. Sleeps in knee chest position, but he does not feel fresh in morning after rising.

Mind : fear snakes, ghost, thunderstorm, very nervous, irritable and is easily offended, extremely forgetful, restless and jealous.

Clinical findings : Straight X-ray of abdomen showed impacted stone in the lower part of the right ureter. I.V.P. showed evidence of hydronephrosis with dilatation of major calyces mainly of the right kidney with dilated right ureter. Tongue was coated with bluish black spots. Nails were thick and ridged.

Anamnesis of the case : History of repeated vaccination and typical mental attitude of the patient lead me to think of sycotic miasmatic state being predominant in the case. Moreover his father also was a victim of gallstone. Now it easily shows a lithaemic constitution which is

one of the basic characteristics of sycotic state. Naturally, the approach in such cases should be not only to relieve the attacks of renal colic or to expel the stone by the so called eliminative medicines but to remove the sycotic dyscrasia and at the same time, he may not develop stone in future too.

Prescription : Medorrhinum 10M / 1 dose

Reason for selection : Medorrhinum is one of the chief antisycotic medicines and the best one to remove the hereditary sycotic dyscrasia. In addition his thirst, typical position of sleep, desire, aversion and typical mental symptoms pointed me to arrive at the totality of the case being Medorrhinum. The mental anxiety, restlessness of the patient and age of the patient lead me to think of high susceptibility of the patient as a whole to prescribe in centesimal potency.

Inference : The patient showed a marked improvement with Medorrhinum. In the next follow-up visits for 4 consecutive month he was prescribed placebo. As such the patient complained practically of no trouble excepting the consciousness of the renal angle, the site where he used to have frequent attacks of renal colic. Straight X-ray was repeated which showed no stone. I repeated a dose of Medorrhinum to complete the cure.

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