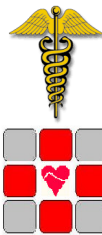


Lithotripsy - The world's latest treatment for
**Kidney Stones removal
Without surgery**

With COMPUTERISED high tech DIREX LITHOTRIPTER

Experience counts
PIONEERS in North INDIA - treating stones since 1991

We succeed where other's fail.



SIBIA MEDICAL CENTRE

Advanced Non-invasive Health Care Centre

"The ideal practice should be to provide only the minimum essential treatment instead of going in for surgical intervention as a routine management of the disease"

- ***Dr.A.P.J.Abdul Kalam,
President of India***

KIDNEY STONES

WHAT ARE KIDNEY STONES?

Kidney stones are a common and painful medical problem. Kidney stones are formed when salts in the urine precipitate and form solid material by deposits of mineral salts bound together by a protein matrix.

WHAT DO KIDNEY STONES LOOK LIKE?

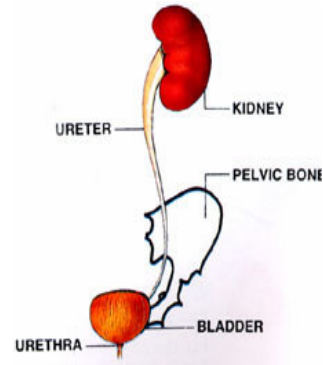
Kidney stones may be small or large and either smooth or jagged. They are usually yellow or brown.

WHERE ARE THE STONES PRESENT?

The stones may be in the Kidney, ureter or the urinary bladder.

WHAT ARE THE SYMPTOMS OF KIDNEY STONES?

- Pain.
- Blood in your urine
- Fever and chills
- Vomiting
- Urine that smells bad or looks cloudy
- A burning feeling when you urinate



WHAT DAMAGE DOES KIDNEY STONE CAUSE?

Small stones can cause pain as they pass from the kidneys down to the bladder while large stones can get stuck in the kidney or in the bladder and cause pain, infection and kidney damage. Obstruction and infection can result in kidney failure.

ARE KIDNEY STONES COMMON IN INDIA?

Yes, kidney stones are very common in India, more so in the rural areas.

WHAT ARE THE TREATMENT OPTIONS FOR KIDNEY STONES?

The complete approach to stone disease involves treatment of the existing stone and preventive measures against recurrences. The majority of kidney stones pass by themselves through the urinary tract and out with the flow of urine. However pain can be so severe that hospital admission and pain killer medicines are required.

Sometimes an open operation is needed to remove stones.

Many stones can be removed with Endoscopic keyhole surgery i.e. extraction with the aid of telescopes.

Now a new invention, the lithotripter, is available for effective treatment of kidney stones with little pain or discomfort using an intense beam of ultrasound to smash large kidney stones into small fragments.

WHAT IS EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY (ESWL)?

During ESWL the stone is localized using an image intensifier and high frequency shock waves (water pressure) are focused onto the stone, which results in its mechanical disintegration into small particles. The doctor can see on the x-rays that the stone has been crushed by the shock waves. Subsequently the stone fragments pass out in the urine. This process may require to be repeated for large stones.



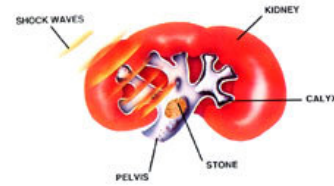
For large stones and patients with ureteric obstruction a Double J Stent (a temporary ureteric tube) may be needed to be placed by a cystoscope through the normal



urinary passage. One end of the stent lies in the kidney while the other in the bladder with nothing visible from outside. This dilates the ureter and prevents obstruction during the passage of stone particles. When the patient is stone free, the stent is removed with the help of cystoscope without any operation.

WHAT ARE THE ADVANTAGES OF LITHOTRIPSY?

- No incision and no scars (as after surgery)
- Safe - no anaesthesia
- Age no bar - Safe even in children and elderly
- No blood transfusion or AIDS risk
- OPD walk-in walk-out treatment – Minimum work loss
- In case of recurrent stones, treatment can be safely repeated
- Comfortable - Most patients need nil or minimal sedation and pain killers (analgesics)
- Life saving for patients unfit for surgery, single kidney patients etc.
- Economical



WHAT TEST WILL BE REQUIRED BEFORE TREATMENT?

Before treatment, blood and urine tests, X-rays KUB and IVP and ECG are done to determine the type of stone, function of the kidney as well as to ensure safety to the patient. Some patients may need other tests like Renal scan, CT scan, MRI etc.

WHAT PREPARATIONS ARE REQUIRED BEFORE TREATMENT?

A high liquid intake the night before the treatment and a mild laxative on the eve of procedure is recommended. Patient should come to the hospital on the morning of lithotripsy treatment after an overnight fast.

WHAT WILL I FEEL DURING THE TREATMENT?

During the treatment, which is usually least painful, the patient can relax comfortably on the treatment table and talk to doctors and nurses. Appropriate medications will be provided in case of any discomfort.

HOW LONG DOES THE TREATMENT TAKE?

The average treatment time is 20-40 minutes. Single small stones may take less time to clear and large or multiple stones will take longer and multiple treatment sessions.

IF REQUIRED WHEN WILL THE TUBE BE PLACED INSIDE THE KIDNEY?

For large stones a Double J Stent is usually placed before ESWL. This is often done under general anaesthesia but can be done under local anaesthesia, on patient's choice.

WHAT WILL HAPPEN TO THE STENT IN THE KIDNEY?

The Stent has to be removed when the stone is cleared.

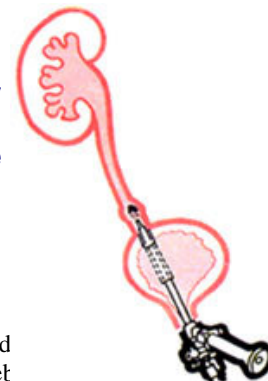
DO STONES ALWAYS PASS OUT AFTER LITHOTRIPSY TREATMENT?

Sometimes stone clearance is delayed by a fragment, which blocks the ureter. The doctor may advise the patient to have this removed by ureteroscopy.

WHAT IS ENDOSCOPIC LITHOTRIPSY?

Many stones can be removed without conventional surgery by introducing small telescopes into the body either through normal urinary passage or through a pencil size hole in the skin (the percutaneous approach).

HOW ARE STONES IN THE URETER REMOVED?



Suitable stones within the ureter can be crushed with ESWL, be removed, pushed back to the kidney for subsequent ESWL or broken down by small portable lithotripter under director vision and removed using forceps. This avoids the need for open surgery.

WHAT IS MINIMALLY INVASIVE TREATMENT?

PCNL or Percutaneous Nephrolithotomy is minimally invasive surgery for large kidney stones. Stones in the kidney can be reached via a pencil sized skin hole and very large kidney stones can be broken down within the kidney and removed piecemeal. Consequently, the remaining small fragments become easily manageable with ESWL.

IS CONVENTIONAL SURGERY STILL REQUIRED FOR STONES?

Not all stones are amenable to treatment by the modern methods. In certain circumstances, the kidney or ureteric stones are still best managed by open surgery, however, this accounts for only a small fraction of all stone patients. The doctor can now utilize a wide variety of instruments and diagnostic aids to select the most appropriate treatment for the patient. A combination of ESWL and minimally invasive treatment may be suitable alternative of open surgery.

HOW CAN RECURRENCE OF KIDNEY STONES BE PREVENTED?

Kidney stones can occur in certain metabolic disorders or structural abnormalities of the genito-urinary system. Blood and urine chemistry along with an IVP are used to detect such abnormalities. Correction of the underlying disorder is the mainstay in prevention against recurrent disease. Additionally, the first-degree relatives of stone patients have a higher risk of stone disease. It is advised that they should be screened with an ultrasound and KUB X-ray for asymptomatic disease. However many patients have no demonstrable abnormality on metabolic work-up.

- 30-50% of people with a first kidney stone will get a second one within five years. The risk of getting a second stone is about 5-10% each year.
- The best preventive measure is to increase water intake. Drinking enough water to produce two or more liters urine a day can halve the risk of getting a second stone.
- It is not necessary to change your diet if you have had a kidney stone, unless you have a metabolic disease. In particular, a low calcium diet has not been shown to be useful in preventing stone recurrence, and may actually worsen the problem of thin bones (osteoporosis) in stone sufferers.
- In stone formers who have a high level of uric acid in their urine or who make uric acid stones, the drug allopurinol can reduce the rate of recurrence of stones.
- If stones are associated with infection, complete clearance of both the stones and the infection is required if recurrence is to be avoided.

ADVANTAGES AND DISADVANTAGES OF THE VARIOUS TREATMENT METHODS

| Comparison | Surgery | PCNL | ESWL |
|--|----------------------------------|----------------------------------|-------------------------|
| Procedure | Cut and remove stone | Remove stone with scopes | Remove stones with rays |
| Anaesthesia | Yes | Sometimes | Rare |
| Blood transfusion | Sometimes | May be | No |
| Scar of cut | Yes | Minor | No |
| Pain | +++ | ++ | + |
| Hospital stay | About a week | Few days | 1 hour |
| Return to work | In months | In weeks | Same day |
| Danger of procedure | ++ + | ++ | Negligible |
| Where unfit for Anaesthesia / surgery | Not possible | May not be possible | Possible and safe |
| Recurrent stones | Preferably avoided | Preferably avoided | Treatment of choice |
| Major complications | ++ | + | Negligible |
| Procedure deaths | Rare | Very Rare | Nil |
| Acceptance by patients | Reluctant due to risk & expenses | Reluctant due to risk & expenses | Very well accepted. |
| Cost effective | Highest | High | Least |

WHAT WILL IT COST?

The cost of Lithotripsy treatment varies depending on the nature and type of the kidney stones.

ARE DOCTORS AT SIBIA MEDICAL CENTRE WELL TRAINED IN ESWL?

They are trained by the Teaching Department of Direx Ltd, Israel who is world leaders in Lithotripsy. Doctors at Sibia Medical Centre are the most experienced team of doctors managing urinary stones and created history by introducing Lithotripsy for the first time in North India in 1991. They have treated thousands of stone patients.

HOW DO I GET AN APPOINTMENT?

For scheduling an appointment with the doctor, please call, fax or email us.

Because Life is Precious

This brochure is for patient information only and should not be used for self-diagnosis or treatment. The information provided reflects the opinion of one segment of medical profession and opinions may vary. Consult the doctor for medical decisions.

We should think of surgery only when all other treatments fail. All surgery should be preserved for patients with crippling disease who do not respond to more conservative treatments and we should think of surgery only when all other safer treatments fail.

- Dr.Sibia

FACILITIES:

- External Counter Pulsation (ECP)
- Artery Clearance Therapy (ACT)
- Cardiovascular Cartography (Heart mapping)
- Periphery Artery Disease Treatment
- Cardiac Rehabilitation / Lifestyle Clinic
- Kidney Stone Treatment with rays – Lithotripsy (ESWL)
- Tissue Engineering and repair for Osteo Arthritis etc
- Master Health Checkup
- Meditation Courses / Stress Management
- Nutritional Medicine
- Computerized ECG
- 24 Hours Blood Pressure Monitoring (ABP)
- Computerized Stress / Tread Mill Test
- Laboratory
- General Ward
- Private Rooms – air conditioned with hot water and internet facility
- Canteen
- Library
- 24 hours generator back-up
- Patient Education Brochures (all diseases)



Your partners in health

HOW TO REACH SIBIA MEDICAL CENTRE

Bus stand > Bharat Nagar Chowk > Fountain Chowk > Cemetery Road / Atam Marg > turn right after petrol pump > clinic is on the left side on this road.

Railway Station > Fountain Chowk > Cemetery Road / Atam Marg > turn right after petrol pump > clinic is on the left side on this road.

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