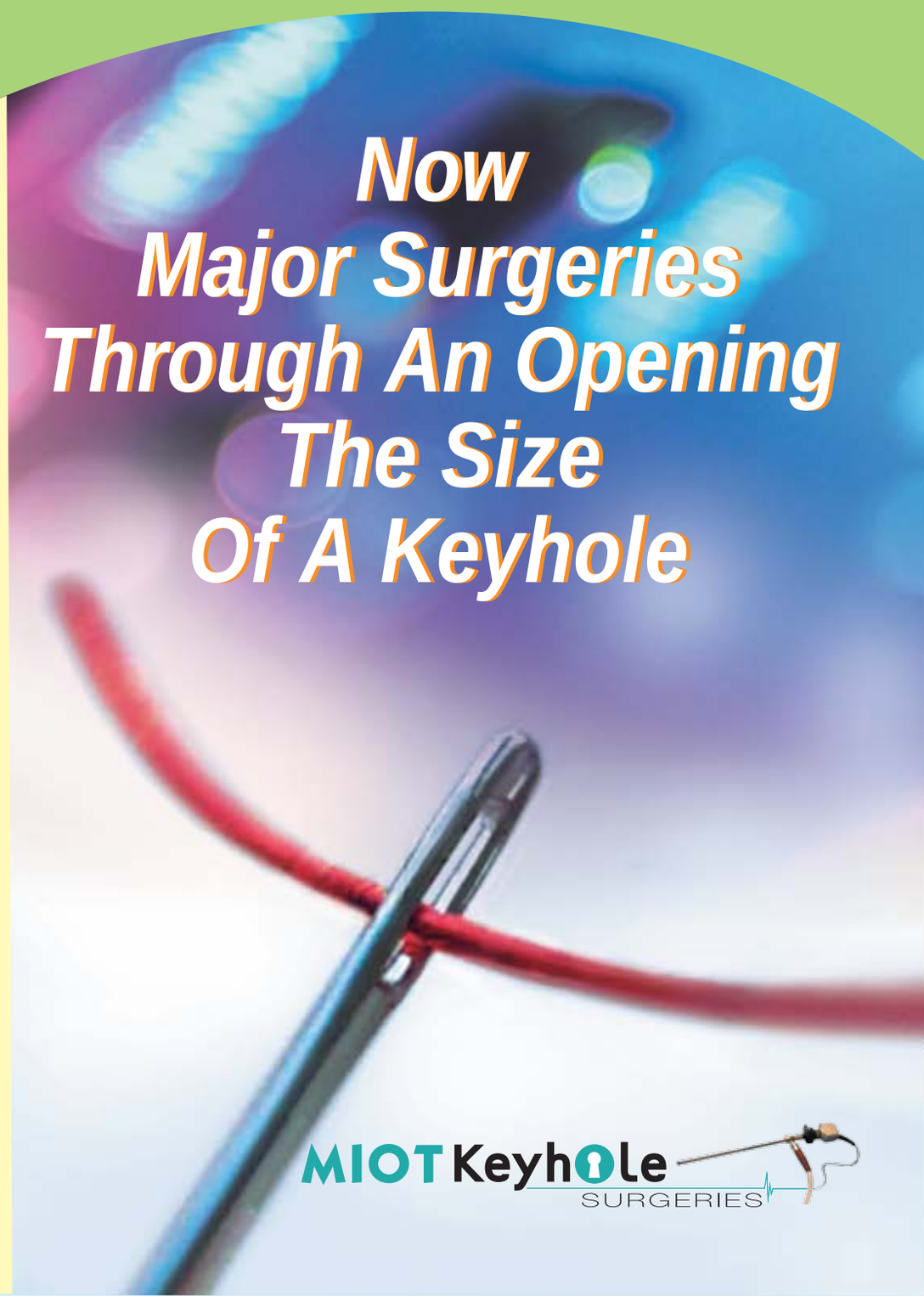
MIOT HOSPITALS
A WORLD OF CARE

MARUTHUVA VIVEKAM

Doctors Advice - For a Healthier Life

Now Major Surgeries Through An Opening The Size Of A Keyhole



MIOT Keyhole SURGERIES

Plus

Keyhole Surgeries of the brain, spine, hip and knee replacement, hysterectomy and more

Chief Editor - Dr. Manoj. B
Jan 2006 Vol:4

Chairman's Desk

From the Chairman's Desk

Dear friends,

There have been quantum leaps in the field of medicine in recent years. One of the most important areas in which advances have been made is Keyhole Surgery. Keyhole Surgery offers some powerful benefits to patients. A lot of you may not be aware of the kinds of surgeries that are possible through the keyhole technique.

You may also have many questions about its benefits, the costs etc. To answer all of those we have dedicated this entire issue of Maruthuva Vivekam to keyhole surgery. We feel the time has come for EVERYONE to be aware of this safe and cost-effective option. I'm sure you will find these articles useful. If you, or anyone you know is scheduled for surgery, please make sure they read this issue and make an informed choice.

Our doctors will be happy to answer any questions you may have. Please email us at miot@vsnl.com to get in touch.

Good luck and Good health in 2006!

Mrs. Mallika Mohandas

Chairman, MIOT Hospitals

Laughter is the Best Medicine

Front Piece

MIOT HOSPITALS
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The World Through A Keyhole

Earlier, patients proudly flaunted a big scar as proof of major surgery.

Not any more. Dr. Mohandas tells us how the "minimalism" concept came to surgery, as well.

When I was a boy I loved to be taken to the local fair. And right there next to the man selling pink panji muttai was the Bioscope Man. For a few paise we were invited to peer down a small hole – and we were instantly transported– the Taj Mahal, the Pyramids, the Eiffel Tower, London Bridge all flashed by as the wheel spun. We saw a whole world through a small keyhole!!

Today as a surgeon, I feel the same exhilaration when I perform keyhole surgery. Gone are the days when a patient proudly flaunted a big operation scar. "The bigger the doctor, the bigger the scar," was the thinking. Now the wheel has come full circle. With the emphasis on comfort and cosmetic appearance, minimalism has come to surgery. Now "the bigger the doctor the smaller the scar". Patients are demanding, painless, bloodless and scarless surgeries. Keyhole surgery is the answer to their prayers.

Minimalism in Surgery

Keyhole Surgery is also known as minimal access or minimally invasive surgery as all procedures are done through a small incision – sometimes as small as a keyhole. There is very little dissection of muscles, fascia and tendons in this kind of surgery. The blood vessels and nerves are not damaged. There is very little bleeding.

Internal organs are not exposed to the environment, therefore chances of infection are reduced. Duration of the hospital stay is also minimized – patients can "Come in the morning, go in the evening".

Patients prefer keyhole surgery as there is no big scar, few complications, and they can get back to their daily routine, including sports, very quickly In the following pages you will get to know more about keyhole surgery and the very real benefits it offers you.

MIOT Keyhole SURGERIES

For more information visit : **www.miothospitals.com**

Lead Article

Frequently Asked Questions about Keyhole Surgery

In recent times the media has played a prominent role in improving the awareness of the public especially regarding the advances that have taken place in medicine. This has made doctors become more sensitive to patients' requirements. Patients demand painless surgery, smallest of scars, shortest possible hospital stay and quick recovery.

Q. What is Keyhole Surgery?

A. In keyhole surgery a scope is introduced into the body cavity through a 0.5cm opening. The area is viewed through a CCD video camera attached to the monitor. Surgeons can perform any type of surgery by viewing the monitor. Because of the smallness of the opening, this kind of surgery is called Keyhole Surgery, Minimal Access Surgery, or based on the equipment used, Laparoscopic or Endoscopic Surgery.

Q. Why Keyhole Surgery?

A. Small incision, minimal pain, no large exposure so chances of infection are almost nil. This surgery is cosmetically acceptable and allows quick recovery – You're back in the gym after a major Laparoscopic Surgery in 24 hrs.

Q. What surgeries can be performed using this method?

A. It's said about keyhole surgery that you can do any surgery except deliver a live baby!

- Surgeries for Peptic ulcer, Gastro-Esophageal Reflux disease
- Appendicectomy
- Gall bladder stones (Cholecystectomy)
- Hernias
- Surgeries of the liver, pancreas, spleen and kidney
- Hysterectomy (Uterus removal), Tubo-ovarian tumours, Ectopic pregnancy, Polycystic Ovarian Disease
- Removal of tumours from the abdomen
- Endoscopic surgery of the brain, sinuses, thoracic cavity, chest cavity and pleural cavity
- Endoscopic surgery of the heart (bypass surgery)
- Arthroscopic surgery of the knee and shoulder
- Minimally invasive total hip replacement surgery
- Minimally invasive total knee replacement surgery
- Endoscopic spinal surgery including microdiscectomy
- Cataract surgery

Q. Is it more expensive than conventional open surgery?

A. The use of sophisticated equipment, instruments and consumables and special training required for surgeons makes the cost of keyhole surgery more expensive. But reducing the use of medicines, especially antibiotics and length of hospital stay, brings down the costs considerably.

Q. Can children undergo Keyhole Surgery?

A. Anybody can undergo keyhole surgery including children. Since most keyhole surgeries are taken up on an outpatient basis (the patient can leave on the same day), children will be spared a long hospital stay and loss of school.

Q. Can cardiac patients undergo Keyhole Surgery?

A. Keyhole surgery is the safest option for the elderly with hypertension and other cardiac problems.

Q. How do surgeons benefit?

A. This method allows surgeons to have a magnified and very close view of the organs that are lying at a depth. The cameras can be used to view, not only the operative field, but other organs and spaces as well. More than one surgery can be simultaneously tackled through the same surgical opening.

Q. What is endoscopy?

A. The word "Endo" means " inside", "Scope" means "to view". Endoscopy is an investigative procedure that is most commonly done to view the esophagus (food pipe), stomach and intestines, windpipe, its branches and lungs.

Done as an outpatient procedure, endoscopy takes just 10 minutes to perform and does not require any anaesthesia. After the procedure, patients can resume their normal diet and medication, and return to work.

Q. Can any hospital perform Keyhole Surgery?

A. Keyhole surgery requires sophisticated dedicated equipment and instruments for each procedure and specially trained skilled personnel.

Article

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Take Advantage of Laparoscopy

No Pain, No Big Wounds, No Long Hospital Stay. Dr. Maran takes us through how some major surgeries can be performed through this technique

What is Laparascopy?

In Greek ('Laparo' means abdomen - 'skopein'- to view). Here a telescope is introduced into the abdominal cavity through small holes of 1 cm. Images from the scope are projected onto a monitor. Surgery is performed by viewing the monitor. Additional openings of 0.5 cm are made as required. Because of the small point of entry, laparoscopy is also called "Keyhole/ Minimal Access Surgery/Endoscopic Surgery /Band Aid Surgery/ Belly Button Surgery."

Let's take a look at some Laparoscopic procedures.

Laparoscopic Appendicectomy

The Appendix is a small worm-like dead tissue at the junction between the small and large intestine which serves no purpose. Appendicitis means infection and inflammation of the appendix. It occurs when faeces or undigested food gets trapped in the dead space by the appendix, setting off infection.

As with any dead infected tissue, the appendix has to be removed. The best and simplest way is through surgical removal – Appendicectomy.

Compare the treatment

In conventional open surgical Appendicectomy, an 8-10 cm long cut is made in the lower abdominal wall and the appendix is removed. After this surgery you will have to stay in the hospital for 4 days, (2-3 days before food is allowed) and you will be recommended complete rest for another 2 weeks and no heavy work for another 4 months.

Compare this to Laparoscopic Appendicectomy. Only three 0.5 cm holes are made. You will be back to normal activity within 24 hours and can return to work in 2 days. There is no pain and no need for attendants. Two months after the Laparoscopy the scar is gone – while in open surgery it remains as a life long reminder.

Laparoscopic Cholecystectomy

The gall blader is a globular bag located on the undersurface of the liver. Its function is to store and concentrate the bile secreted from the liver. During the process the bile sometimes transforms into a salt called gall stones. Once a stone is formed it can obstruct the bile flow causing digestive problems, pain and fever – and in some cases jaundice. If a stone migrates down it can cause pancreatitis (destruction of the pancreas).

If you suffer from gall stones, the only option is to remove the gall bladder completely. Using the conventional method a 12-15cm long cut will be made in your upper abdomen to perform the surgery. Following this you will need to rest for 10 days before resuming routine work. In the Laparoscopic procedure only 3 holes of 0.5 cm are required and you will be back on your feet the next day itself!

Laparoscopic Assisted Vaginal Hysterectomy

No woman is immune to fear of hysterectomy. It brings images of pain, big surgical scar, prolonged bed rest, the possibility of wound infection, weight gain, post surgical back pain and surgical hernias. Even after hysterectomy some women continue to experience pain.

All these were side effects of conventional surgery which involves making a long incision of 15 cms, in the lower abdomen. Laparoscopic Hysterectomy, on the other hand calls for just 3 holes of 0.5 cms. You can return to normal routine in 2 days. Since no prolonged bed rest is required you won't gain weight.

Laparoscopic Ovarian Surgeries

Usually young females have a problem in their ovaries. The cause? Either multiple small cysts or large cysts containing fluid or a tumour. By open method a 8-10 cm cut is made in the lower abdomen to do surgery in the ovaries. But in Laparoscopy 3 holes of 0.5 cm holes is enough. They are immediately discharged and back to normal in a day.

Dr. M. Maran

Director, Minimal Access and GI Endoscopy, MIOT Hospitals, has specialised in Advanced Laparoscopic Procedures, Gastro Enterelogical Surgery and Endoscopic Procedures.

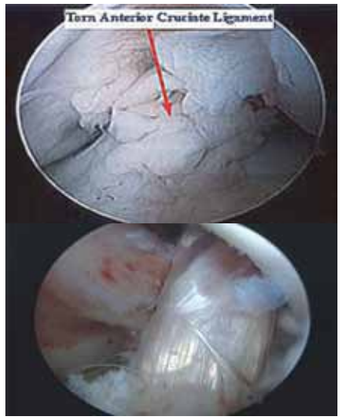
Article

Arthroscopy - Keyhole Surgery of the Joints

An arthroscope is an endoscope for the joints - ('Artho' means joint and 'scope' means the instrument to visualize it). In other words Arthroscopic Surgery is keyhole surgery of the joints. Any joint in the body can be visualized with the arthroscope and the problems can be treated.

Inside the knee

The knee joint is formed by the articulation of the thigh bone (femur), the leg bone (tibia) and the knee cap. The meeting surfaces of the bones are covered with a special smooth tissue, known as cartilege. These two bones are held together by two ribbon like structures inside the joint which cross each other. They are called cruciate ligaments. Then there are two washers in between these two bones which act as shock absorbers.



Do you have these problems?

All these structures can be visualized with an arthroscope. Most of the times after an injury when there is no fracture, injury to these structures are neglected. Usually injuries to these structures give rise to pain, instability, knee giving way, locking, audible clicks and swelling in the knee joint. If unattended these will lead to arthritis of the joint at a later date.

All these injuries can be easily diagnosed by doing arthroscopy.

The Keyhole Solution

Usually these injuries are treated by opening the joints which result in post-operative pain, prolonged recovery and risk of infection.

But, now-a-days all these problems are treated with keyhole surgery. The cruciate ligaments can be reconstructed through arthroscopy. The torn washers can be sutured. When there is a tear in the cartilege, the cartilege can be transferred from one part of the knee joint to the affected part arthroscopically. It is also helpful in removing loose foreign bodies from the knee joint.

Treating Recurrent Dislocation

In case of the shoulder joint, the head of the arm bone and the cup of the shoulder blade are held together by a cover of soft tissue (capsule). When the shoulder joint dislocates, the ball not only comes out of the cup but also peels the soft tissue envelop from the face of the cup. This results in a redundant pouch in front of the cup to which the ball dislocates often (recurrent dislocation). In olden days the shoulder joint had to be entirely opened to repair this. This results in pain, prolonged recovery and in some cases stiffness of the shoulder joint. But now-a-days with two (or) three keyholes it can be done using arthroscopes where the patients can get a full range of movements in 4-6 weeks. Similarly torn muscles around the shoulder joint (rotator cuff) can be reattached arthroscopically.

Advantage Arthroscopy

Arthroscopic surgeries are far superior to conventional surgeries in many ways. The damage to your tissues is less. So, post operative pain will be negligible. The recovery will be quicker. Most of the procedures are done as day care surgeries where you need not stay overnight in the hospital. This reduces the cost of the surgery.

Last, but not the least, it leaves you with a very small scar.

Dr. C. Lenin

Director, MIOT Centre for Knee Surgery and Sports Medicine.

Dr. Lenin has trained in arthroscopic surgeries of the knee at Clique du Cedre, Rouen, France and in arthroscopic surgeries of the shoulder at Munich Sports University and in Australia. He has performed more than 1000 arthroscopic surgeries of the knee and shoulder.

Article

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Can you Benefit from Minimally Invasive Hip Surgery?

Did you know that the hip joint is the largest joint in the body and bears 3-7 times the body weight?

It is a ball and socket joint, formed by the junction of the head of the thigh bone and the cup shaped acetabulum. This is enclosed within a closed sac lined by special tissue which secretes a fluid to lubricate the joint. The bones forming the joint are lined by a smooth surface called Articular Cartilege which enables free movement.

Do you have these problems?

When the joint becomes affected, in the initial stages, the lining becomes swollen, red and inflamed. This is Synovitis. If left untreated this leads to progressive loss of the smooth surfaces of the joint resulting in arthritis. Advanced arthritis can be treated only by surgery.

The common causes requiring surgery of the hip are:

1. Rheumatoid Arthritis
2. Ankylosing Spondylitis
3. Avascular Necrosis
4. Tumours in the joint

Surgery involves providing new surfaces for both the sides of the joint - Total Hip Replacement.

Conventional total hip replacement involves removing the entire ball shaped head of femur and the cup shaped acetabulum and putting in an artificial ball and socket. This is anchored deep in the thigh bone and involves removal of a large amount of bone. If it fails, the patient becomes crippled.

The Safer Option

In contrast, Minimally Invasive Hip Surgery (articular resurfacing) involves only removal of the damaged lining of the head of femur and the cup

Specialized instruments are available for this operation that enable surgery to be performed through small opening - a keyhole surgery.

Since the surgery is a resurfacing only, the **natural diameter of the head and acetabulum are maintained.** (In conventional total hip replacement, smaller head sizes are used). This has important implications - range of movement is near normal.

Other Advantages

The components that are used form **a metal-on-metal articulation** (i.e.) both the sides of the artificial joint are made of metal, which, in comparison to the conventional total hip replacement (a metal on polyethylene articulation), has better survival and durability and less wear – which means it can last for much longer time. Metal-on-metal has better lubrication, less friction.

Summing up the benefits

- Better soft tissue and bone preservation means less trauma from surgery, which translates into faster recovery, less pain and less complications.
- Restoration of full movements -normal physical activity including sports.
- Better lubrication and metal-on-metal articulation means better survival rates.

All these factors make keyhole surgery the ideal choice, for the young and old.

Dr. Kesavan A.R. is a *Consultant Orthopaedic Surgeon- MIOT Hospitals and Director - MIOT Centre for Diseases of the Hip and Hip Surgery.*

Dr. Kesavan has trained in Hip Surgery at the Charite Hospital, Berlin, Germany: Knappschafts Krankenhaus, Puttlingen, Germany and John Flynn Hospital, Gold Coast, Australia.

Article

How to Make Your Knee Replacement Last a Lifetime

Computer Navigation and Knee Replacement through keyhole surgery, is the answer, says **Dr. Barry Rosario**

The knee joint is one of the strongest, and most complex of the large joints of the human body. Since it is the most used joint in the body, it is not surprising that as we grow old, the joints lining (articular cartilage) wears away and people find it painful to move - Osteoarthritis of old age.

There are also other crippling conditions, like rheumatoid arthritis, psoriatic arthritis and others.

Treatment for Arthritis

If you have developed arthritis, there are several forms of treatment available to you. These include medical management through analgesics, NSAIDS, disease-modifying drugs etc; physiotherapy and exercises in the form of ultrasonic therapy, heat massage and interferential therapy and quadriceps drill - which may provide temporary remission of the disease.

If you have reached a stage where you are unable to perform your daily routine – then surgery – Minimally Invasive Total Knee Replacement (MITKR) can offer you a new lease of life.

Conventional technique for Total Knee Replacement

Under epidural anaesthesia, an incision is made over the front of the knee, and

the knee joint is exposed. With the use of special cutting jigs, the damaged articular surface of the femur and tibia are resected and shaped to fit the knee prosthesis, of which there are several sizes. The femoral and tibial prosthesis are cemented to the bone and between the two is a high-density polyethylene liner. Together they form the new joint on which you can walk painlessly.

Computer Navigation in Total Knee Replacement

Computer Navigated MITKR ensures that knee components are placed in perfect alignment with the normal knee axis to ensure a lifetime of trouble-free performance. It also enables us to make bony cuts with zero degree error and allows us to do soft tissue balancing of the knee, so that all the ligaments are in even tension.

How is MITKR superior?

First of all there is a very small skin incision and this means, less damage to muscle and soft tissue and less blood loss.

As a result of this, you will have less pain in the postoperative period.

With a minimum exposure – maximum accuracy is guaranteed, because of the very small size of the instruments used to cut in small areas.

The great advantage of Computer Navigated MITKR is implantation accuracy, decreased blood loss, decreased pain, shorter hospital stay, increased range of motion and above all (especially for women) - a cosmetic scar.

Patient's reactions to MITKR

MIOT was the first hospital in the Asia Pacific Region to perform Computer Navigated MITKR. In the last three months we have performed 55 surgeries. The patients are very happy with the small incision and the decrease in post-operative pain. They are able to perform straight leg raising on the third day and full flexion is obtained by the tenth day – the day of discharge.

Dr. Barry J M D' Rosario,
Director, Center for Joint Replacement Surgery, MIOT Hospitals

Believe it or not

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Keyhole Brain Tumour Surgery – Mission Impossible?

Brain surgery through keyhole? Is it possible? Practically scarless? Almost painless? Discharge in a couple of days? "Possible!" says **Dr. U.S. Srinivasan**

Brain Surgery? Doesn't it involve a threat to life and limb? Not if the problem can be handled through keyhole surgery.

The Keyhole Option

Modern endoscopes combined with image intensifiers have made pituitary brain tumour surgery through a keyhole incision, possible.

Pituitary Problems

Pituitary brain tumours can develop at any age. The first symptoms are visual - decreasing vision and the inability to see objects clearly from certain angles. It can also produce endocrinological abnormality due to increased secretion of normal hormones. Growth hormone excess in children can lead to gigantism where the child may grow to a height of more than 6 ½ feet. In adults it leads to abnormal protrusion of the jaw, spade like hands and feet and brittle bones (Acromegaly). Females may suffer from excess of another pituitary hormone known as Prolactin. This leads to cessation of menstrual flow, infertility and milk secretion.

Diagnosis and Therapy

The diagnosis of pituitary is confirmed by Magnetic Resonance Imaging (MRI). If the tumour is large, surgery is the only option. Otherwise it can be managed via medical and radiation therapy.

In surgery, the pituitary glands are approached through the nose, removing part of the bony septum, entering the sinus and through it, accessing the pituitary.

After the surgery, the patient is mobilized the next day and is discharged at the earliest.

Dr U. S. Srinivasan, *MCh.*
Chief Neurosurgeon, Department of Neurosurgery, MIOT Hospitals, has performed more than 1250 surgeries withan excellent success rate.

Put your Eye to the Keyhole

Anyone can see the benefits of keyhole cataract surgery over conventional cataract surgery, says
Dr. Harshitha Bakshi

Cataract is the most common problem that requires eye surgery. Till date there is no drug which has been proven to treat cataract. Surgery to remove cataract is the only effective treatment. In conventional cataract surgery, the cataract is removed as a whole, therefore the size of the incision is large (12-15mm) and needs 5-7 sutures.

Now more advanced techniques have been developed.

Enter Phacoemulsification

This the current gold standard of cataract surgery. In this technique a 2.8 mm self-sealing tunneled incision is made through which a probe is introduced into the eye. The tip of this probe vibrates fragmenting the cataract into microscopic pieces which are aspirated out of the eye.

Injecting the lens

Once the opaque lens of the eye has been removed by cataract surgery, a replacement for the lens is needed to restore the focusing ability of the eye. This is done by planting an artifical intraocular lens into the eye at exactly the same position from where the cataract has been removed. This becomes a permanent part of the eye.

Foldable intraocular lens of the eye have revolutionized cataract surgery, as they can be folded and injected into the eye through the 3 mm self-sealing tunnel incision made for the phacoemulsification procedure.

Thus minimally invasive cataract surgery because of the markedly smaller wound size and self healing wound which is secure even without sutures, offers the patient a host of advantages.

Clear benefits

You can return to normal activity within hours of the procedure as opposed to a few weeks with conventional surgery

The fast wound healing, minimally induced astigmatism and early stabilization of refraction offer you quick and easy visual rehabilitation with better vision.

Dr.Harshitha Bakshi
Consultant Ophthalmologist, MS (Ophthalmologist) FRCS, (Edinburgh)
Fellowship Cornea Services Medical Research Foundation, (Sankara Nethralaya)

Article

The Key to Successful Keyhole Bypass Surgery

Even major surgeries like Bypass can be done safely through, keyhole surgery says **Dr. V.V. Bashi**

The common problems requiring surgery for the heart are: Coronary artery disease, diseases affecting the valves of the heart, diseases present from birth like holes in the heart or blocks in the valves, mixing of blood inside the heart.

Normal Method of Surgery

The chest is opened through a cut in the midline. The heart is stopped along with the lungs and the heart lung machine is used to sustain the normal function of the rest of the body. Blood is then cooled. Stopping of the heart is done by injecting cardioplegia which paralyses the heart. Once the operation is over, the heart lung machine is stopped after the heart takes over its function.

Problems with the use of Heart Lung Machine

- Excess bleeding-requiring blood transfusion
- Brain problems like stroke
- Kidney dysfunction
- Increased chances of infection
- Increased hospital stay
- Increased cost

Minimally Invasive Cardiac Surgery

Beating heart surgery:- In this the heart lung machine is not used to do the operation. The commonest operation done using this technique, is bypass surgery.

Advantages of beating heart surgery

No requirement of blood transfusion

Up to 30% savings in cost over conventional bypass surgery

Minimal stay in the ICU and in the hospital

Minimized chances of infection

Faster rate of recovery

Minimally Invasive Valve Surgery

In this procedure, small cuts are made in the chest to see the heart and do the operation. Valve replacement is done after stopping the heart.

Robotic surgery

With the use of robots, bypass surgery can be done with incision as small as 3". Removal of veins and arteries can be done through endoscopy.

In our institution minimal access surgeries like Aortic valve replacement/Mitral valve replacement through mini sternotomy and ASD closure through posterolateral thoracotomy are performed with good results. Endoscopic conduit harvesting is done in selected cases. Almost 95% of the CABG's are done without using the heart lung machine with a 99.5% success rate.

Dr.V.V. Bashi

Chairman and Chief Surgeon, Cardiac Care Unit , MIOT Hospitals,has an excellent reputation for complex cardiac surgeries. He has performed over 5000 coronary bypass surgeries and over 1500 beating heart bypass surgeries with a success rate of 99.5%.

Article

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Minimally Invasive Surgery in Urology

Urinary stones have afflicted mankind since ancient times. Bladder and kidney stones have been detected in Egyptian mummies in 4800 BC. Now this problem too benefits from the latest advances in surgery.

About 40% of the outpatients seeking medical advice at any clinic present symptoms relating to the urinary system.

What brings the patient to the Urologist?

Frequent urination especially during nights, inability to pass urine freely, bloodstained urination, burning urination, severe colicky pain at the flank or lower abdomen, pain and swelling of the test are all symptoms which prompt the patients to consult the urologist.

What are the tests required to diagnose urologic problems?

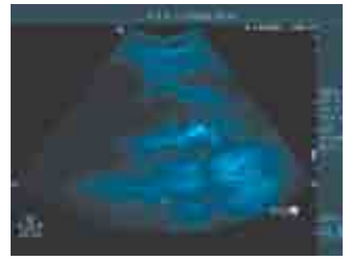
A detailed medical history, clinical examination, urine and blood tests for sugar and urea, Xray and ultrasound scan of the kidneys, may all be required.

What are the common urologic conditions?

Kidney stones, ureteric and bladder stones, urinary tract infection, enlarged prostate with urinary obstruction, cancer of the kidney, bladder. Also, prostate, stricture urethra and hydronephrosis and phimosis are common diseases.

What is the role of minimally invasive surgery?

Open Surgery was the mainstay of treatment until the year 1990, after which a breakthrough occurred with the advent of Endo Urology and extra corporeal shockwave lithotripsy. Most Urologic conditions could be treated effectively and noninvasively, with shorter operating hours, shorter hospital stay and early return to work.



Cystoscopy: This involves direct inspection of the lower urinary passage, urinary bladder and enlarged prostate gland using fiber optic telescopes. It is an outpatient procedure not requiring anaesthesia. It is useful for diagnosing the cause of bleeding from the urinary tract.

Ureteroscopy: A very useful tool to diagnose and treat urinary stones, strictures and tumours of the ureter and pelvis. Usually done under regional anaesthesia, it is very useful in relieving blocks in the kidneys due to stones, tumours or strictures.

Trans urethral Resection of Prostate (TURP)

This permits removal of enlarged prostate in multiple chips without any skin incision, using under water electrocautery and cutting electrodes. The procedure is performed generally under local anaesthesia without the need for massive blood transfusions. It requires only 3-4 days of hospitalization, and eliminates the need for lifelong medication and frequent catheterizations.

Internal Urethrotomy (OIU)

Endoscopic incision of urethral strictures under regional anaesthesia to relieve blocks along the lower urinary passage.

Vesicolithotripsy :

Endoscopic crushing and fragmentation of stones in the bladder and removal through cystoscope sheaths.

Trans urethral Resection of Bladder Cancers (TURBT)

Endoscopic resection of growths involving the bladder, without open surgery, under regional anaesthesia.

Percutaneous Nephrolithotomy (PCNL)

Enables fragmentation and removal of large stones in the kidney, multiple stones and Staghorn stones. The procedure is performed under general anaesthesia, with the patient lying prone on the OT table. Using Xray control a track is created to the kidney from the overlying skin. Special endo urologic instruments are, used to widen the track and fragment the stones using energy sources like air under pressure (pneumatic), ultrasonic sources.

What is the MIOT experience?

The Urologists at MIOT are well experienced in both Open Surgery and Endo urology. We have performed over a 100 minimally invasive procedures in the past two years, on patients from Oman, Maldives, Seychelles, Srilanka, Canada, Singapore, and from all parts of India.

Dr. R. Jayaganesh

Consultant Urologist, MIOT Hospitals Specialist in Endo Urology, Andrology and Reconstructive Urology

Minimal Access Hysterectomy -The Cutting Edge

Good news for ladies –
says **Dr. Saraswathi.** *Uterus removal through keyhole surgery leads to quicker recovery and smaller scars*

Hysterectomy means removal of the uterus and sometimes the ovaries too are removed (oopherectomy) with the uterus.

There are many reasons for the removal of the uterus. Some of the common reasons for performing hysterectomies include fibroids of the uterus, abnormal uterine bleeding, Endometrosis, prolapse of the uterus, chronic pelvic pain or cancerous lesions in the uterus.

The usual methods of surgical treatment for these are either an abdominal hysterectomy or a vaginal hysterectomy.

Convenient New Method

The conventional or open Hysterectomy is done through a large abdominal incision and requires a hospital stay of 7-10 days with a long recovery period of upto 8 weeks It leaves a visible scar on the abdomen.

In recent years the minimally invasive laparoscopic assisted vaginal hysterectomy is replacing conventional surgery as the procedure of choice. Its greatest benefit is the potential to convert what would have been an abdominal hysterectomy into vaginal hysterectomy.

What you will undergo

In a laparoscopic assisted vaginal hysterectomy, an instrument called a laparoscope and other specialized instruments are used to help with the removal of uterus which is completed vaginally. The instruments are passed through 3 or 4 half inch cuts on the abdominal wall. The supporting ligaments of uterus, blood vessels and tissue that surround and support the uterus are cut and the blood vessels are sealed off. Then a cut is made through the vagina, uterus is separated from the vagina and removal with or without ovaries is done.

Shorter Recovery Time

After this procedure you will be required to spend atleast 1- 3 days at the hospital. You will experience very minimal post operative pain and the recovery time is shorter. There is no abdominal cut, only small punctures, so there is lesser possibility of wound related complications. Therefore, you will be left with a smaller scar instead of a large abdominal scar.

Dr. Saraswathi, *M.B.B.S., D.G.O.*
Consultant Obstetrician & Gynaecologist, MIOT Hospitals

Keyhole Surgeries of the Nose

Keyhole Surgery of the nose enables surgeons to be more thorough, says
Dr. Manoj B

Keyhole surgeries of the nose give us surgeons an excellent visualization of tissue to avoid any errors. The scope gives us an end to end, 3D view that helps ensure a complete removal of the disease, leaving no chance for recurrence.

Why Keyhole Surgery?

For one, there is no cutting wound. In conventional surgeries we cut through the nose or the inside of the upper lip. There is no ugly facial scar. Repeated surgery can be avoided and so can other life-threatening complications.

As there is no incision, you will not experience the blood loss of conventional surgery. Also there is no major trauma to the eyes. There is only minimal access to the brain so major surgical stress is avoided. Recovery too takes place in a shorter period.

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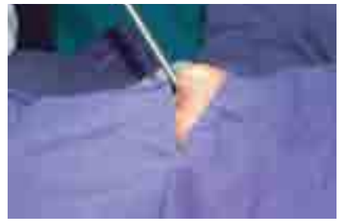
Surgeries of the Nose

Primary sinus surgery involves surgery for repeated sinusitis, nasal polyposis complications of sinusitis, headache and facial pain, fungal infection of sinuses, early detection of cancers and surgery for correction of CSF leak



In transnasal endoscopic assisted surgeries of the skull base, visualization is superior. Advances of technology have made it possible to extend Endoscopic surgeries of the nose, beyond sinuses, to skull base regions mainly for transnasal pituitary tumour removal, biopsy of skull base tumours, to check response to treatment, repair and closure of CSF leak, and more.

Dr. Manoj B
HEAD, Department of Head and Neck Surgery, MIOT Hospitals, has worked in the ENT Departments of premier institutions in India, specialising in ENT surgery.

Breathe Easy – Bronchoscopy is here

A safe and specialized procedure – extremely useful in the diagnosis and management of many pulmonary (lung) diseases.

The bronchoscope is an endoscope used to visualize the airway (windpipe).

Bronchoscopy is mainly used for the diagnosis of suspected pulmonary infections like TB, pneumonia, lung abscess etc. Through bronchoscopy, it is possible to obtain a sample from the exact side of the affected lung . By analyzing the sample the infection can be treated most effectively.

Crucial for diagnosis

Bronchoscopy is the primary diagnostic tool for patients with suspected lung cancer and those coughing out blood (haemoptysis). In cancer biopsy of the lung, tissue can be extracted by this method, avoiding the need for opening the chest wall. Certain lung cancers affecting the airway can also be treated by laser therapy and brachytherapy using this method.

Further symptoms

Unexplained and prolonged cough, haemoptysis, change in character of cough, uncontrolled wheezing, may require bronchoscopy to find the cause. Sometimes cancers, or a foreign body that may be the cause for the above symptoms can be diagnosed and treated by this simple procedure alone. Foreign bodies like a peanut, denture, chalk, etc, which have been aspirated into the airway can be removed without any surgical intervention.

Outpatient procedure

This procedure is being done as an outpatient procedure. No anaesthesia is required. It is pain free. Absolutely no incision is needed as the bronchoscope is passed through the nose or mouth into the airway. The ease of access into the lung, direct visualization, flexibility, simplicity of use which allows rapid examination even in restless/distressed patients, makes bronchoscopy the procedure of choice in almost all kinds of lung diseases.

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Case Study

In My Own Words

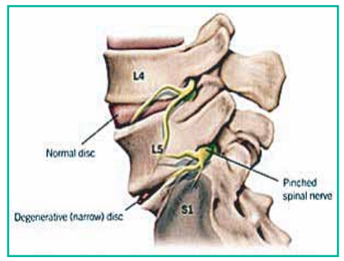
A patient describes his experiences with conventional Spine Surgery and Keyhole Disc Surgery-and the difference between the two

About seven years ago I was diagnosed with two herniated discs. I was working for a trucking company and I had hurt my back in a minor accident. One of the herniated discs had ruptured causing severe right leg pain. Another disc though damaged was not touching the nerve roots. I had an open discectomy operation done in Muscat on the first disc. The recovery period took about 2 months. I had to give up my job in the trucking company and settle for a more sedentary job.

"Oh No! Not Again!"

The second herniated disc level did not cause me any pain until 5 years later. One day, when I was bending down to pick up my child, I felt a sudden and severe back pain radiating down my left leg. It was similar to the pain I had felt before. So I called Dr. Mohandas at MIOT Hospitals and scheduled an appointment. He prescribed some pain medication and we tried some conservative treatment like physiotherapy for a while. When my pain did not subside we did an MRI scan and I was told that I would need an operation to relieve my pain.

Having gone through an agonizing saga



of events following the previous discectomy. I dreaded the idea of a reoperation. However, Dr. Mohandas convinced me that this time the surgery would be different. This would be an endoscopy assisted, micro-discectomy procedure done through a small incision, with a series of scopes. The post-operative period would be painless, he promised, and I should be able to walk on the day of the surgery itself.

Surgery – with a difference

I found this hard to believe. Yet, I had full faith in Dr Mohandas and his surgical team. I myself had witnessed many of his patients with an agonizing back pain, recover miraculously and doing well in Oman. I took the decision to undergo endoscopic discectomy in MIOT Hospitals. The surgery started around six in the morning and was completed by 7.00 am. I was back in my room and on my feet by noon-pain free. I was discharged the very next day and I was back in the office within five days. Soon I left for a 10 week trip to Europe - pain free, the entire time.

The interesting thing about my case is that I have undergone two discectomy procedures -with a vast difference between the two. With the open procedure my surgery was longer. I was under general anaesthesia. I had a larger incision with stitches that had to to be

removed two weeks post op. I was in hospital for seven days and I had to have antibiotics intravenously. It was a full blown surgical procedure. I was still sore when I went home because they cut through a major back muscle in order to reach the disc, and remained sore for atleast two to three weeks. Besides I had to restrict my activities for almost 10 months before returning to routine. I had to give up my job.

"No comparison"

With the endoscopic procedure, on the other hand, I only had to have a local anaesthesia. I was completely pain free after the surgery. There was no cutting of the back muscle and I received only three stitches which did not have to be removed. The major difference between the two, is that instead of making a larger incision and cutting through the large back muscle, the surgeon made a small incision and used scopes, gradually adding one on top of the other until he was able to do the surgery through the scopes. Plus, there is no comparison in procedure time. If I had an open procedure the second time around. I would not have been home 8 hours later - having dinner with my family!

Article

MIOT HOSPITALS
A WORLD OF CARE

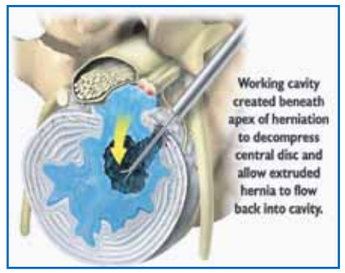
Spine surgery made safer, simpler, surer

You've heard from the patient, now get the surgeon's point of view on Keyhole Surgery of the Spine.

Invertebral discs are located in the spinal column between successive vertebral bodies. Each disc functions as a shock absorber to cushion the spinal column and ensure smooth synchronous and painless movements of the spine.

Inside the Spine

The disc is made of a gelatinous central portion called the nucleaus puposis and an outer ring of ligaments called the Annulus Fibrosus, which seals the nucleus. The annulus has overlapping radial bands, somewhat similar to the plies of a radial tire, and this allows stresses to be distributed without rupture. The disc thus functions as a hydraulic cylinder. Any tear in the annulus leads to failure of this hydraulic cylinder leading to disc dysfunction.



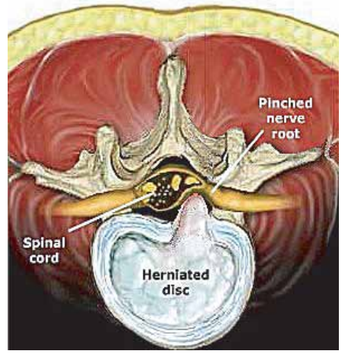
Factors leading to disc prolapse

Several factors can lead to annular tears and disc prolapse This includes smoking, increased coughing, sitting in a stooped posture, driving, lifting heavy weights etc. Tear in the annulus also leads to leakage from the nuclear material which is toxic to the nerves. The resulting inflammatory response causes a neural irritation with radiating pain in the legs (sciatica). This could be accompanied with numbness and loss of reflex. Surgical intervention may be required to relieve the leg pain.

Classical vs Modern

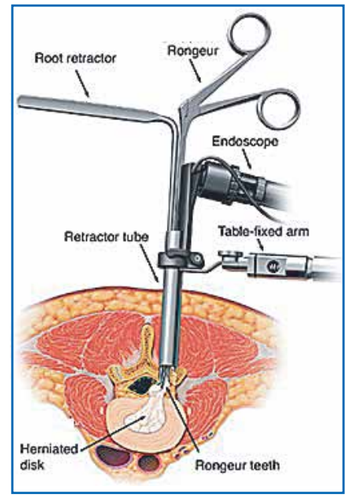
The classical approach in the yesteryears consisted of a procedure called laminectomy. It involved removal of the entire lamina of the spine for approach to the disc. The resulting surgical scar was long and patients were restricted for 2-3 months.

Modern lumbar discectomy termed "micro discectomy" utilizes the operating microscope to allow better visualization of the nerve structures.



This means it is minimally invasive-minimizes muscle, ligament and bone disruption and allows faster healing. Patients who undergo a micro discectomy can be discharged with minimal soreness and complete relief from leg pain after an overnight admission and observation.

Endoscopic techniques allow the same surgery to be performed through an incision of less than 1 cm in size further minimizing disruption of normal structures.



Advantages of Endoscopic Discectomy

- Avoidance of general anaesthetic
- Smaller scar
- Less post-operative pain
- Shorter hospital stay
- Quicker return to work and normal activity

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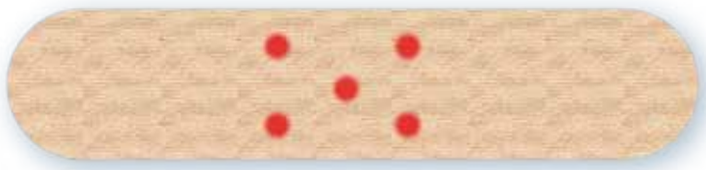
Director, MIOT Centre for Spine Surgery

HOW TO CONVERT YOUR MAJOR SURGERY INTO A MINOR ONE



Recent advances in medical technology enable major procedures to be carried out through an opening the size of a keyhole.

Keyhole surgery offers several benefits: A quick discharge (sometimes on the same day), quick recovery, less pain and a much smaller scar.

All kinds of surgeries from appendicectomy, to hysterectomy, to brain tumour removal, can be performed using the keyhole technique. So ask your surgeon if your major surgery can be converted into a keyhole surgery.

To know more about MIOT Keyhole Surgeries attend our free symposium or access our website.

MIOT Keyhole SURGERIES

Symposium on Feb 12, 2006, 5.30 pm onwards

MIOT HOSPITALS
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