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Laparoscopic surgery for Neovagina construction in MRKH syndrome


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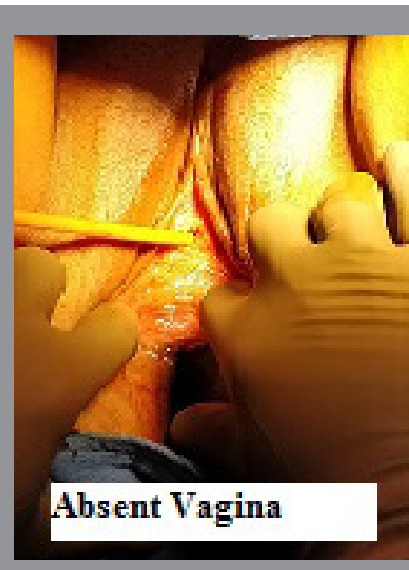
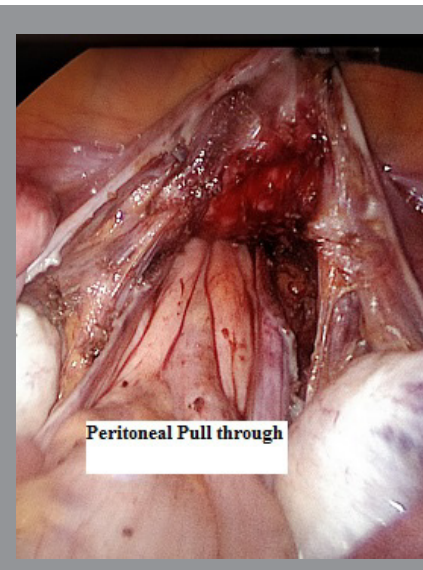
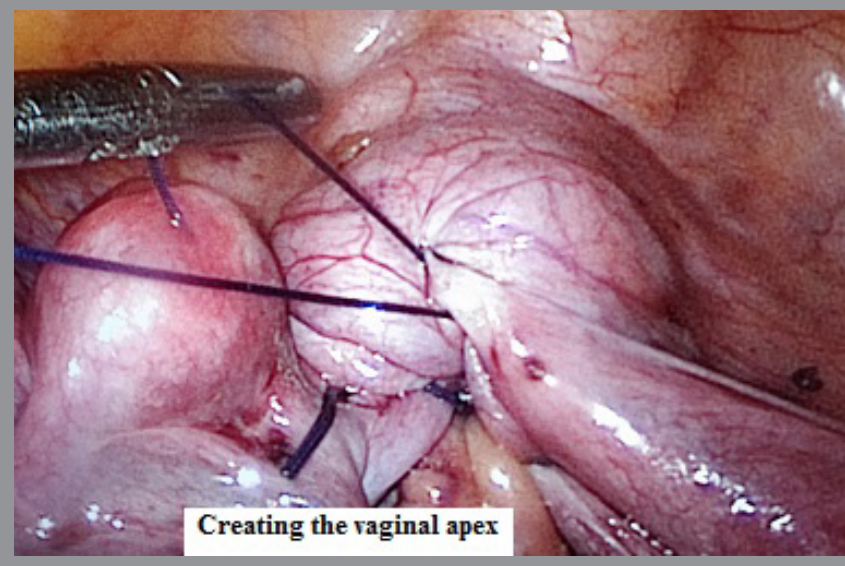
Overview

Developmental anomalies of the müllerian duct system represent some of the most fascinating disorders that gynecologists encounter in clinical practice. Müllerian ducts are the primordial anlage of female reproductive tract. They differentiate to form the fallopian tubes, uterus, the uterine cervix, and the superior aspect of the vagina. A wide variety of malformations can occur when this system is disrupted. Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome is characterized by vaginal agenesis and rudimentary or absent uterus. It occurs at the rate of 1 in 4,500 newborn girls.







Introduction

Patients with MRKH syndrome have normal development of secondary sex characteristics, normal external genitalia and 46, XX karyotype, typically presenting with primary amenorrhea, problems with sexual intercourse during adolescence. Later problems include infertility. The ovaries are normal and are placed on lateral pelvic wall along with the usually normal Fallopian tubes. Uterus is represented by two small nodes.

There are many operative options available for the creation of neovagina: Free skin graft, amnion graft and sigmoid vaginoplasty. The disadvantages include stenosis, poor lubrication, scarring, contracture leading to dyspareunia. Transformation to squamous cell carcinoma from free skin graft and adenocarcinoma from sigmoid have been reported. The amnion graft can transmit hepatitis or human immunodeficiency virus, although the use of freeze-dried amnion prevents such a transmission. The new laparoscopic peritoneal pull-through vaginoplasty offers a relatively easy surgical procedure with excellent results on long term follow up.

CASE SCENARIO

A 21 year old Russian girl presented to us with primary amennorhoea. She had normal secondary sexual characters and

was without any associated urogenital/skeletal anomaly. Her ultrasound showed normal ovaries and urinary system with absence of uterus. On physical examination, there was just a small dimple in place of a normal vagina (Fig. 1).

Inspection through laparoscope confirmed the diagnosis of MRKH syndrome. As counselled earlier, vaginoplasty through laparoscopic route was performed by peritoneal pull-through technique.

Space for neovagina was created by making a horizontal incision midway on the blind vaginal pouch between bladder and rectum. Blunt dissection was done till apex of the vaginal pouch to create an adequate vagina was reached. Care was taken to avoid injury to rectum and bladder and to achieve adequate hemostasis.

Large size dilators were left in the vaginal space. Laparoscopically, the pelvic peritoneum was opened from the level of the round ligaments, lateralizing the ureters and a U-shaped flap was created till the bottom of the pouch of Douglas. Anterior margin served as the anterior flap. The top of the neo-vaginal space was made prominent by the dilator and was divided using Harmonic. The peritoneal flaps were drawn through this opening and pulled from below so as to reach the introitus (Fig. 2). They were attached using 3-0 vicryl-interrupted suture.

The vault of the neovagina was created by applying purse-string stitch taking peritoneum of the bladder, the right-sided round ligament, the right-sided 'utero-ovarian' ligament, the pelvic peritoneum between the right ovary and rectum (taking care of the ureter) and then the right-side surface of the rectum before going to its ventral surface to do the same thing in reverse order on the patient's left side. The peritoneal flaps were kept in continuation with the parent site through the attachment thus ensuring continuation of blood supply (Fig.3, 4).

Unlike amnion graft technique, it is not mandatory to dilate the vagina regularly following this technque of peritoneal pull through. However, our patient was travelling back to her native country, so we preferred instructing the patient to self dilate the neovagina regularly till she started sexual activity. This was to prevent adhesions and closure of the newly constructed space. A special mould of desired size was created by the dental department (Fig.5).

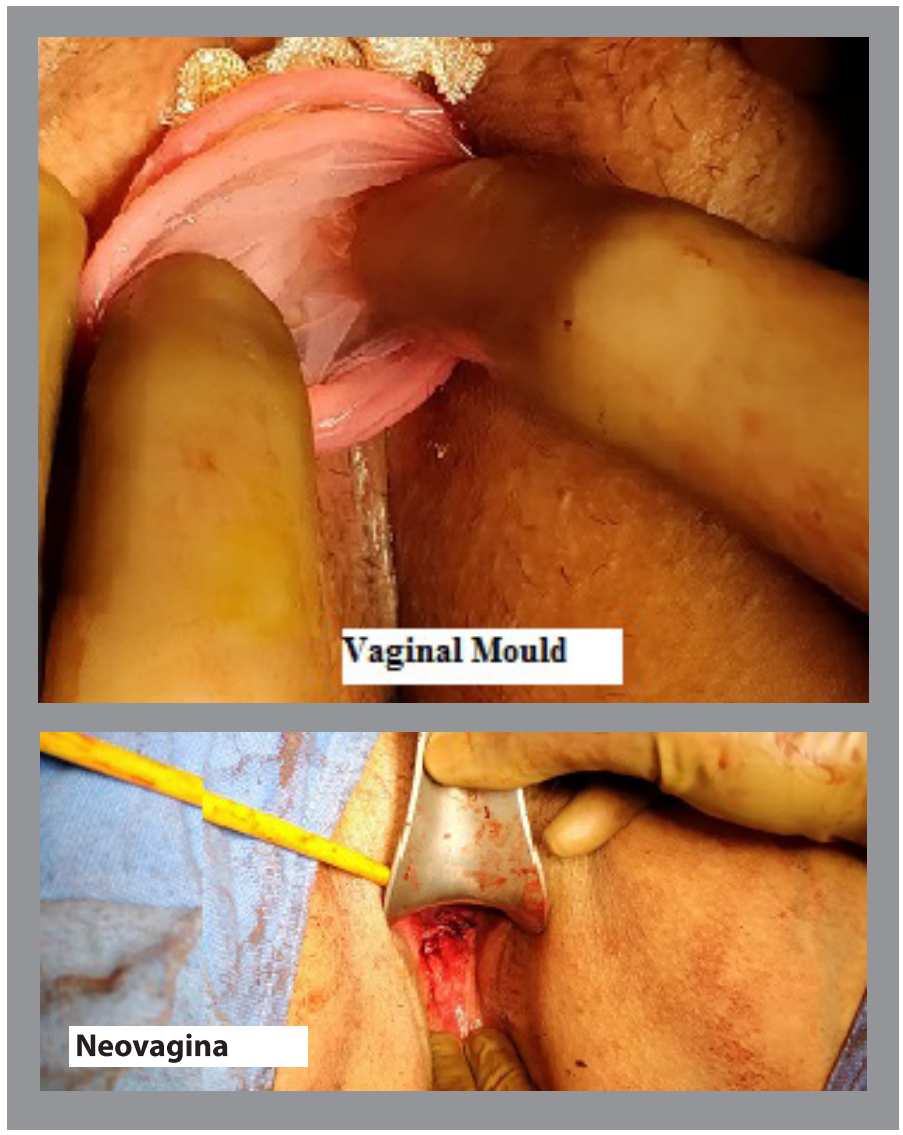
COUNSELLING

These patients usually suffer from psychological trauma of loss of feminity due to improper genital development. Counselling of the patient and family is mandatory about the nature of the anomaly and importance of self dilatation of neovagina after surgery.

Fertility can be achieved through surrogacy as these patients have normally functioning ovaries. There is no long term morbidity associated with MRKH syndrome.

CONCLUSION

Laparoscopic peritoneal pull through technique for creation of neovagina is a new technique, which offers all the benefits of minimal access surgery. This procedure is practically devoid of morbidity associated with other techniques. Peritoneal lining having the same parentage of mullerian duct undergoes metaplasia and transforms itself in to stratified squamous epithelium resembling normal vagina. As the ovary becomes accessible per vaginum, patients may undergo ovum retrieval and pregnancy using surrogate mother, thus making this a fertility enhancing procedure.



Spinal Deformity

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Scoliosis (pronounced sko-lee-o-sis) is a three-dimensional abnormality that occurs when the spine becomes rotated and curved sideways.

Most often this condition has no known cause, in which case it is called idiopathic scoliosis. While the cause is unknown, idiopathic scoliosis does tend to run in families. The specific genes involved have not all been identified yet, and there could be factors beyond genetics as well. Some people mistakenly think that carrying heavy book bags or sleeping on the side could cause scoliosis, but that is not the case. About 3% of the population is estimated to have idiopathic scoliosis.

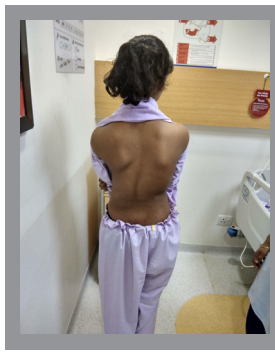
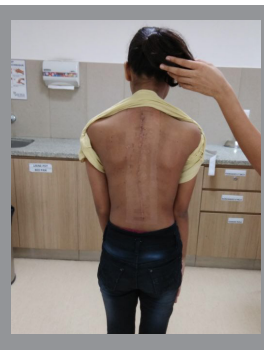
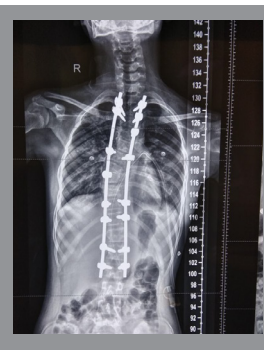
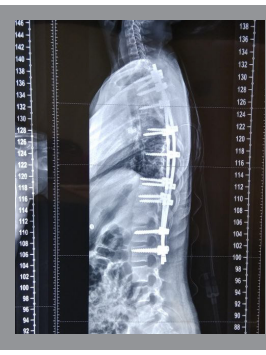
Typically, idiopathic scoliosis is categorized by the age at which the deformity developed: Infantile idiopathic scoliosis: develops from birth to 3 years old; Juvenile idiopathic scoliosis: develops from 4 to 9 years old; Adolescent idiopathic scoliosis: develops from 10 to 18 years old. Any sideways — or lateral — spinal curvature of at least 10 degrees, as measured on an X-ray of the spine, is considered scoliosis. However, that small curve size would not show signs or symptoms. As the curve progresses to 20 degrees or beyond, there is an increased chance that the person or an observer, such as a parent or teacher, might notice abnormalities such as clothes hanging unevenly or the body tilting to one side. The idiopathic scoliosis in and of itself is generally not thought to cause significant pain, especially in adolescents and young adults. However, a scoliosis curve can cause trunk imbalances and other issues that increase the likelihood for muscle spasms and other issues, which can in turn lead to pain.

Treatment options for idiopathic scoliosis could include: Observation. Observation is advised for a scoliosis curve that has not yet reached 25 degrees. Every 4 to 6 months, X-ray of the spine is taken to see if the scoliosis is progressing or not. Bracing. If the scoliosis has progressed past 20 or 25 degrees, a back brace could be prescribed to be worn until the adolescent has reached full skeletal maturity. The goal of bracing is to prevent the curve from getting worse and to avoid surgery. If the curve continues to progress despite bracing, surgery could be considered. The most common surgical option for scoliosis today is a posterior spinal fusion, which can offer better corrections with fewer fusion levels (preserving more back mobility) than what was done in years past. Approximately 90% of people identified with idiopathic scoliosis have curves that never progress enough to require bracing or surgery.

Case

The patient was a 15-year-old female with complaints of deformity of back and back pain. Pain used to increase with activity like playing but she was more concerened about the cosmetic aspect. She was greater than 2 years postmenarchal and had no medical problems. The back pain was localized to the mid-thoracic region, was absent at rest and exacerbated by her sporting activities. The pain had been present for 1 year. She was unhappy with her body alignment and complaints of shoulder imbalance and truncal rotation (rib cage and breast asymmetry).

On examination, patient appeared to be a healthy-appearing adolescent with near ideal body weight. The right shoulder was slightly higher with minimal waist line asymmetry. Scoliometer of the thoracic curve was 16° and the lumbar was 7°. There was no clinical leg-length discrepancy. The skin had no abnormalities, and the neurological assessment was normal. Her xrays showed right sided thoracic scoliosis with compensatory lumbar curve. She underwent deformity correction from back with pedicle screw fixation from T4 to L2 vertebra. Post operatively her visual appearance improved, pain reduced and lung capacity improved.


Tetanus - a forgotten Illness

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Dr. Ashutosh Sinha

Introduction

Tetanus is caused by an infection with Clostridium Tetani, which is found in soil, dust and manure. The bacteria normally gets into the body through cut or abrasion by a contaminated object.

The bacteria on its entry into the body produces toxins which causes contraction and spasms which cause the typical symptoms of tetanus. Diagnosis is purely clinical. There is no diagnostic test to diagnose tetanus. The diagnosis is based on the the symptom at presentation and does not depend on the isolation of bacteria from the wound.

Another clinical test is the 'spatula test' where there involuntary contraction of the jaw when a spatula is touched to the posterior pharyngeal wall. This test has high sensitivity (94%) and specificity (zero false positive test results). But it has a significant danger of compromising the patient's airway.

Case Report

We present an interesting case of tetanus which was saved just by early diagnosis and proper treatment.

This is an 8-year-old boy who presented to us with 5 days of fever and vomiting for 2 days. He also had abnormal movements of limbs and mouth with decreased oral intake for 1 day. He was transferred from another hospital where he had worsening of the above symptoms. He was already started on IV antibiotics in line with meningitis. He was also given antiepileptic medications outside.

On admission, he had fever but his vitals were stable. His blood results from the other hospital was unremarkable. He was admitted in PICU.

His frequency of spasms was increasing. On examination he was conscious and oriented. He went into spasms during examination him but he was conscious and replied appropriately when asked questions. He seemed to be in pain because of the spasms. His jaw was stiff and he went in extension posturing while he was being examined. His pupils were normal and his neurological examination was normal in between the episodes.

On further questioning the parents, it came out that this child had injured his foot 10-12 days back and there was bleeding. The site had healed. His vaccination history was incomplete and parents could not remember whether he had full vaccination in early childhood.

As a work up, he had an MRI and EEG which were normal. His CPK came back as abnormally high 3377.32 suggesting muscle breakdown. His blood calcium level was normal which excluded hypocalcaemic spasms. In the meantime, on the suspicion and clinical diagnosis of tetanus, he was started on midazolam infusion. His antibiotics were changed to metronidazole due to non-availability of Penicillin G. He was also given tetanus Immunoglobulin 500 IU im and tetanus toxoid vaccine at the same time. He was started on hyperhydration with iv fluid and NG feeds.

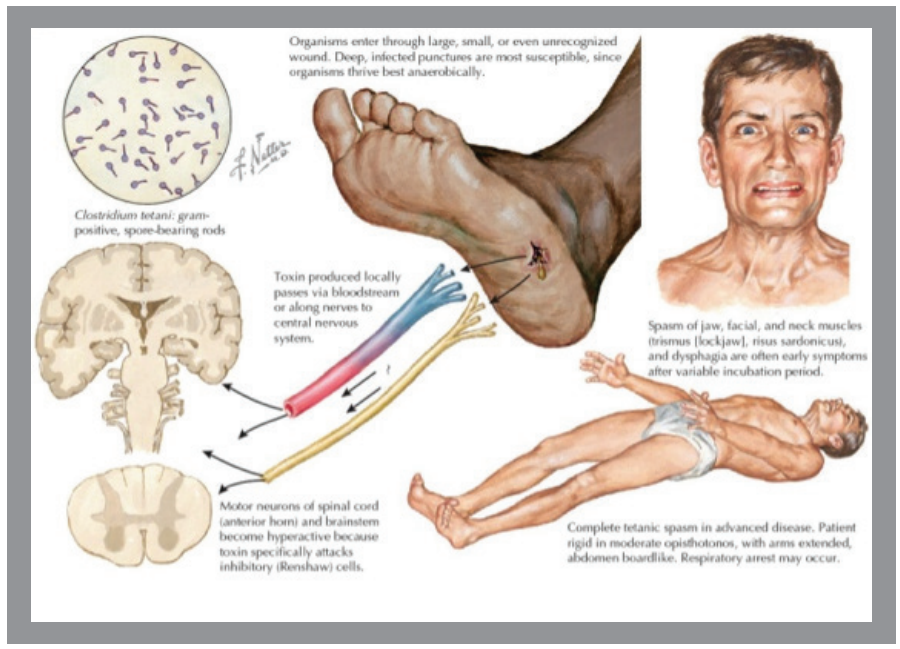
Overnight, the frequency of spasms decreased and fever settled. Next CPK level showed decreasing trend. After 24 hrs of starting treatment, this child was free from spasmodic episodes and was able to feed by himself. His midazolam infusion was weaned and stopped.

He was discharged home without any complications and on follow-up he is doing good.

Discussion

Tetanus is becoming rarer in both industrialized and developing nations due to an effective vaccination program. In 2010, the World Health Organization estimated there was a 93% reduction in newborns dying from tetanus worldwide, compared to the situation in the late 1980s. Due to its rarity, many diagnostic delays occur as physicians may not consider the diagnosis until the manifestations become overt. Without timely diagnosis and proper treatment, severe tetanus is fatal (mortality is also influenced by the comorbidities of the patient). The principles of treating tetanus are: reducing muscle spasms, rigidity and autonomic instability (with ventilatory support when necessary); neutralization of tetanus toxin with human antitetanus immunoglobulin or equine antitetanus sera; wound debridement; and administration of antibiotics to eradicate locally proliferating bacteria at the wound site.

Early clinical diagnosis is the key to save the patients as it carries high mortality if there is delay in recognising and treating these patients.



Living Donor Liver Transplantation with Complex Reconstruction for Advanced Hepatic Echinococcus Alveolaris at Jaypee Hospital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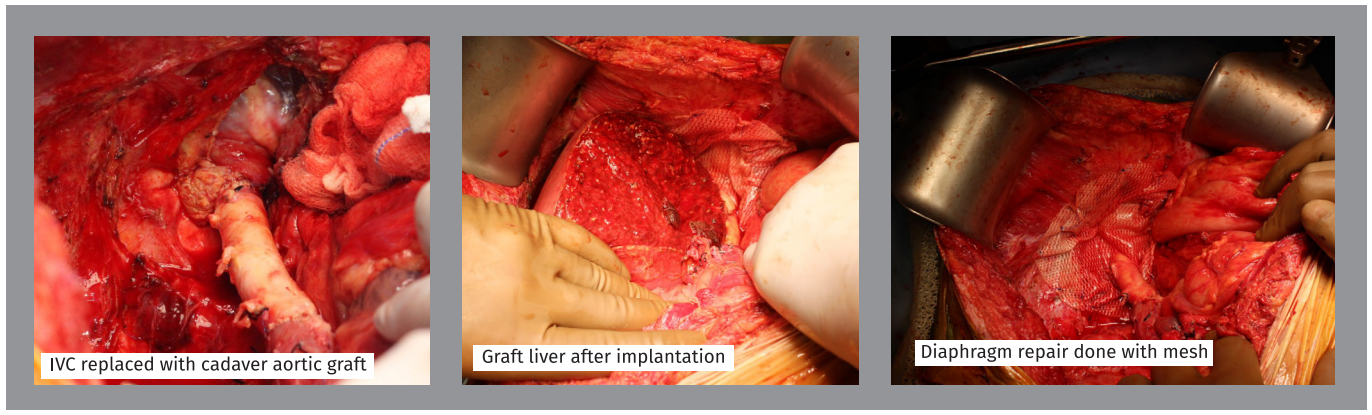
Alveolar echinococcosis (AE) is a chronic disease caused by the ingestion of the eggs of the parasitic tapeworm, Echinococcosis multilocularis (EM). Humans are affected by the larval stage with a primary manifestation in the liver that causes a lethal disease similar to liver cancer. (1,2) AE is especially common in the northern hemisphere, and it is endemic in Central Europe, North America, and Eastern and Central Asia. It is rarely seen in India and Western Europe. (3,4) A fatal outcome may occur in >95% of untreated patients within a 10-year period following the diagnosis. (5) Diagnosis of AE is based on clinical findings, lesion morphology as determined by imaging techniques, immunodiagnostics, and other laboratory tests. (6) The primary screening tests for the diagnosis of AE are Em2 and Em2/3-10 tests which use EM antigens and the western blot method is used as a secondary test. (7) Antibodies specific for AE gradually decrease after the surgical treatment and become negative within approximately 18 months. (8) Symptoms of AE are primarily jaundice and pain in upper abdomen. AE is detected through incidental findings in more than one third of patients. (9) Treatment involves surgery, therapy with albendazole derivatives, and liver transplantation (LT) if necessary. (10,11) Patients diagnosed with AE have to receive albendazole treatment. The World Health Organization (WHO) recommends that all operable cases should undergo radical surgery followed by albendazole treatment for a minimum of 2 years. In severe cases such as biliary septicemia, bleeding from portal hypertension caused by portal vein invasion, invasion of both liver lobes, and chronic Budd-Chiari syndrome secondary to invasion of the suprahepatic veins, LT may represent the only possibility of survival and cure. (12-17) LT should be considered in patients with very severe hilar extension, leading to uncontrolled biliary infections, symptomatic secondary biliary cirrhosis with ascites, and/or severe variceal bleeding because of portal hypertension. (5) Liver Transplantation is also suggested especially for patients with involvement at the liver hilum (hepatic pedicle) and PNM stage IIIa, IIIb, and IV patients who could not undergo liver resection. (13,16,17) We present a technically challenging case of a patient with advanced stage AE who was treated successfully at Jaypee Hospital with living donor liver transplantation (LDLT) involving complex reconstruction.

A 19-year-old male, from Kyrgyzstan with Blood group AB+ve was diagnosed as having Alveolar Echinococcosis Liver in April 2017, when he was investigated for weight loss of 10 kgs. Headache and groin and lower limbs pain. Patient underwent blood investigations and imaging in Kyrgyzstan. He underwent Exploratory Laparotomy in April 2017 in Kyrgyzstan but abdomen was closed without any intervention in view of extensive Alveolar Echinococcosis Liver. Patient was started on Tab. Albendazole in April 2017. Patient was advised liver transplantation in view of his condition. Patient visited Jaypee Hospital, Noida where he and his donor (his 21-year-old brother) were evaluated for Living Donor Liver Transplantation. He was advised Living Donor Liver Transplant with IVC replacement as his IVC was also infiltrated by Alveolar Echinococcosis. He underwent Living Donor Liver Transplant: Right lobe graft without MHV with IVC replacement with Cadaveric Aortic Graft on 11/01/2018. He tolerated the surgery well and his post operative course in TICU and Transplant ward were also grossly uneventful. His donor was discharged from hospital after one week of surgery. The patient was discharged from hospital at three weeks of surgery. Now, the patient is back to his normal life in his country after a successful Liver Transplantation. At present, patient is on immunosuppressants and other supportive medications. His Liver Function Test has normalized and the CT Triphasic abdomen showed graft liver within normal limits and patent IVC.

As already discussed above, Hepatic Alveolar Echinococcosis is an infectious disease that grows and spreads like a malignant tumor. If curative surgery is not possible in cases of extended disease or because of hilar involvement, the only treatment option is Liver Transplantation. Removing the liver during Liver Transplantation is a major problem in patients with this disease. The long operation times and multiple blood



transfusion requirements are the result of technical difficulties related to the extrahepatic extension of the disease (mostly because of the diaphragm and retrohepatic vena cava involvement but also because of adjacent structures) during surgery. We also had technical difficulties while removing the liver, and we removed the retrohepatic vena cava with the liver and replaced the vena cava with Cadaveric Aortic Graft. A prior surgery also makes the operation more complicated. Thus, it is important for future transplant candidates to avoid unnecessary abdominal surgery.

Cases of Living donor Liver Transplantation for Hepatic Alveolar Echinococcosis have only been published as case reports since 1989 (the first Living donor Liver Transplantation) according to PubMed records. As per the internet search, there were about 10 cases of Liver Transplantation with IVC replacement reported in literature with one case reported from India before.

Therefore, LDLT can be performed successfully in patients with this rare infectious disease, with careful follow-up for potential recurrence and metastasis and administration of low-dose immunosuppressive agents.

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Laparoscopic Restorative Proctocolectomy with Ileal Pouch Anal Anastomosis (RP-IPAA)


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Ulcerative colitis is an inflammatory disease of the colon and rectum that affects millions of adults and children worldwide. Despite the progress of medical therapy, which has broadened the possible treatments after failure of corticosteroids, surgery is still required in 15%-35% of patients affected by ulcerative colitis. Surgery is indicated in the elective setting when dysplasia or cancer is present. The patient has a refractory disease, intolerable side effects, the patient develops steroid dependence, or the patient is not compliant. In the acute setting, surgery is recommended in cases with complications such as hemorrhage, perforation, toxic megacolon or acute severe colitis.

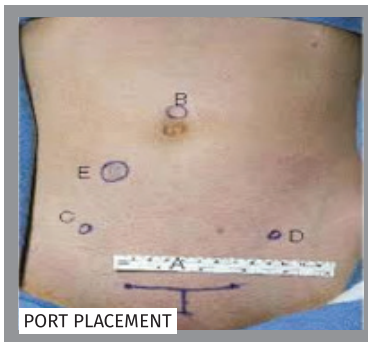
Despite the widespread use of RP-IPAA, many aspects remain controversial, including the type of approach (open or laparoscopic), number of stages of surgery (one vs two vs three), type of pouch, and construction type (i.e., hand-sewn or stapled ileal pouch-anal anastomosis).

Two-stage surgery consists of RP-IPAA and ileostomy during the initial operation, followed by ileostomy closure, whereas the three-stage surgery consists of a subtotal colectomy and ileostomy, proctectomy and pouch creation, and ileostomy closure. One stage surgery is usually not preferred because the rate of complications and number of subsequent laparotomies is higher when diversion is not performed. The two-stage RP-IPAA has the advantages of avoiding an additional operation, a shorter hospital stay and a shorter time with a stoma compared with the three-stage procedure.

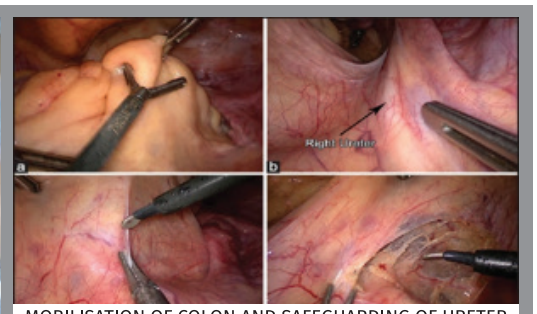
Laparoscopy benefits these patients with better outcomes in context of cosmesis, pain and early recovery, especially in young patients. We present our standardized technique of laparoscopic assisted restorative proctocolectomy and ileal pouch anal anastomosis (IPAA). As majority of our patients undergo two stage surgeries with diverting ileostomy, preoperatively patient is counselled for stoma site and care. Mechanical bowel preparation is done one day prior and patient is kept on clear liquids orally. DVT prophylaxis is given.
Patient is placed in modified lithotomy position. Pneumoperitoneum is created and ports are inserted. Entire procedure is divided in three major steps. First is laparoscopic mobilisation of whole colon with rectum. Second is mini laparotomy with specimen removal and creation of pouch outside abdomen. Third is re-laparoscopy and pouch anal anastomosis intracorporeally with covering ileostomy and closure.

The dissection is carried out medially to laterally and ileocolic, right colic and middle colic vessels are clipped with hemolocks and divided. Superior hemorrhoidal artery and inferior mesenteric vein are similarly divided after clipping and mesentery is divided. The lateral peritoneal attachments are then lysed and transverse colon is freed from the omentum. Care is taken to avoid injury to duodenum and bilateral ureters. Next rectal mobilisation is done, which is similar to total mesorectal excision (TME). Care is taken to avoid injury to inferior hypogastric nerves on sidewall of pelvis during posterior dissection. Lateral pedicles are divided and haemostasis is secured by dividing middle rectal vessels. Dissection is done upto the level of anorectal junction, which is confirmed by per rectal digital examination and rectum is divided with two firings of Endostapler. A small Pfannenstiel incision is made and specimen is delivered and ileum is divided flush at ileo-cecal junction. J-Pouch of terminal ileum is created 15cm long by firing two linear GIA 80mm staplers. Anvil of the circular stapler is inserted at the enterotomy and pouch is replaced within the abdomen and pneumoperitoneum is re-created. Ileal pouch anal anastomosis is done with circular stapler without undue tension on it. Doughnuts are checked for adequacy. Pouch is checked for leaks with insufflating air in pouch while pelvis is filled with saline.

32 Fr drain is inserted in pelvis through RIF port. Loop ileostomy is created in RIF.



PORT PLACEMENT


MOBILISATION OF COLON AND SAFEGUARDING OF URETER

Free Function Gracilis Muscle Transfer for Reconstruction of Extensor Muscle Loss at Forearm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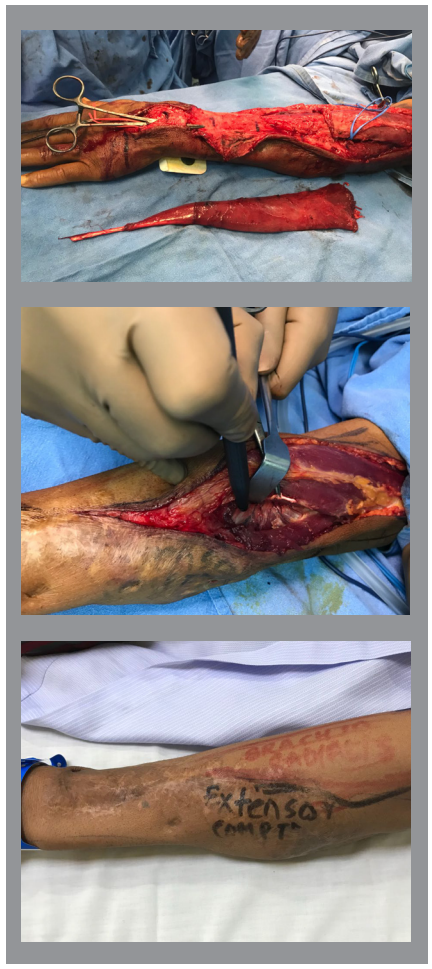
Case report

A 25 year old Iraqi army soldier suffering from a blast injury two years back, presented with an inability to actively extend left wrist and fingers. He sustained extensive soft tissue and bony injuries during the blast and had undergone multiple surgeries for the same in Iraq.
The examination of his left forearm and hand revealed the following findings:
1) Loss of extensor muscles over mid and lower dorsum of forearm
2) Skin graft directly adherent to bone over distal forearm
3) Fingers and wrist extensor near elbow was intact with normal motor activity
4) Distal part of extensor tendons were intact at wrist and hand
5) No active extension at wrist and finger
6) Normal extension at elbow joint
The patient had deficient sensation over the dorsum of hand and fingers. Flexor motor functions and sensation were normal. CT findings showed segmental loss of extensors in mid and distal forearm. CT angio showed normal radial and ulnar arteries. In view of the above findings, it was decided to perform free functional gracilis muscle transfer to bridge the segmental loss in the extensor muscle.

Surgical anatomy

A medial thigh muscle, the gracilis takes origin off the pubic symphysis, inferior pubic ramus and ischium then inserts distally into the medial condyle of the knee. The axis of the muscle can be outlined by drawing a line from the ischium to the knee medial condyle. Or alternatively, the adductor longus is palpated medially with the thigh abducted, and the gracilis axis is defined 2 to 3 finger breadths posterior to the adductor longus. The artery and vein runs superficial to the adductor magnus muscle, underneath the adductor longus. By retracting the adductor longus, the



artery can be traced to its origin on the medial femoral circumflex vessels and branches of the profunda femoral system. There are two secondary pedicles to the gracilis muscle that can be found segmentally and distal to the proximal pedicle. They are both ligated and divided when the muscle is harvested.

Recipient area

The extensor muscle origin at the left elbow was exposed, scar tissue excised and area was prepared for gracilis to be transferred. The branch of radial nerve to extensor muscle origin (Posterior INtrosseus nerve) was identified by nerve stimulation and prepared for coaptation. The harvested gracilis muscle was anchored with superficial extensor tendons proximally and then neurovascular anastomosis was performed. The nerve to gracilis was anastomosed with posterior introsseus nerve, artery with branch of radial artery and vein with superficial vein in forearm. The gracilis tendon was split into multiple slips and individual slip was sutured with extensor tendons at the wrist. The gracilis muscle belly was skin grafted.
The patient has been advised six week splintage followed by gradual passive and active range of movements at wrist and fingers. He has been adviced to return to India after 6 months when further corrective tendon tightening and wrist arthodesis will be performed to improve the tendon function.

Discussion

Gracilis muscle provides a reliable workhorse for reconstructive microsurgery both for wound coverage and as a functional muscle transplant. The intramuscular neural anatomy allows the muscle to be thinned segmentally, allowing excessive bulk to be trimmed as needed before functional muscle transplantation. It has broad applicability in both lower and upper extremity reconstruction and in functional muscle reconstruction after paralysis or muscle loss. Gracilis transfer is associated with minimal donor morbidity. In this case, as a single muscle has been used to perform both wrist and finger extension, therefore in our opinion a future wrist arthrodesis will relieve the muscle of wrist extension function and will significantly improve the finger extension.

ABO Incompatible Third Kidney Transplant with Nephrectomy of Previous Allograft with Double Ureteric Reimplantation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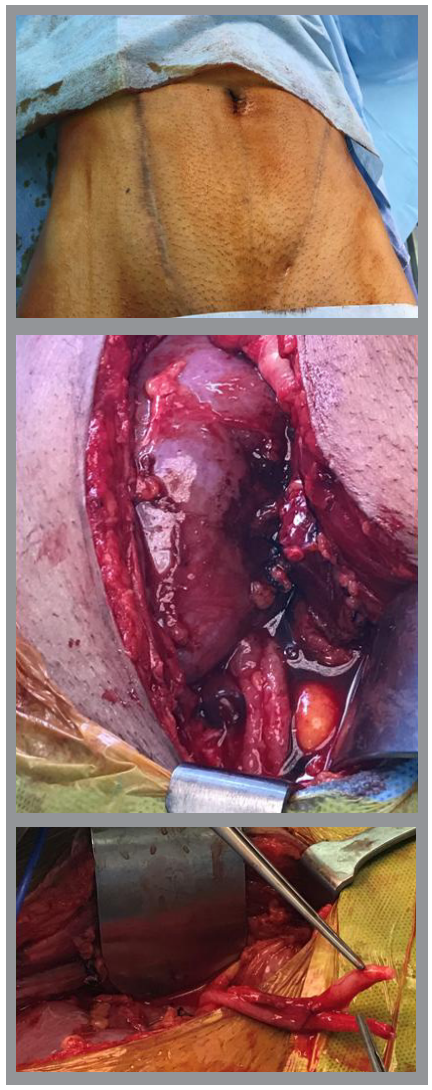
A 52 years old patient had with history of previous two kidney transplants done outside was dialysis dependent for the last 6 months because of chronic graft dysfunction. Graft doppler showed small contracted renal allograft in right iliac fossa with increased parenchyma l echogenicity and normal size graft in the left iliac fossa . USG Doppler for pelvic vessels showed atherosclerotic changes in form of wall thickening, luminal irregularity and calcification of aorta and bilateral iliac arteries.

In previous two transplants, donors were mother and father in 2006 and 2011 respectively. For the third kidney transplant his wife was the only available donor but the blood group was A+ve where as patient's blood group was B+ve. The anti A antibody titre was 1:8. So, patient was thoroughly counseled about possible option of third kidney transplantation with ABO incompatible donor, his wife.

Patient underwent CT angiography whole abdomen to look for the status of common iliac, external iliac, internal iliac, native renal and splenic artery. As the right allograft was small and contracted and was anastomosed with internal iliac artery, a surgical plan was made. Right graft nephrectomy followed by kidney transplantation was done in the right iliac fossa. The donor was evaluated with basic tests, DTPA Renal scan and CT Renal angiography, which suggested double renal artery on left side, single renal artery on right side with bilateral single renal veins with right side duplicated pelvi calyceal system and ureter. The patient required two plasma exchanges before the kidney transplant When anti A titre was achieved 1:4, the patient was taken for transplantation.



Right modified Gibson's incision was made. Peri graft dense adhesions were present. Meticulous dissection was carried out outside renal capsule. Internal iliac artery was identified and ligated, the renal vein ligated and the graft was taken out. The new allograft renal artery was anstomosed with an external iliac artery end to side and renal vein ansatomosed with an external iliac vein. There were two ureter in the kidney so both the ureters were reimplanted separately using Lich Gregoir techniques over two 6F/16cm DJ stent. Intraoperative period was uneventful.

Post operatively the anti A titre remain 1:2. There was no need of plasma exchange. The graft Doppler of both renal artery and vein were normal. The Serum creatinine was 1.1mg% on third post operative day. Drain and Foley catheter were removed on fifth post operative day. Patient was discharged on seventh postoperative day with normal graft.

Capsular Tension Ring in Traumatic Cataract surgery

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Dr. Madhu Karna

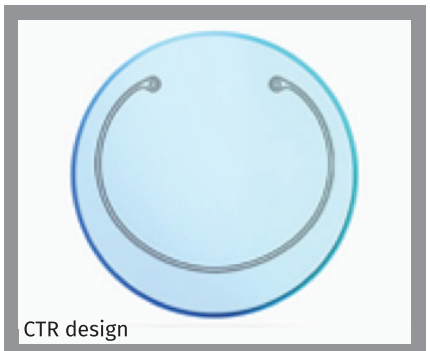
Case Report

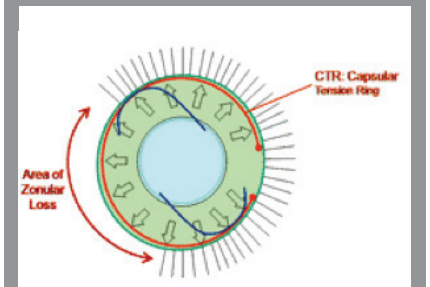
A 43 year old male walked in to the OPD with thick black rimmed glasses. He said that he had come to the hospital with high expectations for his left eye, which had lost vision in an injury 20 years back.

On examination he had a vision of light perception only in his left eye. He had a full thickness linear corneal scar from 12 o'clock limbus to just 2 mm short of inferior limbus. There was a vitreous strand adhered to the scar from 12 to 2 o'clock with an irregular peaked pupil. There was a mature traumatic cataract with zonular dehiscence leading to vitreous prolapsed and incarceration in the wound.

B scan ultrasound showed no retinal detachment. A scan measurement showed a larger left eye, axial length being more than the other eye which meant this could be a lazy eye too (anisometropic amblyopia) with a grim visual prognosis. Patient was asked about usage of glasses since childhood, which he denied.

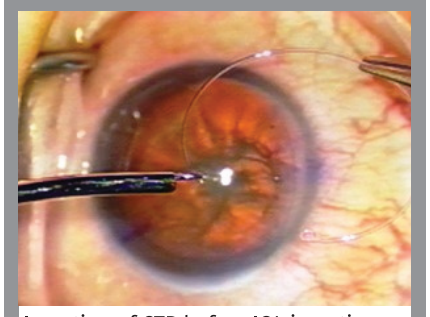
Zonular dehiscence with a traumatic mature cataract in a myopic eye warranted the use of an Capsular Tension Ring (CTR). Size 11 CTR was chosen based on the lens diameter. This ring stabilizes the capsular bag of the natural lens to hold the intraocular lens which is implanted. Phacoemulsification with intraocular lens and anterior vitrectomy with ECR was planned. The ECR was implanted in the bag after making a circular capsular opening, before proceeding for phacoemulsification. The risk of breaking more zonules was thus minimized and the patient went through uneventful surgery.


CTR design



CTR with IOL in the capsular bag


Insertion of CTR before removal of lens


Insertion of CTR before IOL insertion

Postoperatively the patient achieved 6/9 vision unaided and was extremely grateful for having a second good seeing eye after twenty years.

Discussion

Capsular Tension Ring (CTR):

• CTR is a 270 degree open PMMA ring placed in a capsular bag during cataract surgery in cases with zonular weakness involving less than 4 clock hours.

• It is an open ended flexible horse shoe shaped polymethyl methacrylate (PMMA) filament ring with two eyelets at either end.

• It prevents capsular fibrosis and ensures stable conditions during surgery.

Cataract surgery in the presence of zonular weakness is a great challenge. Earlier, surgery in these cases was difficult, leading to complications. The use of CTR has changed the surgical approach to such cataracts. Implantation of a endocapsular ring, stabilizes a loose lens and allows the surgeon to place the IOL in the most desirable place, which is in the bag.

There are other advantages such as the vitreous herniation to the anterior chamber is reduced, a taut capsule gives a counter-traction to all traction maneuvers, making them easier to perform, capsular support for in the bag implant is obtained and most important, the capsular bag maintains its shape, avoiding capsular fibrosis syndrome and IOL decentration.

ENDOFERT - 2017

(Conference & Live Laproscopic Suturing Workshop)


Dr. Jyoti Mishra

Dr. Jyoti Mishra, MD, Dip. Gynae Endoscopy (Germany)
Associate Director, Institute of Mother & Child Care

ENDOFERT - 2017

(Conference and Live Laproscopic Suturing Workshop)

1) Surgical cure of gynaecological disease in women has been through changing trends in the last two decades. Laparoscopic surgery is one such major evolutionary step.

2) Gynaecology divison of mother and child department organised "ENDOFERT 2017" conference and live workshop on 4th and 5th Nov 2017, preceded by Laparoscopic suturing workshop on 3rd Nov.

3) There was live transmission of twenty surgeries, which included Laproscopic hysterectomy, fibroid removal, ovarian cysts, endometreosis, blocked tubes, cancer surgery, infertility and hysteroscopic surgeries, on 4th Nov.

4) Operating national faculty included Dr. Jyoti Mishra, Associate director, Jaypee hospital, Noida. Dr. B.Ramesh (Banglore), Dr. PG Paul (Kochi), Dr. Sudha Tandon (Mumbai), Dr. Deepak Limbachiya (Ahmedabad), Dr. Rajesh Modi (Nagpur) and Dr. Hafeez Rahman (Kochi).

5) Academic sessions on 5th Nov consisted of lectures, panels, debates on most recent advances in making laparoscopic surgery safe for the patients. There was active participation by Dr. Tanveer Aujla, Dr. Sandeep Chaddha, Dr. Reenu Jain and Dr. Manju Gupta and many other doctors of national fame.

6) For the first time in North India, Jaypee Hospital organised "Laparoscopic Suturing Workshop" on 3rd Nov, where Dr. Jyoti Mishra and Dr. Nutan Jain taught the tricks of stitching the tissues through laproscopic instruments - a technique which has the longest learning curve for clinicians.

7) The event was attended by more than 300 delegates from all parts of India and abroad. Delegates gained a lot by actively interacting with the expert faculty.

8) In its endeavour to help the society, special discount were extended to the patients, who got the difficult surgeries done by national experts.

9) Many pharmaceutical companies benefited by showcasing their products, in the event.

Our endeavour towards quality (January to March 2018)

We at Jaypee Hospital, take consistent measures to serve our clients with quality and affordable care. We endeavor to achieve quality of services that meet international standards. Our dedicated team in quality department monitors the quality of services in various areas of the hospital and work towards its improvement.

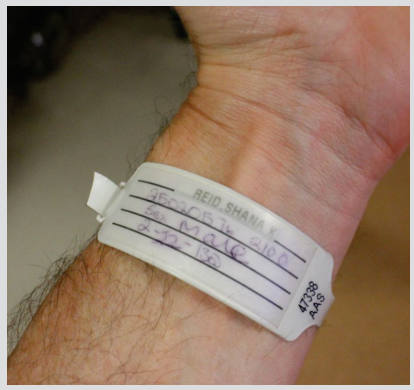
In order to maintain organizational standards, monitoring of various organizational indicators is done every month which are then dicussed in the Quality Steering Committee Meeting. The discussions include, appropriateness of consent, adherence to financial estimates, hand hygiene compliance rate, incidence of medication errors and hospital acquired infection rate. Pertinent patient care service issues and the remedial measures for improvement of services are discussed on everyday basis in the Hospital Operations Meeting.

Patient Feedback is considered as a basis for continual improvement in our services. Patient Welfare team visits patients everyday and collects feedback from both OPD and IPD. Patient satisfaction index is discussed by the top management every Tuesday. Commitment to high level of patient service has helped us achieve a satisfaction rate of 98% percent in OPD area for the quarter (Oct-Dec, 2017). For IPD patients we have improved our patient care services, which is reflected by the increase in IPD patient satisfaction to 83% (Oct-Dec 2017).

Our Cath lab team is proficient in providing quality services and the post cath procedure complication rate and unplanned return to cath lab has been zero percent for the previous (July-Sept, 2017) and current quarter (Oct–Dec, 2017).

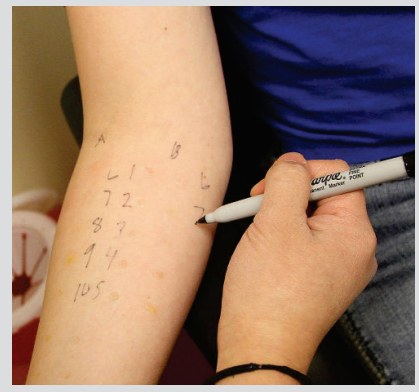
We have further reduced our average length of stay of patients to three days which clearly shows that the complication rates in post surgical patient are minimal and patients are recovering fast We strongly adhere to blood transfusion safety protocols. The adverse transfusion reaction reported is zero for more than three thousand transfusions which were performed for the quarter (Oct–Dec 2017). Our talent management strategy has a strong focus on interdisciplinary team development in line with the specialty development. These additional skills are key to orientating staff to a culture of patient value, productivity and continuous improvement.

International Patient Safety Goals









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Ranked amongst the
TOP 10 HOSPITALS
in North India by Times Health
All India Critical Care Hospital
Ranking Survey 2017

EMERGING BRAND OF THE YEAR 2016
by India Health & Wellness Awards 2016

BEST EMERGING HOSPITAL
by TOI Best Hospital Survery, 2016

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- Institute of Oncology
- Institute of Organ Transplant
- Institute of Orthopaedics And Spine
- Institute of Minimally Invasive Surgery
- Institute of Gastrointestinal And Hepatobiliary Sciences
- Institute of Neurosciences
- Institute of Renal Diseases
- Institute of Aesthetic And Reconstructive Surgery
- Institute of Mother And Child
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- Department of Emergency and Trauma
- Department of Critical Care and Anaesthesiology
- Department of Respiratory and Critical Care Medicine
- Department of Endocrinology and Diabetes
- Department of Infertility and IVF
- Department of Internal Medicine
- Department of Rheumatology
- Department of Ophthalmology
- Department of ENT
- Department of Radiology
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