

PEDIATRIC ROBOTIC SURGERY

Minimally invasive surgery, including robotic and laparoscopic surgery, has become the standard of care for treatment of many pediatric urological surgeries. Many surgeries, previously performed using large open incisions, can now be done with up to three incisions of the size of 5mm or 8mm. Minimally invasive surgery has been shown to reduce postoperative pain, decrease the duration of hospitalization, shorten recovery time, and improve the appearance of scars.

Pediatric Robotic Surgery requires special expertise since surgery in children's smaller bodies requires adapting to different quadrants of the abdomen and the chest.

What are the advantages of Robotic Surgery ?

Traditional laparoscopic surgeries have certain limitations when it comes to younger patients. A robotic surgery overcomes these limitations and helps the surgeons accomplish greater surgical success. The benefits of robotic pediatric surgery are two-fold: It offers advantages to both the surgeon and the patient.

For surgeons, the advantages are :

- A high-definition, 3-D view of the ongoing procedure
- Better dexterity which helps in correct suturing
- Better precision due to filtering of hand tremors
- More degrees of freedom compared to human hand

Since the surgeon is able to perform better operations, the following advantages are passed on to the patients:

- Small keyhole-sized incisions and hence, fewer scars
- Shorter hospital stay
- Quicker return to normal activity level
- Reduced risk of blood loss as well as blood transfusion

- Reduced risk of post-operative infections
- Much less pain post the surgery

What are the surgeries that can be performed by Robotic technique ?

All surgeries that are done laparoscopically can be done with robotics with better precision. The common pediatric surgeries done with Robotics are

- Robotic Pyeloplasty
- Robotic Nephrectomy
- Robotic Ureteric reimplantation
- Robotic Choledochal cyst excision
- Robotic Abdominal tumour excision
- Robotic Pelvic surgeries, and many more.

Is every child fit for Robotic surgery ?

No. Whether Robotic surgery can be performed on a particular child depends on many factors like the disease and various child related factors. The pediatric surgeon will assess all the factors and take a decision as to what is best for the child.

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