

Evolution of laparoscopic surgery for inguinal hernia repair

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With modernization of medical sciences, a concept of minimal access surgery was conceived. After very acceptable results of gallbladder surgery, the technique was extended to other organs and surgeries with reduced postoperative pain, mobility, reduced time of return to work and excellent cosmesis.

Groin hernias, being the most commonly done procedure in males was not forgotten and all efforts were made to devise a technique to apply the mesh on the under surface of abdominal wall as earlier experience with mesh application on the outer surface of the groin muscles had resulted in rather unacceptable incidence of recurrence of hernia especially in patients with obesity, chronic upper respiratory tract infection, cough and straining at urine because of enlarged prostate. Early experiences of laparoscopic hernia repair (about 30 years ago) revealed that the technique was difficult to learn as it dealt with an area where structures (nerves and major vessels) were in close proximity to most of the dissection making them liable to injury with disastrous results in some cases.

The concept of stripping a flap of peritoneum covering the hernial orifices requires a tedious exercise but it is one of the important part of transabdominal preperitoneal (TAPP) approach. This flap ultimately covers the mesh that is an important part of this operation. Any rent or damage to the peritoneal flap, therefore jeopardizes the results and the ultimate outcome with reference to bowel adhesions and other complications. Initial attempts to apply a small sized mesh to cover the presenting hernial orifice only lead to development of other hernias in the vicinity as the causative factors remained. This lead to using a bigger mesh to

cover the openings of all the four hernias possible in that region (direct and indirect inguinal, femoral and obturator hernias) liable to occur or reoccur in the patient in future.

Early experience of TAPP repair showed increase number of recurrences due to displaced mesh implants. It, therefore, necessitated the use of some kind of fixing or tacking devices to stabilize the mesh to the Coopers ligament. Further development lead to hernias repair and placement of mesh through total extraperitoneal space (TEP). This procedure gave a very limited space to the surgeon but with experience and a bit longer and difficult learning curve, the creation of appropriate sized space was learnt for placement of mesh. Even now, most of recurrences are seen during early phase of the so-called learning curve.

TEP is certainly better from TAPP procedure as far as injury to great vessels and nerves is concerned, but with experience, a large number of series have revealed that both procedures had nearly the same operating time, length of stay in the hospital, time for return to work and recurrences within three months of surgery. No real difference was seen in results of both of these procedures. When comparing laparoscopic hernia repair to open surgery, laparoscopic surgery had significantly reduced degree duration of postoperative pain, time for return to activity and work, numbness of scrotum and thigh and wound infection.

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