THE LATERAL APPROACH TEP METHOD BASED ON KNOWLEDGE OF FASCIAL ANATOMY AND FASCIAL STRUCTURE IN THE INGUINAL REGION

Fujio Ito, Takao Tsuchiya, Takahiro Saito, Ryo Okada, Daiki Yamaguchi, Yuka Kenno
Iwase General Hospital Abstract ID: 134619

Introduction:

Landmarks are essential for the safe performance of laparoscopic inguinal hernia repair, and fascia is one of them and is even more critical in the TEP method, where dissection begins from the extraperitoneal space.

However, the details of the fascia have not yet been clarified. The fascia is thinner than expected, and the significant individual differences in fascia make it challenging to elucidate the issue. We utilized several fascial structures that are relatively regularly observed during TEP for landmarks during dissection, VAS protection, creation of a robust peritoneal flap, and mesh fixation, which are helpful.

Methods and Results:

TEP was performed using a 3-port technique in the midline of the lower abdomen under observation with a 4K camera. The posterior layer of the rectus sheath is divided cranially into the tendinous part, attenuated part, and membranous part, and the medio-caudal portion is thinned and unclear, so we dissected it caudally along the semilunar line. Proceed forward, enter the preperitoneal space at the membranous area where the peritoneum separates, and seek the peritoneal edge outward to reach the inguinal ring. After recognizing the hernia sac while the preperitoneal fascia still surrounded it, we performed parietalization on the dorsal half circumference and then ligated and transected the hernia sac. Distal ligation prevented inguinal ring dilatation and postoperative hematoma. We kept the VAS embedded in a Spermatic sheath, dissected it medially to the umbilical artery cord, and then treated the umbilical prevesical fascia to reach the Cooper ligament and Retzius space. We could prevent the mesh from contacting the VAS by keeping the Spermatic sheath embedded in the fascia and dissecting it without exposing it. On the outside, thickened areas of the fascia were observed in both the deep and superficial preperitoneal facias. The former is firmly adhered to the peritoneum and is often difficult to dissect, so it is cut sharply, and the dissected surface is moved into the preperitoneal space. We created a robust peritoneal flap by attaching connective tissue to the peritoneum as much as possible except at the parietalization site. The latter is a solid structure continuous from the IPT, and we can eliminate the need for tucking by sandwiching the mesh between this and the peritoneum, which has connective tissue.

Conclusion:

By sequentially tracing the fascia while checking it, an appropriate dissecting layer was obtained, and safe and reliable TEP using each fascia became possible.

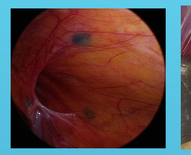


Fig. 2 right indirect hernias

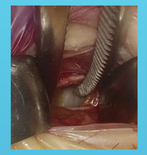


Fig. 3 infraumbilical small incision for the first port

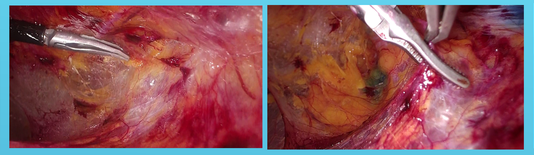


Fig. 4 Access to the preperitoneal space through an incision through the membranous portion

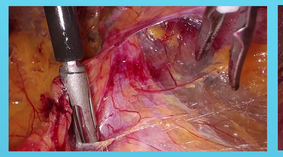


Fig. 5 Lateral dissection

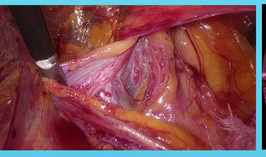


Fig. 6 Lateral dissection of the cord components

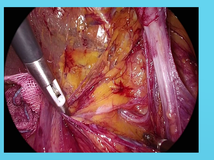


Fig. 7 Crossing of VAS and umbilical cord

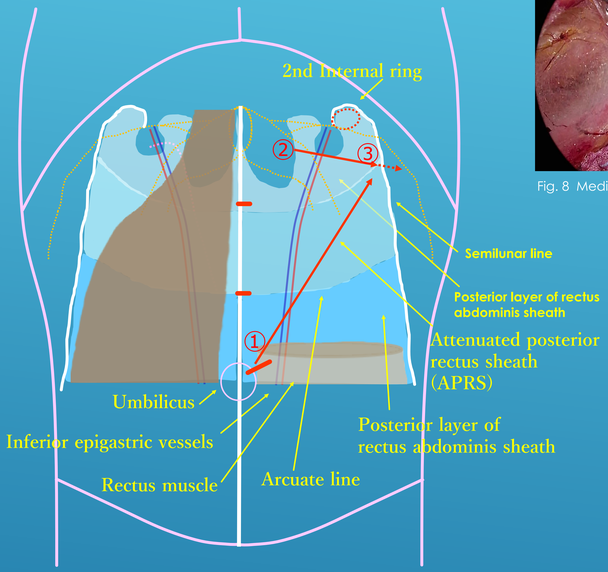


Fig. 1 Lateral approach

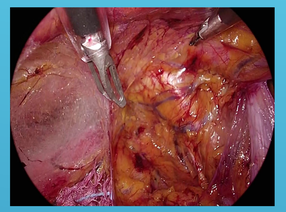


Fig. 8 Medial dissection

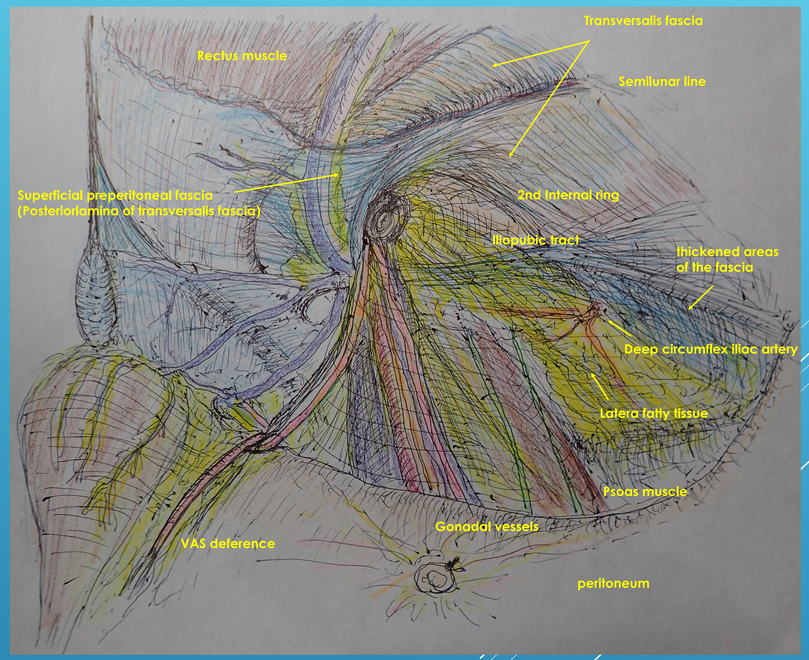


Fig13. Scheme of the anatomy after completion of preperitoneal dissection

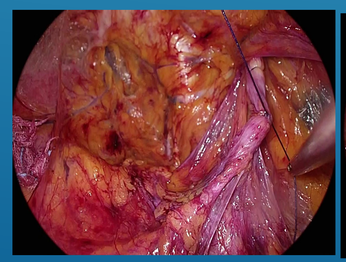


Fig. 8 Ligation and transection of the hernia sac

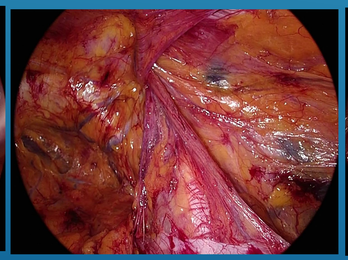


Fig. 9 Medial view

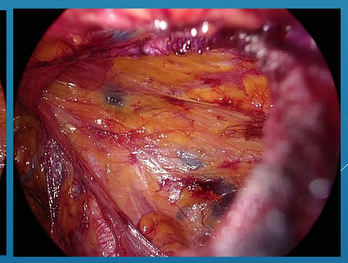


Fig. 10 Lateral view

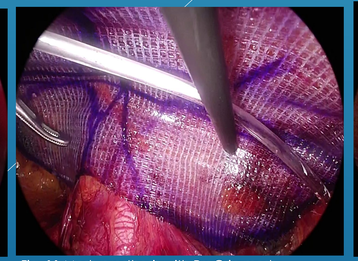


Fig. 11 Mesh prosthesis with ProGrip mesh

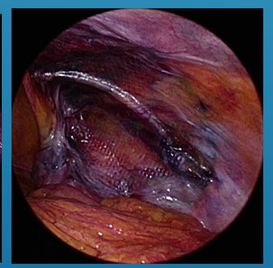


Fig. 12 Mesh prosthesis with ProGrip mesh