

Transumbilical Hidden-Scar High Anterior Resection for Sigmoid Colon Cancer Using GelPOINT[®] Through an Umbilical Zigzag Skin Incision

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Abstract

Introduction: Hidden-scar surgery is a new method by which surgeons perform abdominal operations through one incision made in the folds of the patient's umbilicus. However, with a straight incision in the umbilicus, the maximal opening of the fascia is 2 cm. The 2-cm fascial opening is not enough to allow for the triangulation of instruments, the removal of specimens, and the performance of anastomosis, particularly during gastrectomy and colectomy. To overcome this problem, we developed an umbilical zigzag skin incision with a 6-cm opening of the fascia and peritoneum in collaboration with plastic surgeons and used Gelport® to maintain pneumoperitoneum, which resulted in a scarless wound.¹ Plastic surgeons modified this technique from umbilicoplasties for umbilical deformities.^{2,3} We have performed gastrectomies, colectomies, cholecystectomies, and transabdominal preperitoneal hernia repairs using this method without any complications and have succeeded in hiding scars in the umbilicus. GelPOINT® is a newly developed device for minimally invasive surgery that provides a flexible, air-tight fulcrum to facilitate the triangulation of standard instrumentation. By offering an increased range of motion and maximum retraction and exposure, the GelPOINT platforms assure maximum versatility and access for a wide range of abdominal procedures. We report herein a video (559 seconds) describing a new method of transumbilical hidden-scar surgery using GelPOINT through an umbilical zigzag skin incision.

Materials and Surgical Technique: A 64-year-old woman underwent laparoscopic sigmoidectomy for sigmoid colon cancer. The procedure was performed as previously described¹; after marking a zigzag skin incision in the umbilical region, the skin was incised along this line. Then, a GelPOINT double-ring wound retractor was inserted through the incision, which enlarged the diameter of the fascial opening to 6 cm. The GelPOINT was latched to the wound retractor ring, and the pneumoperitoneum was then inflated using CO₂. One additional port was inserted in the right-lower abdomen for safety. Laparoscopic high anterior resection with lymph node dissection was performed in the standard fashion. The specimen was easily extracted from the abdomen through the umbilical zigzag incision, and the double-staple technique was used for anastomosis without any complications. The wound in the umbilical region was virtually hidden in the bottom of the umbilicus after surgery.

Results and Conclusion: We performed an umbilical zigzag skin incision technique using GelPOINT for laparoscopic high anterior resection without any complications. We consider that this zigzag skin incision technique is one way to lessen the technical difficulties of laparoscopic surgery, resulting in a hidden scar in the umbilicus.

The authors have no conflicts of interest or financial ties to disclose.

Runtime of video: 9 mins 19 secs

Cite this video

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