The umbilicus in laparoscopic surgery

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Is Umbilicus safe?

• The central location and ability of the umbilicus to camouflage scars make it an attractive trocar site for laparoscopic surgery.

• Umbilicus is a naturally weak area due to absence of all the layers.

• Weakness is also due its location at the midpoint of the abdomen's greatest diameter

• Most Surgeon believe there is a difference between the umbilicus and other trocar sites in both susceptibility to infection and postoperative incisional herniation.
Aims of Study

• To determine whether the umbilicus is at greater risk for postoperative infection than other trocar wounds.
• To determine whether the umbilicus is at greater risk for incisional herniation than other trocar wounds.
• Is pre-existing umbilical fascial defect is a risk factor for postoperative umbilical wound herniation.
Material and Methods

- 873 operations were studied
- 561 cholecystectomies
- 190 inguinal hernia repairs
- 71 Nissen fundoplications
- 51 ventral hernia repairs
comparison

- The factors related to infection and incisional herniation after laparoscopy at the umbilicus, as compared with those at remote sites
- 873 consecutive Hasson cannula sites, 748 umbilicus sites, and 125 remote sites were analyzed
Infection

• This study showed that the increased infection rate at the umbilicus seems to be related to cholecystectomy and not to the umbilicus.

• Excluding cholecystectomy, the umbilical infection rate was 2%, similar to that at remote sites.
Hernia

• Fascial defects at the umbilicus occur in more than 10% of patients,

• Twice as common in patients with inguinal hernias as in those with gallstone disease.

• Such defects can be used safely for laparoscopic portals of entry and, if repaired appropriately, will not contribute to postoperative incisional herniation.
Result

• The umbilical infection rate was 2%, similar to that at remote sites.
• The postoperative ventral hernia rate was at 0.8%, the same at the umbilicus as elsewhere.
• The more infection after cholecystectomy is due to the contamination of wound due to infected gallbladder.
Conclusions

• Wound infection at the umbilicus is similar to that at other sites
• Postoperative ventral hernia at the umbilicus is similar to that at other sites
• Umbilical hernia is not related to pre-existing fascial defects
THANK YOU !!!