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Portsite Hernia presenting as intestinal obstruction following RobotAssisted Laparoscopictrans-peritoneal Radical Prostatectomy:

Jai Param Singh Wazir*,Jaffar Hussain,ArifBashir,P.L.Kariholu.
Department of general and minimal access surgery,
School of Medical Sciences and Research,
Sharda University, India.

***Abstract**: Port site hernia is a rare but a serious complication following laparoscopic surgery.We present the case report of a 65-year-old male patient who had undergone robot assisted laparoscopic trans-peritoneal radical prostatectomy for adenocarcinoma prostate which was uneventful. After 3months patient presented to surgical emergency with the chief complaints of pain abdomen and multiple of vomiting from the last 2 days. Clinical examination revealed swelling in the right lumbar area at the scar of previous port site, swelling was soft,tender,irreducible.Abdomen was distended and tender. X ray abdomen showed multiple air fluid levels, with dilated small bowel loops suggestive of small bowel obstruction. USG revealed defect in the right lateral ventral area with herniation of bowel loops.Mini-laparotomy was performed, hernia contained viable bowel loops, hernia contents were reduced and fascial defect was closed.Patient did well post-operatively and was discharged on 4th post-operative day.*

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I. Introduction:

Robot assisted radical prostatectomyhas emerged as the leading operation for patients with localized prostate cancer. The procedure provides patient with excellent clinical,functional,aesthetic and oncological results with decreased postoperative pain and quicker recovery. Incidence of incisional hernia following robot assisted radical prostatectomy is estimated to be at 0.2-4.8%[1-9]. Factors predisposing patients to incisional hernia include technical factors, such as trocar type,size and location[10]lack of fascial defect closure.Other host factors like diabetes,obesity,surgical site infection,malnutrition, immunosuppression,smoking, delay wound healing hence contribute to development of incisional hernia.

II. Case Report:

65 years old male patient presented to surgical emergency with the complaints of swelling in the right lower quadrant for 2 months,abdominal distension and vomiting from 2 days. Patient had undergone robot assisted laparoscopic trans-peritoneal prostatectomy for prostatic adenocarcinoma with gleason score(4+3) involving 60% volume (with pathological stage Pt2N1) 3 months back.Patient had wound site soakage post-operatively for about 7 days and upon removal of skin sutures developed a swelling after one month. On examination GCS was 15/15, pulse 94bpm,BP 110/70mmHg. Abdomen was distended with tenderness present over the whole abdomen, more in the right lower quadrant. Chest,CNS,CVS examination was normal. Local examination revealed swelling present in the right lower quadrant, tender,soft to firm in consistency,irreducible with a scar mark over the swelling. Digital rectal examination was normal. X-ray abdomen revealed multiple air fluid levels, USG showed small lateral ventral wall defect over the right lower quadrant with herniation of bowel loops.Patient was explored and hernia contents were reduced with closure of the ventral wall defect. Patient recovered and was discharged after 4 days.

Fig.1. Pre-operative image showing right lateral ventral port site hernia.

Fig.2. Erect X-ray image showing multiple air fluid levels.

Fig.3. Intra-operative image showing herniated bowel loops with a constriction ring.

Fig.4. Intra-operative image showing herniated bowel loops with a constriction ring.

III. Discussion:

Port site hernia is an uncommon complication following laparoscopic surgery and is a potential cause of significant morbidity if bowel incarceration or strangulation occurs.Limited data demonstrate an incidence between 0.4% to 0.9% after robotic prostatectomy.[11]Lateral port sites are less susceptible to hernia development and traditionally don't mandate fascial closure. Port site hernia may be a consequence of technical factors such as trocar design,port location, fascial closure technique, patient related factors such as diabetes,obesity, wound infection etc. most laparoscopic surgeons now use bladeless,radiating trocars to decrease complication by muscle splitting rather than cutting.Closing Lateral port site fascia is a controversial topic especially after using bladeless trocars,theoretically multiple layers of lateral flank musculature should coapt to prevent hernia development.Chiong et al. retrospectively reviewed 1055 patients following laparoscopic urology surgery and noted out of 7 hernia cases reported,6 were located at 12mm lateral port sites and all 4 incisional hernias from patients undergoing robot assisted laparoscopic radical prostatectomy involved 12mm lateral port sites.[11] With rare occurrence and limited literature this patient experience makes it critical to properly review all technical, patient related factors and keep a low threshold for close post-operative follow up to prevent the development of trocar site hernia and its complications. The cause of port site hernia in our patient possibly seems to be a wound site infection coupled with inadequately closed fascial defect following port removal.

IV. Conclusion:

Although very rare port site hernia is a potential cause of fatal complication if incarceration or strangulation occurs.To prevent,it is critical to review all technical factors and keep a low threshold for close postoperative follow-up if any clinical suspicion of trocar site hernia develops.

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