



ORIGINAL RESEARCH PAPER

General Surgery

A RARE CASE REPORT OF INCISIONAL HERNIA AFTER VENTRICULOPERITONEAL SHUNT INSERTION

KEY WORDS:

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ABSTRACT

Ventriculoperitoneal (VP) shunt Insertion is a commonly undertaken neurosurgical procedure that aims to drain the excess cerebrospinal fluid (CSF) into the peritoneal cavity in cases of Hydrocephalus. The procedure is quite safe, though it can be associated with a variety of complications, notable at the abdominal site of shunt insertion such as displacement, cyst formation, hydrocele, perforation of intra abdominal organs, or extrusion. An incisional hernia may also occur. We present a rare case of an incisional hernia occurring at the abdominal site of shunt insertion and highlight the problems faced while repairing it.

Case Report

A 60 year old female presented with complaints of pain and lump in the upper right abdomen at VP shunt site. Patient had undergone VP shunt insertion for Communicating Hydrocephalus 2 years back.

On examination, there was an oblique 3cm scar in the right hypochondrium, with shunt in situ, a palpable tender soft lump that was reducible with difficulty and showed cough impulse. A defect of size 1x1cm was palpable. On a short follow-up, the patient was clinically the same. Patient opted for surgery in view of pain. On Ultrasound Imaging, patient had a defect of size 1x1cm at the scar site in the Right Hypochondrium with Omentum as content.

An Right Subcostal oblique incision was made at the old incision site. Intra- operatively, a subcutaneous sac was found with vp shunt entering it from superolateral side. On opening the sac, omentum was noted which was circumferentially adherant to the VP shunt original to it's tip. A defect of size 1x1cm was noted. Peritoneum was entered from Virgin area to avoid any injury to VP Shunt. VP shunt tip was found to be free lying without any adhesions. The defect was found to be small and non-yielding. Omentum was carefully dissected off the VP shunt and was reduced back into the peritoneal cavity under Neurosurgical guidance. The defect was closed with 1-0 prolene with 5mm gap in superolateral end for VP shunt. A Polypropylene Mesh of appropriate size was placed and fixed above the muscle layer in subcutaneous plane, making a tunnel for VP shunt providing adequate space keeping mesh contraction in mind. Wound closed in layers.

Post-operatively, Patient was stable with no complications or neurological symptoms. Patient was discharged on POD-3. Wound healed without any Seroma/ Hematoma formation. On 3 months follow up, healthy scar was noted, with no sign of recurrence of hernia and no neurological symptoms.



Figure 1. Incisional hernia at the abdominal insertion site of

VP shunt. Note the omental adhesions to the shunt (clinically making hernia difficult to reduce, thus causing symptoms)

DISCUSSION

Any swelling at the shunt insertion site should be investigated. Patients undergoing ventriculoperitoneal shunt insertion should be educated regarding the same. Omental Adhesions to the shunt should also be kept in mind in such cases of incisional hernias. Surgical Repair is the treatment of choice, so as to avoid potential complications. Tunneling of shunt by mesh can be done while doing mesh repair. This will decrease shunt's mobility across the fascial defect of shunt insertion site. Elective laparoscopic surgical procedures have better outcomes.

CONCLUSION

- Incisional hernia at the Ventriculoperitoneal shunt insertion site should be surgically repaired.
- Patient's written informed consent was taken to publish the case report.

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