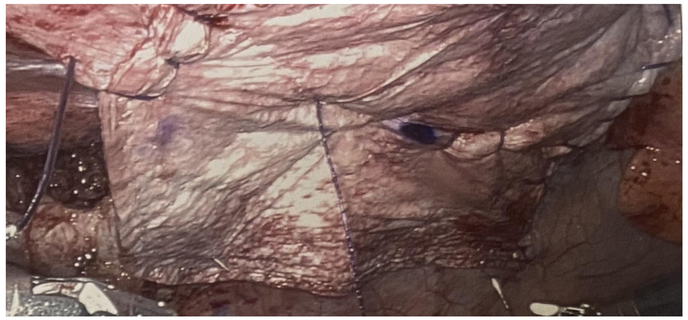
ROLE OF BIOLOGIC MESH IN ELECTIVE REPAIR OF VENTRAL HERNIA: RETROSPECTIVE ANALYSIS

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Background/Objective

- Surgical mesh has become an indispensable aspect of hernia repair to improve outcomes. Literature supports use of mesh to decrease recurrence rates.
- Although mesh is certainly beneficial in terms of hernia recurrence rates the use of mesh is associated with complications such as adhesions, infections, mesh extrusion, chronic pain and erosion into surrounding structures [1].
- Currently, majority of elective hernia repair is performed with synthetic products such as polytetrafluoroethylene(PTFE) mesh.
- Biologic mesh is frequently utilized during emergent cases in high-risk patients associated with infection and contaminated field.
- Biological meshes promote regeneration rather then scarring however lack of long-term recurrence rates precludes utilization of this mesh on elective bases [2].
- Additionally, increased cost is a significant factor.
- In our practice we encountered a significant population of patients needing elective hernia repair however requesting to avoid the use of synthetic mesh due to previously stated complications.
- After extensive product research to find a biological alternative we selected to utilize OviTex 1S mesh.



- Robotic IPOM ventral hernia repair using Ovitex 1S - suturing mesh to posterior layer of ventral abdominal wall

Methods

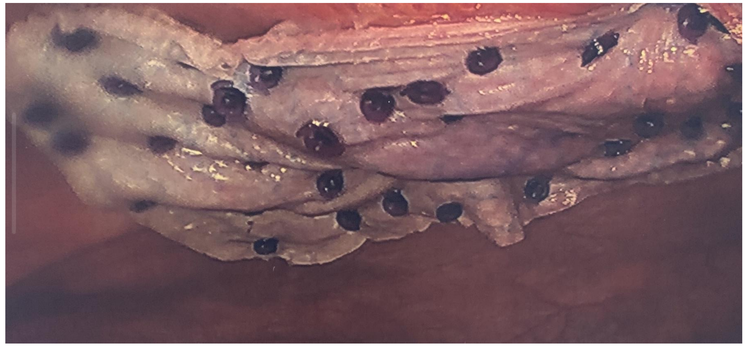
- Surgical mesh has become an indispensable aspect of hernia repair to improve outcomes. Literature supports use of mesh to decrease recurrence rates.
- OviTex 1S mesh is a biologic material is derived from ovine rumen interwoven with permanent polymer fiber through the layers in “lockstitch pattern”[3].
- We evaluated the 1S which is comprised of 6 layers interwoven by 5-0 prolene suture.
- This is a extracellular matrix completely incorporates into host tissue leaving a small synthetic footprint (3-5%).
- We utilized this product on patient cohort requiring elective hernia repair which elected to avoid synthetic mesh.
- Total of 15 cases were evaluated retrospectively. All cases performed utilizing robotic approach (XI platform) with primary closure of fascial defect and intraperitoneal onlay mesh (IPOM) technique.
- Diagnosis breakdown was 9 (60%) with ventral hernia and 6 (40%) with incisional hernia.
- Mean age was 58 (39-76), mean BMI was 30 (20-50) and mean ASA was 3 (2-4).
- Cumulative mean fascial defect size was 4.5 x 5 cm. (3 x 3 cm – 7 x 7cm).

Preliminary Results

- Patients were evaluated postoperatively at 2 weeks and 8 weeks on outpatient basis.
- Patients evaluated by physical examination for recurrence.
- No readmissions, wound infections or other complications noted.
- No hernia recurrence was found in this short term postoperative follow up period.

Conclusions / Future Directions

- Conclusion: OviTex 1S is a biologic mesh derived from ovine rumen and formed in 6 layers interwoven with 5-0 prolene suture.
- Mesh was easy to handle and utilize during surgical intervention.
- Furthermore, we found the mesh to be cost effective.
- We hypothesize that using biologic mesh leaves a smaller footprint on the body and thus, may have lower rates of postoperative complications associated with use of synthetic mesh.
- Cost and lack of long term recurrence data precludes use of biologic mesh on elective basis.
- Perhaps OviTex 1S design with cross link interwoven 5-0 prolene sutures may provide all the benefits of biologic mesh while ensuring low recurrence rates that approach or equal to synthetic mesh.
- Long term follow up and larger group study is required to determine if this biologic mesh can be routinely used for elective hernia repair.



- Robotic IPOM ventral hernia repair using Ovitex 1S - mesh fixated with laparoscopic tacks

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