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OTHERS

Prophylactic Onlay Mesh in Emergency Surgery: Preliminary Results

M. Käser, S. Hernandez Villafranca, J. Carrillo Peña, E. Rojo Villardon, P. Pastor Riquelme, V. Dominguez Prieto, H. Guadalajara Labajo.

Hospital Universitario Fundación Jiménez Díaz, Madrid, Spain.

Aim

Evaluate outcomes of prophylactic non-absorbable onlay mesh in emergency midline laparotomy.

Material & Methods

A prospective, non-randomized study was conducted **from July 2023 to December 2024** in the Department of General and Digestive Surgery at Hospital Universitario Fundación Jiménez Díaz (Madrid, Spain). Patients **undergoing emergency midline laparotomy with prophylactic mesh placement were included**, excluding those with incarcerated hernias. All closures were performed using polydioxanone sutures (PDS) and non-absorbable onlay mesh.

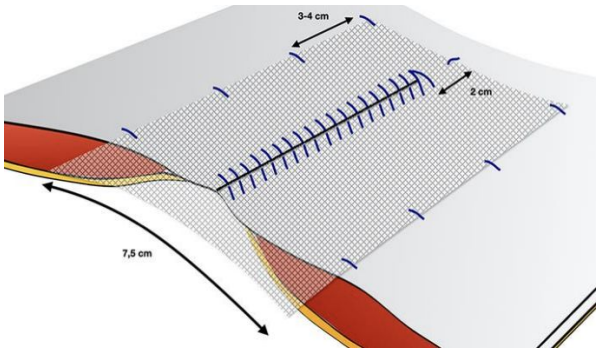

Fig. 1: Example of supra-aponeurotic or "onlay" mesh placement over midline closure. The mesh should extend approximately 3 cm beyond the ends of the incision in all directions.

28 patients enrolled → **5 were excluded** due to death or mesh explantation during revision surgery **(not related to the mesh)**.

Results

The morbidity in the analyzed group was high, considering the patients' characteristics and the type of surgery, 70% of which were classified as CDC Wound Class III/IV.
The mortality during follow-up was 13%.

Mean BMI	26
BMI > 25	78%
BMI < 18	13%
Age > 70 years	88%
Malignant disease	35%

Emergency surgery	100%
Bowel resection	78%
Stoma formation	13%

After a mean follow-up of **9.1 months** (4–21 months), the outcomes were as follows:

Evisceration	0%
Incisional hernia	13%
Chronic seroma	30%
Wound infection	13%

Chronic complications, including asymptomatic seroma, occurred in 13% of patients. No wound dehiscence or chronic mesh infections were observed. There was only one case of chronic pain, with a VAS score of 4/10. **No reoperations related to the mesh were required.**

Conclusions

Our cohort presents a high risk for both midline incisional pathology and surgical site infection. However, the outcomes showed 0% evisceration, 8.7% incisional hernia, and 13% wound infection. Both acute and chronic complications remained within an expected range. Nevertheless, longer follow-up is still necessary.