

DOES THE USE OF A SYNTHETIC SEALANT CATER FOR INTRAOPERATIVE AIR-LEAKS FOLLOWING LUNG RESECTIONS IN ALL PATIENTS ? A SINGLE CENTRE PROSPECTIVE STUDY.

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Objectives

To evaluate the effectiveness of a novel synthetic film sealant (TissuePatch3™) used for intraoperative parenchymal air-leaks in facilitating quicker chest drain removal & hospital stay.

Methods

- A single-centre prospective study. March 2010 - July 2011.
- 31 patients TissuePatch3 group (TPG) underwent lung resection either Open or VATS.
- 10 patients matched Control group (CG) - standard closure techniques.
- Air-leaks were graded with Macchiarini scale.
- Defects attended with sutures and TP3 or TP3 alone.
- A digital drainage system (Thopaz-Medela®) was used to quantify air-leaks and duration.

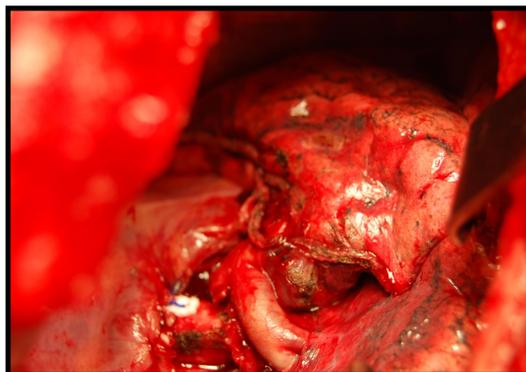
Results

- **Faster drain removal for the TPG (median = 4.0 days) compared to CG. (median = 11.5).**
- **Quicker discharge for the TPG (median = 5.0 days) compared to CG. (median = 7.5)**
- **Thoracotomy patients experienced a shorter hospital stay. (TPG median= 5 days - CG median= 7)**
- Favourable trend compared to national data. (HES, hospital episode statistics for England 2010) (median 8 & 9 days for lobectomy & bilobectomy respectively)
- No adverse events.

Conclusions

- We advocate the use of TissuePatch3™ for intraoperative management of parenchymal leaks.
- We recognise that the sample size was small to reach strong statistical significance.
- **Sealants have a place in the management of parenchymal leaks providing careful patient selection and utilization of products either alone or in combination with suturing techniques.**
- **The position and size of tear and the quality of underlying parenchyma play the most important role in the effective application of sealants and reward a successful outcome.**

Incomplete fissure developed with stapler. Air-leak present.



TP3 applied on the surface.

