Component Separation and Ventral Hernia Repair – A Systematic Review of the Literature

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Background

Component separations are becoming more popular for the management of large and complex ventral hernias

Involves releasing the external oblique (anterior component separation or ACS) or transversus abdominis muscle (TAR)

Aim: Compare morbidity and recurrence rates of different component separation techniques in ventral hernia repair

Methods

Comprehensive search of PubMed and Embase

Inclusion Criteria
- Systematic Reviews
- Meta-analyses
- Randomized Controlled Trials
- Guidelines papers

Exclusion Criteria
- Duplicates
- Conference abstracts

Results

10 papers specifically addressed component separation – only 7 reported on morbidity and recurrence

5 approaches considered
1. Open ACS
2. Endoscopic ACS (ECS)
3. Minimally invasive perforator sparing ACS (MiCS)
4. Open TAR
5. Robotic TAR

Main Findings

- No randomized controlled trials and no studies compared all 5 techniques
- Open approaches tended to have a higher morbidity (20%-40%) compared to minimally invasive approaches (10-20%)[1-4]
- TAR had lower recurrence rates (~5%) compared to ACS (10%-15%) at 2 years[5,6]
- ECS and MiCS had similar morbidity and recurrence rates although there was trend towards MiCS having better outcomes[6,7]
  - Morbidity: ECS 10%-20.3%, MiCS 9.5%-16%
  - Recurrence: ECS 7%-11.3%, MiCS 6.5%-10%

Summary

Lack of randomized controlled trials. Most studies included in the papers were retrospective with high heterogeneity and variable follow up

Limited ability to make conclusions with current literature

Trend towards MiCS having the lowest morbidity and TAR having the lowest recurrence

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