Mechanical Vacuum Aspiration & Debulking of Vegetations During CIED Extraction Malyshev et al., JACC, Oct 7, 2025

Background

- Large vegetations on infected CIED leads → high embolic & mortality risk
- Surgery historically preferred; percutaneous options emerging
- AlphaVac manual aspiration = single-operator, no extracorporeal circuit

Study Design

- Multicenter retrospective (3 centers)
- n = 42 pts with vegetations >1 cm
- PMD (AlphaVac) + TLE (n = 13) vs TLE only (n = 29)
- Time: 2015–2025 (PMD available since 2023)

Key Outcomes

- No major procedural complications
- **WBC change**: PMD −8.4% vs Control +21.1% (p = 0.046)
- **LOS**: PMD 8.2 vs Control 15.8 days (p = 0.056)
- **1-mo Mortality**: PMD 0% vs Control 14%
- Complete debulking in 100% of PMD cases
- Only AlphaVac used

Interpretation

- Feasible, safe, reduced inflammatory response
- Signals toward lower LOS and mortality
- Hypothesis-generating; not definitive

Limitations

- Small sample, retrospective
- Historical controls (non-contemporary)
- No subclinical embolization imaging
- Single operator for PMD

Bottom Line

- Percutaneous AlphaVac debulking appears safe and promising for large vegetations but requires larger prospective validation.

GUESTS:

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