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Abstract (poster session)

Impact of vacuum-assisted closure (VAC) therapy on clinical outcomes of patients with sternal wound infections: a metaanalysis

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Objective: To examine the impact of VAC therapy on mortality of patients with sternal wound infections after cardiothoracic surgery. **Summary Background Data:** Controversial results regarding mortality of patients with sternal wound infections were published. **Methods:** We performed a systematic search in PubMed and Scopus. Mortality was the primary outcome of the meta-analysis. Recurrences, complications and length of stay were secondary outcomes. **Results:** Twenty two retrospective studies including 2467 patients were eligible for inclusion. Patients treated with VAC had significantly lower mortality compared to those treated without VAC [2233 patients, RR= 0.40, (95% CI: 0.28, 0.57)]. This finding was consistent regardless of the study design, the exclusion of studies with positive findings, the criteria for establishment of the compared groups, the time of mortality assessment or the type of infections under study, provided that adequate data was available. VAC therapy was associated with fewer recurrences (RR= 0.34, 95% CI: 0.19-0.59). The meta-analysis did not show any difference in the length of stay (RR= -2.25, 95% CI: -7.52-3.02). **Conclusions:** VAC therapy was associated with lower mortality than other surgical techniques in retrospective cohorts of patients with DSWIs following cardiothoracic surgery.