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Deep Sternal Wound Infection Following OPCAB: Delving Deeper into the Predisposition!

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Dear Editor,

Predisposition to deep sternal wound infection (DSWI) following off-pump coronary artery bypass (OPCAB) grafting surgery classifies as an area of particular research interest. Given the fact that a sound evaluation of the risk factors for DSWI mandates a comprehensive approach, we wish to highlight a few important concerns pertaining to the Enginoev et al.^[1] study recently published in the *Brazilian Journal of Cardiovascular Surgery*.

Interestingly, the index analysis does not outline diabetes mellitus as a preoperative risk factor for DSWI (30.2% in DSWI and 26.2% in non DSWI group, $P=0.5$)^[1] albeit the lack of data on perioperative glycaemic control deserves attention. Appropriate to the context, the Mayo Clinic research group delineate as high as 30% increase in adverse outcomes, including infective complications for every 20 mg/dL rise in mean intraoperative glucose levels^[2]. Moreover, specific literature linking glycaemic fluctuations with infective complications continues to accumulate over the past decade^[3,4]. Järvelä et al.^[3] found a significantly heightened rate of postoperative infections in their cardiac surgical cohort manifesting repeated hyperglycaemia (39.7% incidence) as opposed to normoglycaemic or those with single hyperglycaemic episode (12.1% and 8.2%, respectively, $P=0.019$).

Furnary et al.^[4] reveal the independent DSWI predictive ability of post-cardiac surgery hyperglycaemia in the Portland Diabetic Project, wherein the subset with 48-hour mean blood glucose levels >200 mg/dL demonstrated a 2.2 times elevated risk of DSWI. Concomitantly, there is convincing evidence to suggest that perioperative glucose control with insulin infusion management protocols considerably attenuate the DSWI

incidence^[4-6]. Alongside the absence of perioperative glucose data, Enginoev et al.^[1] fail to describe the glucose management regime employed in their retrospective study^[1].

In addition, the authors could have elaborated whether or not any of the study participants were receiving preoperative corticosteroids^[1,7]. Herein, a comparative account of the preoperative leucocytic counts of the DSWI and non-DSWI groups could also have added incremental value^[1,8]. As much as we laud the endeavours of Enginoev et al.^[1], the points of perioperative relevance elucidated by us and the authors' explanation would probably assist readers to comprehend this dynamic research area in a more holistic manner.

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