AB010. SOH21AS220. Comparison of outcomes between immediate direct-to-implant breast reconstruction versus two-stage implant breast reconstruction: a systematic review and meta-analysis

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Background: Direct-to-implant (DTI) breast reconstruction is increasingly performed as the preferred method of immediate breast reconstruction following mastectomy. The proposed advantages of DTI over two-stage tissue expander (TE)/implant reconstruction relate to fewer surgical procedures. This systematic review and meta-analysis aims to evaluate the safety and efficacy of DTI versus conventional TE/implant breast reconstruction.
Methods: A systematic review was performed (PubMed, Embase and Scopus) to identify relevant studies that compared outcomes between DTI and TE/implant reconstructions. Publications up to October 2020 were included. The primary outcome was overall complication rate. Secondary outcomes included infection rate and implant loss.
Results: Nineteen studies, including 32,971 implant-based breast reconstructions, were analysed. Median age was 48 years. Mean BMI was 25.9 and there was no statistically significant difference between the two groups. Duration of follow up ranged from 1–60 months. Overall complications were significantly more likely to occur in the DTI group [OR 1.81 (1.17–2.79)]. Overall complications refers to all reported complications including seroma, haematoma, would dehiscence, infection, skin necrosis and capsular contracture. Implant loss was also significantly higher in the DTI cohort [OR 1.31 (1.12–1.78)]. There was no significant difference in infection rates between the two groups. Subgroup analyses, focusing on high-powered multicentre studies showed that the risks of overall complications were significantly higher in the DTI group [OR 1.51 (1.06–2.14)].
Conclusions: This meta-analysis demonstrates significantly greater risk of complications and implant loss in the DTI breast reconstruction group. These findings serve to aid both patients and clinicians in the decision-making process regarding implant reconstruction following mastectomy.
Keywords: Breast implant; breast prosthesis; breast reconstruction; immediate breast reconstruction; tissue expander (TE)

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Footnote

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