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## Efficacy and safety of acellular dermal matrix in diabetic foot ulcer treatment: A systematic review and meta-analysis

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**Background:** Diabetic Foot Ulcer (DFU) is a chronic, refractory disease in need of multidisciplinary endeavour, miscellaneous strategies have been adopted to address this annoying issue, including acellular dermal matrix (ADM)/negative pressure wound therapy/Standard of Care (SOC) etc. However, consensus has not been reached. As a promising procedure, the efficacy and safety of ADM remains controversial. We therefore performed a meta-analysis of Randomized Controlled Trials (RCTs) to compare the efficacy and safety of acellular dermal matrix to standard of care in DFU.

**Methods:** Databases, including Pubmed, Medline, Embase and Cochrane library were searched to identify RCTs comparing ADM to SOC in DFU patients. The outcomes mainly included complete wound healing, mean time to heal and adverse events.

**Results:** A total of 632 DFU patients from 6 RCTs were subjected to meta-analysis. The results showed that compared with the merely SOC, the complete healing rate in ADM group was higher both at 12 weeks (risk ratio (RR) 2.31, 95% (CI) 1.42 to 3.76) and 16 weeks (RR 1.57, 95% CI 1.28 to 1.93). The mean time to complete wound healing was shorter in ADM group (MD=-2.98, 95% CI: -5.15 to -0.82). The occurrence of adverse event in both groups showed no significant difference (RR 0.98, 95% CI 0.58 to 1.67).

**Conclusion:** Compared with standard of care, acellular dermal matrix may accelerate the healing velocity of uninfected, non-ischemic, full-thickness diabetic foot ulcer. Acellular dermal matrix showed superiority compared with standard of care alone, while generating no more complications.

### Biography

Xiaoshuang Guo is pursuing her Doctoral Degree. With her passion in improving the health and wellbeing, she focuses on not only cosmetic surgeries but also reconstructive fields. She devoted her efforts in basic aesthetic knowledge and pertinent experimental research, mainly on biomaterial and tissue engineering.

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