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Titel des Beitrags: Evaluation of human amniotic membrane as a wound dressing for split-thickness skin-graft donor sites.

Abstract: Human amniotic membrane (HAM) has been used as a biomaterial in various surgical procedures and exceeds some qualities of common materials. We evaluated HAM as wound dressing for split-thickness skin-graft (STSG) donor sites in a swine model (Part A) and a clinical trial (Part B). Part A: STSG donor sites in 4 piglets were treated with HAM or a clinically used conventional polyurethane (PU) foil (n = 8 each). Biopsies were taken on days 5, 7, 10, 20, 40, and 60 and investigated immunohistochemically for alpha-smooth muscle actin (?SMA: wound contraction marker), von Willebrand factor (vWF: angiogenesis), Ki-67 (cell proliferation), and laminin (basement membrane integrity). Part B: STSG donor sites in 45 adult patients (16 female/29 male) were treated with HAM covered by PU foam, solely by PU foam, or PU foil/paraffin gauze (n = 15 each). Part A revealed no difference in the rate of wound closure between groups. HAM showed improved esthetic results and inhibitory effects on cicatrization. Angioneogenesis was reduced, and basement membrane formation was accelerated in HAM group. Part B: no difference in re-epithelialization/infection rate was found. HAM caused less ichor exudation and less pruritus. HAM has...
no relevant advantage over conventional dressings but might be a cost-effective alternative.