EP-200

재생형 티슈덤 스페이서를 이용한 대형 복합 결손 재건 : 근막근피판 재건술의 대안

(Spacer-based reconstruction as an alternative to bulky flap reconstruction for large sacral composite defects)

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Purpose: Wide excision of sacral chordoma often results in large composite defects involving bone, muscle, and subcutaneous tissue. Even when skin coverage is preserved, restoration of deep structural volume is essential to prevent contour deformity and maintain pelvic stability. Conventional reconstruction frequently requires bulky musculofascial flaps, such as gluteus maximus muscle flaps, which are associated with donor-site morbidity, muscle weakness, prolonged operative time, and delayed ambulation. This study presents the use of a customized TissueDerm® spacer as a potential alternative to bulky flap reconstruction in deep composite defects.

Methods: A 65-year-old female underwent sacral chordoma excision at the S2–3 level. The defect measured 7 × 9.5 × 5 cm and involved bone, muscle, and subcutaneous layers based on preoperative MRI evaluation with the neurosurgical team. A customized spacer composed of collagen to promote tissue ingrowth and a biodegradable polycaprolactone mesh was designed preoperatively. Regulatory approval and reporting to the Korean Ministry of Food and Drug Safety (MFDS) were completed. The TissueDerm spacer was fabricated intraoperatively to restore deep volume and structural support.

Results: Structural volume was restored without bulky musculofascial flap reconstruction. Reconstruction required one hour, and ambulation began on postoperative day 7. The patient was discharged on postoperative day 26 without major complications. One-month CT demonstrated minimal seroma (<50 cc) and stable defect maintenance.

Conclusion: In large composite defects excluding skin loss, a customized TissueDerm spacer may serve as a less invasive alternative to bulky musculofascial flap reconstruction.

Fig. 1. Intraoperative fabrication

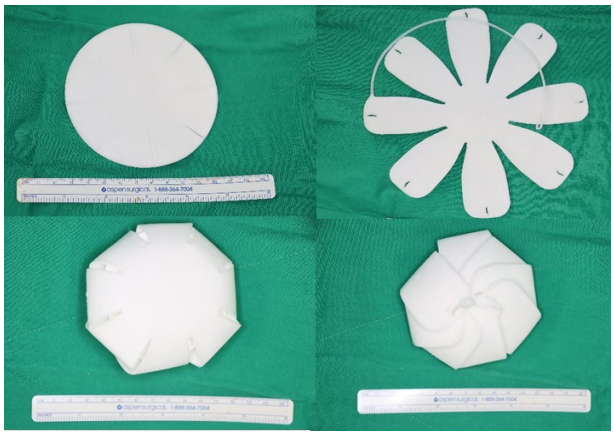

Fig. 2. Specimen & installation

Fig. 3. One-month postoperative CT

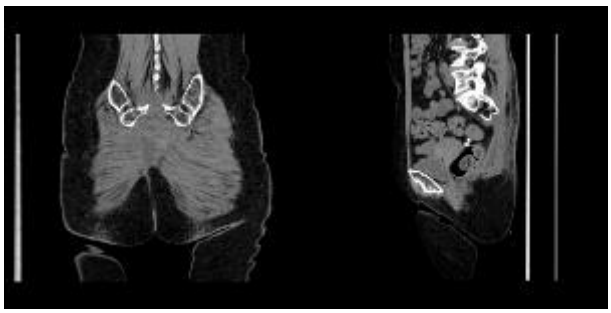

Fig. 4. An alternative to bulky musculofascial flap reconstruction