Treatment of En Coup de Sabre Deformity with Fat Grafting and Demineralized Bone Matrix: A Case Series

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En coup de sabre deformity (ECDS) is a form of localized scleroderma in the frontoparietal region due to progressive subcutaneous tissue atrophy and bony defect. Although ECDS involves two layers, skin/subcutaneous tissue and bone, the existing literature mainly focuses on treating only the skin/subcutaneous tissue layer. In this case series, we aimed to propose a novel approach which includes combined use of fat grafting and demineralized bone matrix (DBM). Four patients with ECDS deformity operated between February 2016 and October 2018 were retrospectively evaluated. All the patients were treated with the novel approach. Patients were evaluated with localized scleroderma scale and Computed Tomography (CT) scan in the preoperative period and at the annual follow-up. We observed remarkable improvement at localized scleroderma scale including appearance, palpation and size scores in all patients at the annual follow-up. CT scans at the annual follow-up revealed new callus formation at bony defect area in all patients. Reinforcing of fat grafting with DBM could promote healing of the bony and skin/subcutaneous tissue defects associated with ECDS.

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