

eP-06

Anteroposterior Cervical Fusion without Osteotomy in Emery-Dreifuss Muscular Dystrophy: A Novel Surgical Paradigm for Cervical Hyper-Lordotic Deformity Correction

Tae Sik Goh¹, Min Jun Choi¹, Han Sol Kim¹, Yoon Jae Cho¹, Jung Sub Lee¹

¹*Pusan National University Hospital, Orthopaedic Surgery, Busan, South Korea*

Background: Emery-Dreifuss muscular dystrophy (EDMD) is characterized by progressive myopathy and spinal contractures, leading to cervical hyper-lordotic deformity. Traditional correction involves osteotomies, posing risks of neurovascular complications.

Research Question: Can cervical hyper-lordotic deformity in EDMD be effectively corrected through anteroposterior cervical fusion without the need for osteotomy, thereby reducing complication risks?

Design & Method: A 24-year-old male with EDMD and severe cervical hyper-lordosis underwent surgery. The procedure included C4 to T1 discectomy, posterior fixation with lateral mass screws, partial muscle resection, and anterior plate fixation without cage insertion. The patient's preoperative condition involved a 97° cervical lordosis and limited neck motion.

Results: Post-surgery, cervical lordosis reduced to 17°, neck motion increased to 50°, and sagittal balance improved. The patient achieved horizontal gaze without compensatory postures. The Neck Disability Index improved from 16 to 6. Rehabilitation began three days post-surgery, with the patient quickly resuming daily activities. The correction angle achieved was 80° without osteotomy or neurovascular complications.

Discussion: This case illustrates a successful cervical hyper-lordosis correction in EDMD using a non-osteotomy approach. The technique offers a safer alternative, especially for less experienced surgeons, by minimizing neurological and vertebral artery risks. This suggests the potential for broader application of non-osteotomy methods in spinal deformities associated with EDMD.

Fig. 1

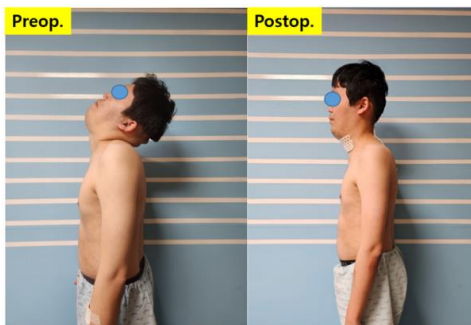


Fig. 2

