The far-lateral approach: destruction of the condyle does not necessarily result in clinically evident craniovertebral junction instability.

Abstract:
OBJECT Far-lateral or extreme-lateral approaches to the skull base allow access to the lateral and anterior portion of the lower posterior fossa and foramen magnum. These approaches include a certain extent of resection of the condyle, which potentially results in craniocervical junction instability. However, it is debated what extent of condyle resection is safe and at what extent of condyle resection an occipitocervical fusion should be recommended. The authors reviewed cases of condyle resection/destruction with regard to necessity of occipitocervical fusion.

METHODS The authors conducted a retrospective analysis of all patients in whom a far- or extreme-lateral approach including condyle resection of various extents was performed between January 2007 and December 2014. RESULTS Twenty-one consecutive patients who had undergone a unilateral far- or extreme-lateral approach including condyle resection were identified. There were 10 male and 11 female patients with a median age of 61 years (range 22-83 years). The extent of condyle resection was 25% or less in 15 cases, 50% in 1 case, and greater than 75% in 5 cases. None of the patients who underwent condyle resection of 50% or less was placed in a collar postoperatively or developed neck pain. Two of the patients with condyle resection of greater than 75% were placed in a semirigid collar for a
period of 3 months postoperatively and remained free of pain after this period. At last follow-up none of the cases showed any clear sign of radiological or clinical instability. CONCLUSIONS The unilateral resection or destruction of the condyle does not necessarily result in craniocervical instability. No evident instability was encountered even in the 5 patients who underwent removal of more than 75% of the condyle. The far- or extreme-lateral approach may be safer than generally accepted with regard to craniocervical instability as generally considered and may not compel fusion in all cases with condylar resection of more than 75%.