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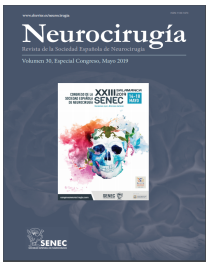

C0050 - SURGICAL TREATMENT FOR KIMMERLE ANOMALY: IS IT REASONABLE AND EFFECTIVE?

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Resumen

Objectives: Kimmerle anomaly consists of a bone bridge between the C1 articular process and its posterior arch or the atlas transverse process. This bridge forms a pathological canal with vascular and nervous structures such as the vertebral artery, vertebral vein, and occasionally, occipital nerve. Compression of this neurovascular bundle results in neurological deficits. Reports on the surgical treatment of Kimmerle anomaly are extremely rare. Objectives: to assess long-term results of surgical treatment of patients with Kimmerle anomaly.

Methods: Thirteen patients with Kimmerle anomaly were treated from 2015 until 2018. The mean age was 42 (range, 20–66) years. The patients had headaches with radiation to the eye or the external acoustic meatus, symptoms of vertebrobasilar insufficiency, and/or vegetative syndrome in the form of panic attacks. Two patients had bow hunters syndrome. Clinical performance was assessed using the Rankin scale, Rivermead mobility index, Neck disability index and SF-36 score. All patients underwent conservative therapy with no positive effects for at least 6 months prior to admission. Four patients underwent routine operations using the posterior midline approach, while the other 9 underwent decompression of the V3 segment of the vertebral artery via a paravertebral transmuscular approach using a tubular retractor. In 4 cases, neuronavigation was used.

Results: Results of the surgical treatments were assessed at discharge and 4-24 months post-operation. Neurological deficits improved in 10 cases. In 2 patients, there was no improvement, and in 1 case, only C1-pain was decreased. There were no postoperative complications.

Conclusions: The surgical treatment of vertebral artery compression in patients with Kimmerle anomaly may be preferable in cases where conservative treatment is inefficient. The minimally invasive paravertebral transmuscular approach is an alternative to the routine midline posterior approach. Collaboration with neurologists should be performed to select patients for surgical treatment.