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DISTRACTION ARTHRODESIS OF THE C1-C2 FACET JOINT FOR THE MANAGEMENT OF INTRACTABLE OCCIPITAL NEURALGIA CAUSED BY C2 ROOT COMPRESSION

Introduction/Aim

Vertical collapse of the atlantoaxial facet joint may cause C2 root compression, resulting in severe occipital neuralgia. The aim of this study was to evaluate the prospectively collected outcomes data of a distraction arthrodesis surgical group in comparison to a Control group in a non-randomized design.

Materials and Methods

The Study group underwent intraoperative skeletal traction, preservation of the C2 roots, facet joint distraction and posterior fusion, and segmental screw fixation using posterior C1 arch screws. The Control group had C2 root transection with C1-C2 segmental screw fixation and arthrodesis. We compared the preoperative and postoperative outcomes scores.

Results

There were 12 patients in the Study group and 8 in the Control group. The follow-up period averaged 24 ± 14 versus 33 ± 25 months. There was no difference in the VAS score for the preoperative occipital neuralgia. However, it was significantly lower in the Study group at 1, 3, 6, and 12 months postoperatively. There was no significant difference in preoperative and postoperative VAS scores for neck pain, NDI, and JOA scores and recovery rate.

Discussion

The VAS score for occipital neuralgia significantly improved in the study group but the other scores did not improved significantly, since these values are minimally influenced by occipital neuralgia.

Conclusion

Our results suggest that our novel technique of distraction arthrodesis can be an effective option for the management of intractable occipital neuralgia caused by C2 root compression.