Pain arising from the atlantooccipital joint

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I read with great interest the article entitled “Surgical treatment for atlantooccipital osteoarthritis: a case report of two patients” by Yoshihara et al. [1]. The destruction of O–C1 joints is not rare in rheumatoid arthritis (RA) patients. I sometimes vacillate between performing O–C2 fusion and C1–2 fusion in a patient with mild O–C1 joint destruction in addition to C1–2 joint destruction. O–C2 fusion is a surer method for relieving pain, but extension of the fusion to the occiput reduces the range of motion of the cervical spine and may cause additional complications, such as dysphagia [2]. Although I know that O–C1 destruction causes pain similar to that from the C1–2 joint, C1–2 fusion alone relieves the suboccipital pain markedly in most patients with concomitant mild O–C1 destruction (Fig. 1). In our experience, accidental violation of the O–C1 joint by a slightly too long transarticular screw causes no pain in most patients with C1–2 subluxation.

When I read the title of the article, I expected that I might learn about how to differentiate the pain from these two joints. However, both cases presented showed destruction of both the C1–2 and O–C1 joints. The authors failed to demonstrate that some of the pain in both patients came from the O–C1 joint. Particularly in case 1, in which the destruction was much milder in the O–C1 joint than in the C1–2 joint, I feel that C1–2 fusion alone may have alleviated the patient’s pain. I thus think that the title of the article is misleading. With this title, the authors should

Fig. 1 A 42-year-old woman with RA with atlantoaxial subluxation underwent C1–2 fusion with transarticular screws. Her chief complaint before the operation was neck pain. Sagittal CT reconstruction of the right O–C1–C2 joints 3 days after the operation demonstrated a transarticular screw and a very narrow O–C1 joint space. Postoperatively, however, the pain disappeared and has not reappeared for the past 2.5 years despite the destroyed but mobile right O–C1 joint

have demonstrated improvement of the pain after only O–C1 fusion, as Grob did [3] or pain relief after O–C2 fusion in the patient with previous C1–2 union and such information would really help us in understanding the pain arising from the upper cervical spine and decide on the fusion range.

Conflict of interest None.

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