Reviewer's comment concerning "Percutaneous cervical nucleoplasty treatment in the cervical disc herniation" (Jian Li et al. MS-no: ESJO-D-08-00079R2)

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The article of Jian Li et al. describes the clinical results in a series of 126 patients with 'contained' cervical disc herniations treated by percutaneous nucleoplasty.

The principle of this procedure is to introduce a small fiber (Perc D Spine Wand^{TM}) into the cervical disc. Then radiofrequency energy is applied to coagulate parts of the disc in a controlled way. It is postulated that this leads to a decompressive effect with a consecutive relief of the patient's symptoms.

This procedure is on the market in the US and outside US for a couple of years but never made it to become a generally accepted routine procedure.

One of the reasons for this is the fact that there can be doubts whether the clinical success rates are really based on a therapeutic effect rather than on a 'modulation' of the spontaneous course. The procedure is also characterized by an occasionally uncritical application in patients who would otherwise not have been surgical candidates.

The paper by Jian Li et al. describes a series of patients with favorable clinical result after cervical nucleoplasty. However, again there is a lack of information and some methodological flaws which should lead to a careful interpretation of these results.

The diagnostic criteria as stated in the paper were CT scan and/or MRI which means that in some patients no MRI was performed. This makes it difficult to show all morphological inclusion/exclusion criteria in an adequate way.

Considering that severe vascular (carotid artery) or esophageal injury is one of the rare but potential complications of percutaneous puncturing of a cervical disc, it is amazing and irritating that the patients left the hospital within 1 h postop. without any postop. surveillance.

Figure 3 shows different sagittal planes pre- and postop. so it is not exactly comparable. Moreover, it looks like there is an epidural fragment at C3-4 in Fig. 3a which is considered a contraindication for nucleoplasty but which is known to occasionally disappear over time by itself. The MRI in Fig. 4 is interpreted as a discitis C5-6, however in T2-weighted images the disc is hypointense suggesting that these are Modic type I changes and not inflammatory.

In summary, I congratulate the authors for their good and favorable clinical results and their low complication rate. Whether this has been the therapeutic effect of percutaneous nucleoplasty is, however, not proven in their paper.

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