**Reviewer’s report**

**Title:** Factors related to subjective satisfaction following microendoscopic foraminotomy for cervical radiculopathy

**Version:** 0  **Date:** 06 Aug 2017

**Reviewer:** Lucio Marinelli

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This study investigates factors related to patients satisfaction after microendoscopic foraminotomy for cervical radiculopathy using clinical rating scales and concludes that younger age, non-smoking status, high preoperative NDI score, high preoperative NRS score for the arm, low preoperative EQ-5D score, and a low postoperative NRS score for the arm predict better satisfaction.

The study is interesting and well written, however the following comments should be properly addressed:

Page 7 (Methods): authors state that in a 2-years time span 44 patients underwent foraminotomy after unsuccessful 4-months conservative treatment. It would be interesting to report the total number of treated patients and therefore the number of those responding to conservative treatment in this case series.

Page 7-8: Numeric Rating Scale (NRS) was used to rate both pain and disability in neck, back and arm districts? This looks very coarse; which is the contribution of pain and which of disability? Why separated NRS were not used? What question was asked to patients?

Furthermore, what is meant by "back"? Dorsal segment, lumbosacral? Both? Why other districts apart from neck and arm have been investigated?

Page 8, line 1 "EuroQOL-5D (EQ-5D) score was also used": it should be specified if EQ-5D-3L or EQ-5D-5L was used and also that the EQ-5D index values (0-1) derived from the original score were calculated and used for statistical analysis.

Page 8, lines 6-7 "We regarded the former question as a direct evaluation of satisfaction and the latter question as an indirect evaluation of satisfaction": it is difficult to understand which questions the authors refer to. The following sentence can be clarified to help the reader, for example: "We regarded the former question (subjective satisfaction) as a direct evaluation of satisfaction and the latter question (willingness to undergo the same operation if needed) as an indirect evaluation of satisfaction".

Statistics: who administered the rating scales? Which was the blinding status of the examiner/s?
Page 9, line 2 (Results) "A total of 43 patients were included in this study." : in the methods it was stated that 42 patients have been included, which is correct?

Results: no informations are provided about the symptomatic side; it would be interesting to know how many reported symptoms on right, left or both sides. It would be also interesting to understand possible correlations with subjects' handedness (eg. right handed subjects report more frequently radiculopathy on the right side?) and job.

Page 9, line 9 "venus plexus craniad to the nerve root": misspelled "cranial"?

Page 9, lines 18-19 "The response to the direct satisfaction survey and willingness to undergo the same operation were significantly related (p = 0.0079).": which statistical test was performed? No correlation analysis was declared in the methods.

Page 10 from line 17 (Discussion) "Parker et al. have reported the minimal clinically important difference...": the authors compare the mean minimal clinically important difference obtained in the current study for NDI, NRS for the neck, NRS for the arm, and EQ-5D with those reported by Parker et al in a study involving anterior cervical discectomy and fusion. In the present study the differences are comparable or more relevant for NDI and NRS for the neck but less relevant for NRS for the arm and EQ-5D; based on such observation the authors state that "we can regard microendoscopic foraminotomy for CR as an effective treatment method." (page 11, lines 3-4). This statement seems unsupported by data.

Page 12, lines 11-12 "low accuracy of the area under the receiver operating characteristic curves, which were 0.65 and 0.53, respectively." : the meaning of this sentence is not clear to me.

Table 3: measures of variability are missing

Table 5 - NDI: the decimal point for significance is missing. Also NRS for the arm is here reported as "upper extremity"; please correct for consistency.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No
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