Abstract #689.docx

The impact of anxiety and depression on self-assessed neck disability after surgery for cervical radiculopathy.

Introduction/Aim

In this study of patients treated for cervical radiculopathy, the aim was to evaluate impact of preoperative anxiety and depression on outcome.

Methods

151 patients included in a RCT comparing ACDF with artificial disk replacement, were evaluated at a two-year follow up. 48% were women and mean age was 47 years. Primary outcome was Neck Disability Index (NDI) at two years. Preoperative data included age, gender, smoking, level and duration of pain, sick leave, unemployment and use of analgesics. Preoperative anxiety and depression was evaluated with the Hospital Anxiety and Depression Scale: HADa and HADd respectively. The results were blinded to the surgeons before intervention. The preoperative possible risk factors were correlated to NDI at two years postoperative and also computed in a linear regression model.

Results

The stepwise regression analysis showed that HADa ($p<0.01$, adjusted r square = 0.25), HADd ($p<0.01$, adjusted r square = 0.21) constituted the major factors for the variance in NDI after two years. Patients scoring low in anxiety (HADa < 11; n=104) and depression (HADd <11; n=124) had mean preoperative NDI levels of 59 and 60 respectively while patients scoring high (> 11), n=32 and n=12 respectively, had corresponding NDI levels of 68 and 74. At two years, the low scoring patients' mean NDI levels were 30 and 32 respectively while the high-scoring groups' were 54 and 56. The difference was statistically significant, even after Bonferroni correction, $p<0.01$.

Discussion

The mechanisms for the association between mental distress, pain and self-assessed function are not fully understood but it is possible that the pathways are bidirectional: Painful conditions can most likely cause anxiety and in long term also depression, and probably also vice versa. We therefore suggest that screening, with the intention to detect mental distress, should be a part of the preoperative evaluation.

Conclusion

Patients with high preoperative levels of anxiety and depression did not improve to the same extent. More studies are needed to investigate whether this group of patients may achieve better results if other treatments are offered, either non-surgical treatment alone or as an adjunct to surgery.