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"Skip" corpectomy in treatment of multilevel cervical spondylotic myelopathy causing by ossified posterior longitudinal ligament.

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Introduction

- ▣ Results of corpectomy on one and two levels are usually considered to be good. At the same time, multilevel corpectomy is associated with a high complication rate, such as graft migration, screw and plate breakage, pseudoarthrosis and screw loosening (Vaccaro et al., 1998 & Hee et al., 2003)
- ▣ The skip corpectomy technique is one of modern ways of decompression and stabilization of cervical spine in patients with cervical spondylotic myelopathy (CSM) and ossified posterior longitudinal ligament (OPLL). Theoretically it can lessen the rate of complications, associated with grafts and implants (Dalbayrak et al., 2010 & Yilmaz et al., 2012)

Objectives

- ▣ to analyze own results of skip corpectomy by clinical and radiological criteria in patients with CSM causing by OPLL

Material and Methods

- ▣ 15 consecutive patients
- ▣ 11(73,3%) men and 4(26,7%) women
- ▣ origin – Caucasian -6 patients, Asian – 9 patients, no Ukrainians among them
- ▣ age of patients- from 57 to 76 years (mean age - 63 years)
- ▣ OPLL classified according to Hirabayashi et. al, 1981
- ▣ 6 (40%) patients had continuous type, 5 (33,3%)– segmental type, 4 (26,7%)– mixed type

Material and Methods

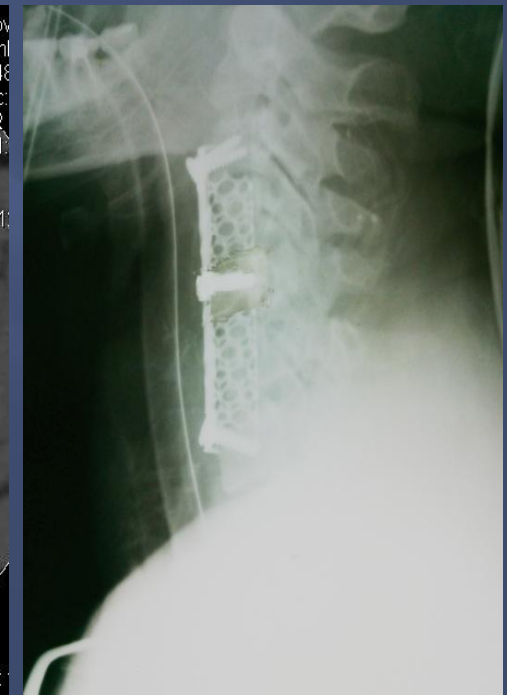
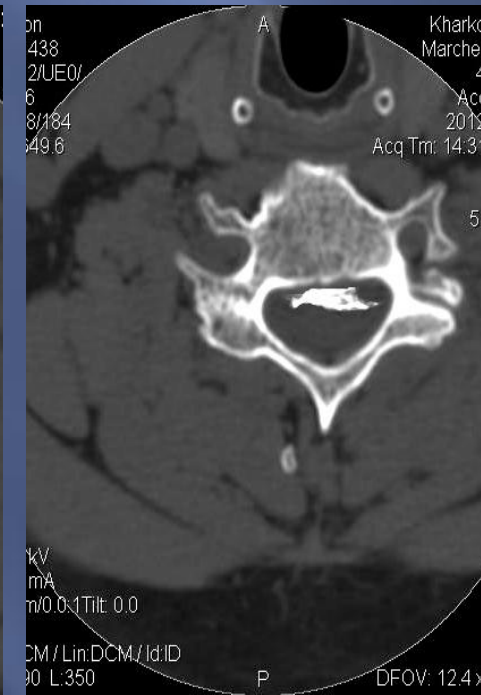
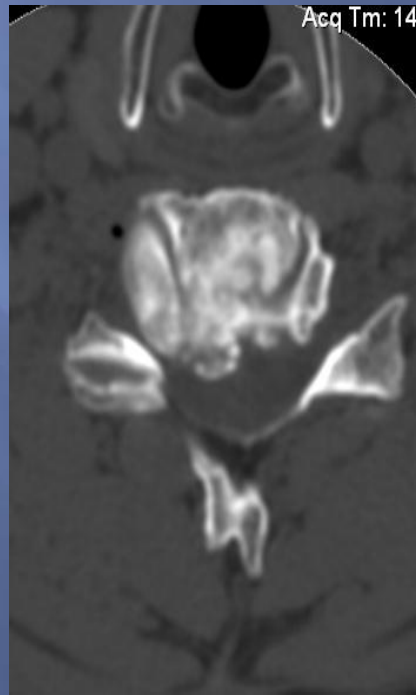
- ▣ all patients had undergone surgical treatment – subtotal corpectomy of C4 and C6 vertebrae, resection of osteophytes on C5 vertebra, decompression of spinal canal, anterior cervical interbody fusion
- ▣ used implants-vertical titanium meshed cages filled with tricortical iliac crest bone grafts and plates for fusion of own construction (Diamant, Ukraine)
- ▣ clinical outcomes evaluated using JOA scale
- ▣ X-ray and CT examination
- ▣ explored signs of fusion by Bridwell
- ▣ measured cervical lordosis

Results

- the mean preoperative JOA score was $12,2 \pm 1,7$, after surgery it was $13,1 \pm 0,8$, at the final follow up it was $14,3 \pm 2,2$
- the cervical lordosis was $1,8 \pm 10,5$ degrees preoperatively, $16,4 \pm 2,3$ after surgery and $14,5 \pm 6,5$ degrees at the final follow up
- fusion signs grade 1 had 4 patients, grade 2 was in 8 cases, grade 3 had 2 patients, grade 4 was in 1 case

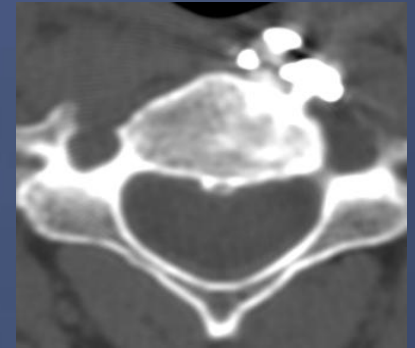
Clinical case

- Male, 59 years, with diagnosis of CSM, caused by OPLL, had undergone anterior cervical C4 and C6 corpectomy and fusion using cage and plate fixation



Complications

- ▣ transient dysphagia in 2 cases
- ▣ C-5 nerve palsy in 1 case
- ▣ C-7 partial screw pullout in 1 case
- ▣ temporary hoarseness in 1 case
- ▣ two patients had pain in iliac crest donor site for 3 weeks
- ▣ dura damage of various intensities - in 13 patients
- ▣ dura damage managed with haemostatic sponge (Tachokomb)



Conclusions

- ▣ skip corpectomy is an effective technique in OPLL and CSM treatment, evidenced by good fusion rate and proper clinical outcomes
- ▣ preservation of the C-5 vertebra provide an additional stability and strengthening of the construct

Thank you for your attention!



none of the authors has any potential conflict of interest