

Introduction: Inflammation of rhinosinusotubal area is a clinical situation, characterized by inflammation in the paranasal sinuses, nasal cavity, nasopharynx and Eustachian tube, in which dripping of infected discharge from the nasal cavity towards the Eustachian tube leads to the inflammation and obstruction of the latter. This complex of symptoms significantly impairs the quality of life. That's why it is so important to improve diagnostic methods and develop a treatment algorithm for such simultaneous pathology of the paranasal sinuses and Eustachian tube.

Material and methods: A total of 27 patient (19 women, 8 men), aged from 34 to 55 years, were enrolled in our study. Main complaints were prolonged autophony and hearing loss (10 days and longer), which did not improve after the standard treatment. All patients underwent the following examination: ENT examination, rigid endoscopy of the nasal cavity and nasopharynx by endoscopes 0 and 30 grade, cone-beam 3D Sirona middle and upper faces areas to examine the condition of paranasal sinuses and audiological assessment (pure tone audiometry, tympanometry).

Results: After a thorough examination of patients we found that all of them had different forms of sinusitis. Acute bilateral sinusitis was diagnosed in 56% of patients, 34% - had acute unilateral sinusitis and the last 10% - hemisinusitis. According to the results of pure tone audiometry 78% of patients had insignificant hearing loss, 10% had 1-2 grade conductive hearing loss, 12% had mixed hearing loss 2-3 grade with prevalence of conductive component. According to the study results we developed a diagnostic and treatment algorithm for the inflammation of rhinosinusotubal complex.

In addition to standard diagnostic methods it is necessary to use: plain X-ray or cone-beam computed tomography of the paranasal sinuses, audiological examination (pure tone audiometry, tympanometry), endoscopy of the nasopharynx. The treatment should include drainage of involved sinuses and restoration of the Eustachian tube function. This can be achieved by maxillary sinus puncture with instillations of antibacterial solutions and Eustachian tube catheterization. Pathogenetic treatment with mucoactive drugs, including herbal remedies, elimination therapy and hyposensitizing drugs for mucociliary clearance improvement is also of a great importance.

Conclusion: We recommend the use of plain X-ray or computed tomography of the paranasal sinuses for all patients with inflammation of rhinosinusotubal area to exclude possible "covert" sinusitis.

Keywords: Inflammation of rhino-sinostubal area, diagnosis and treatment, algorithm.

176. EARLY CLINICAL RESULTS WITH THE CORTICAL BONE TRAJECTORY PEDICLE SCREW FIXATION OF THE LUMBAR SPINE, USED FOR THE SURGICAL TREATMENT OF THE DEGENERATIVE SPONDYLOLISTHESIS

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Introduction: Low bone mineral density in patients undergoing lumbar spinal surgery with screws is an especially difficult challenge because poor bone quality can severely compromise the

maximum achievable purchase of the screws. Wide posterior approaches to the lumbar spine, exposing lateral to the facet joints and onto transverse processes causes an additional degree of muscular damage and blood loss not present with a simple laminectomy. A cortical bone trajectory (CBT) of the pediclescrew has been proposed as an alternative to prevent screw pullout and decrease the morbidity associated with the wide posterior approach to the spine. The CBT screw follows a lateral path in the transverse plane and caudocephalad path in the sagittal plane. This technique has been advocated because it is reportedly less invasive, improves screw–bone purchase and reduces neurovascular injury.

Materials and methods: Between January 2016 and March 2016, seven patients (2 men and 5 women) underwent transforaminal lumbar interbody fusion (TLIF) using the cortical bone trajectory instead of traditional pediclescrew fixation for degenerative spondylolisthesis of the lumbar spine. The cortical screws were placed with the assistance of the BrainLab Curve navigation system and the Siemens Artis Zee multi-purpose system.

Results: The average patient age was 63,5 years (range 55 – 72 years). Prior to surgery, all patients underwent MRI, CT and DEXA scans. Low vertebral bone mineral density (osteoporosis and osteopenia) was found in three cases. The L3 to S1 levels were instrumented. For the L3 and L4 pedicles, we used 5,5x35 mm polyaxial screws, for L5 - 6,5x35 mm screws. For S1 we used a different trajectory of the screw, oriented to engage with the high-density bone by penetrating the S1 superior endplate. This insertion technique allowed a larger 7,5 x 40 mm screw to be used, thus increasing the stability of the instrumentation construct. We obtained good postoperative results in all seven cases. Considerable improvement in both back and leg pain was achieved. In terms of complications, one case of pedicle fracture at the insertion site on the facetectomy side occurred. No dural tear, superior facet violation or screw misplacement were encountered. The mean operation time, radiation exposure and blood loss was significantly less than in the traditional lumbar fusion surgery.

Conclusion: We present early clinical results of a new technique that appeared to have a better fixation profile in laboratory testing. The CBT represents a good alternative option to obtain fixation for the lumbar spine, even in case of low bone quality.

Keywords: cortical bone trajectory, pedicle screw, degenerative, spondylolisthesis

177. COMPLICATIONS AND THEIR PREVENTION AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY (ES WL)

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Introduction: Approximately 80-90% of reno-ureteral stones have for treatment indication Extra Corporeal Shock Wave Lithotripsy (ESWL). Like a therapeutic procedure, extracorporeal lithotripsy may be accompanied by complications. Most of these are minor complications, but in a lower percentage, major complications can appear.