Objectives: Assessing the efficacy of surgical treatment of children with persistent auditory tube dysfunction caused by the presence of cartilage stenosis areas.

Conclusions: FMSCT, which allows to diagnose changes in the cartilage region of auditory tubes, is indicated for children with persistent dysfunction of auditory tubes. Balloon dilatation of auditory tubes is a highly effective and safe treatment method for children with persistent dysfunction caused by the presence of cartilage stenosis areas.

Objectives:
Assessing the efficacy of surgical treatment of children with persistent auditory tube dysfunction caused by the presence of cartilage stenosis areas.

Methods:
27 patients aged 6 to 15 years with persistent bilateral dysfunction of auditory tubes were examined. The examination comprised endoscopic examination of nasal cavity and nasopharynx, ear endoscopy, audiologic examination and functional multispiral computed tomography (FMSCT) of auditory tubes. Bilateral balloon dilatation of auditory tubes was performed on all children.

Results:
Nasa; cavity and nasopharynx endoscopy revealed no pathology. Tympanograms of 10 (37.1 %) children were bilateral type C. Tonal threshold audiometry was featured by increasing air conduction thresholds to 30 – 40 dB. 17 (62.9 %) of children had bilateral type B tympanogram, with tonal threshold audiometry featured by increasing air conduction thresholds to 40 – 60 dB. As FMSCT of auditory tubes showed, all patients had bilateral cartilage stenosis areas inside auditory tubes.

After balloon dilatation of auditory tubes had been performed, the patients were examined in 2, 6 and 12 months. Clinical audiological examination parameters returned to normal values in 25 (93.3 %) children, while 2 (6.7 %) children had a recurrence of unilateral exudative otitis media accompanied by progressing atelectasis of posterior eardrum regions. Type 1 tympanoplasty, anterior eardrum shunting and balloon dilatation of auditory tubes were performed, followed by shunt extrusion in 6 months’ time, with clinical audiological examination parameter values being within normal age norms.

Conclusions:
FMSCT, which allows to diagnose changes in the cartilage region of auditory tubes, is indicated for children with persistent dysfunction of auditory tubes. Balloon dilatation of auditory tubes is a highly effective and safe treatment method for children with persistent dysfunction caused by the presence of cartilage stenosis areas.