

# Implantation of 4,5/0,4 mm titanium stapes prostheses: 2017 - retrospective study

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## Objective:

In this short-term result study, we present ENT Department Timisoaras's experience with the 4,5/0,4 mm titanium stapes prostheses that we use in otosclerosis.

Beginning with 1956, a multitude a stapes prostheses have been designed: poliethylene tube prostheses, teflon prostheses - Shea and Marquet, steel wire-adipose tissue prostheses – Schuknecht 1960, steel wire teflon prostheses, pure gold piston - Pusalkar and Steinbach 1990. In 1999 titanium stapes prostheses was introduced in stapes surgery. However, as Hugo Fish once eloquently pointed out “this new technologies will not make good surgeons out of bad ones, but they might help good surgeons to obtain even better results”.

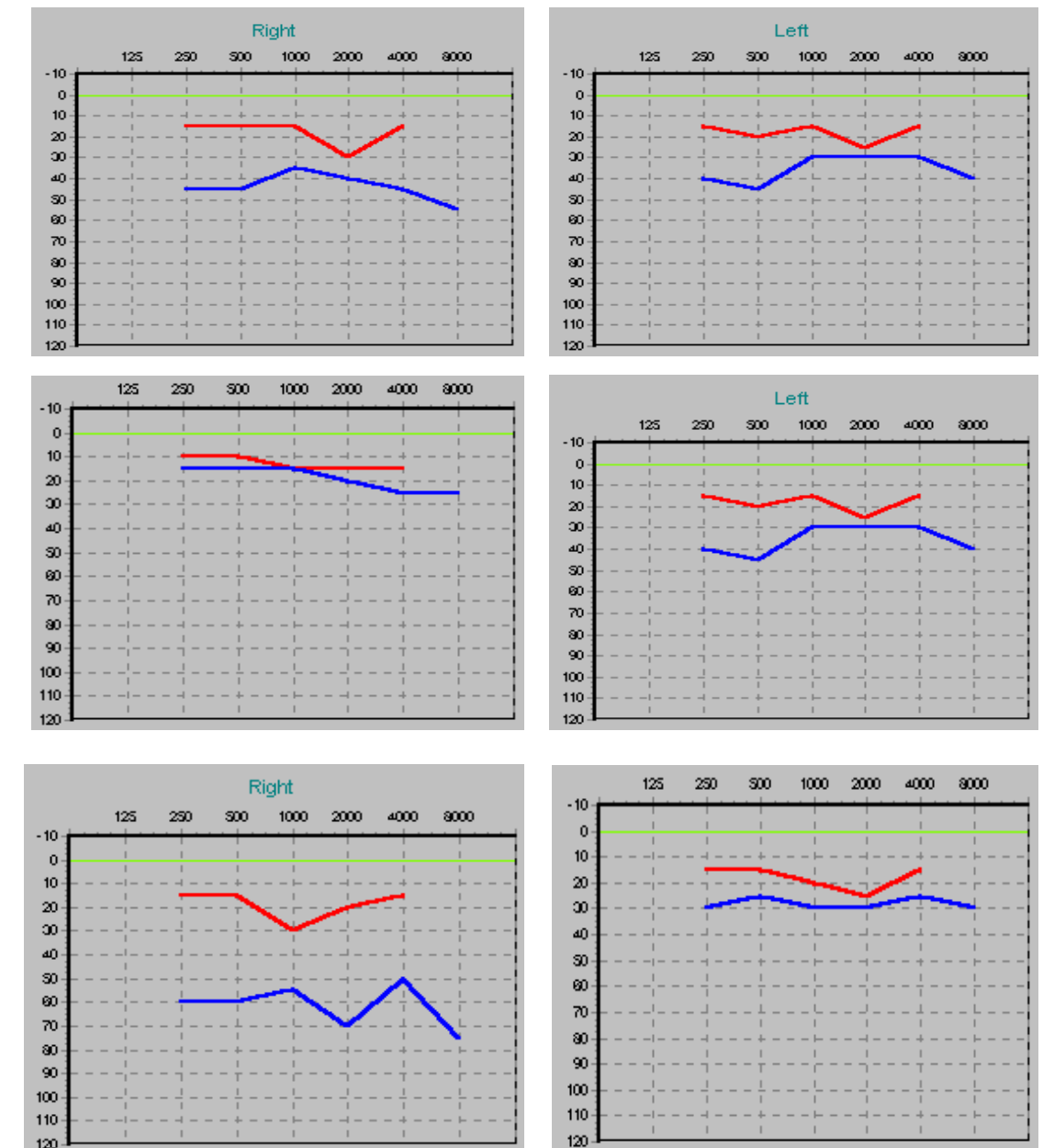
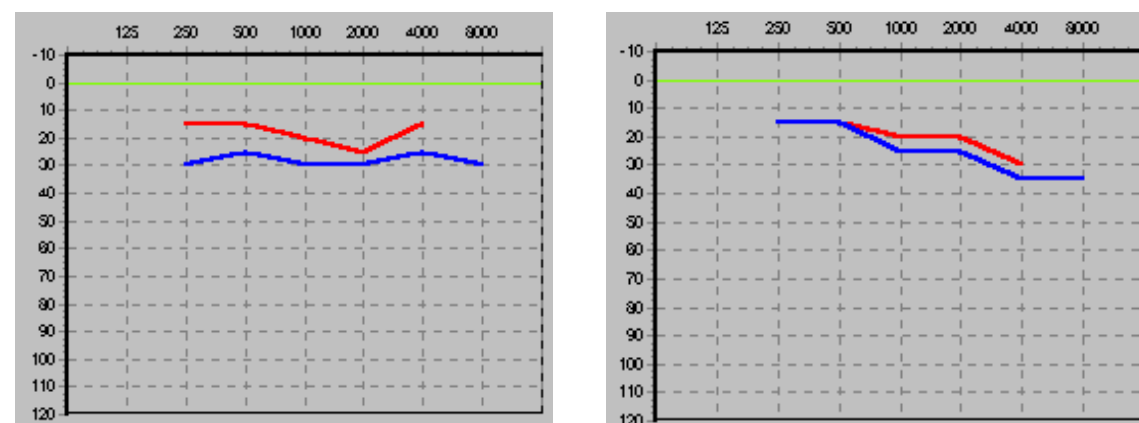
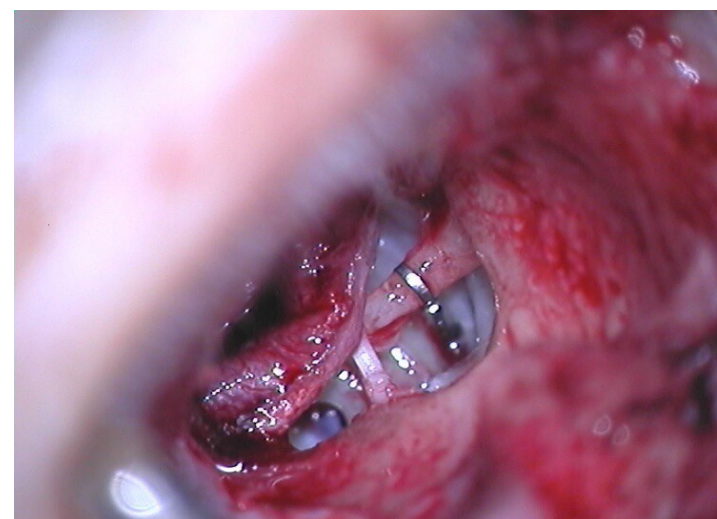
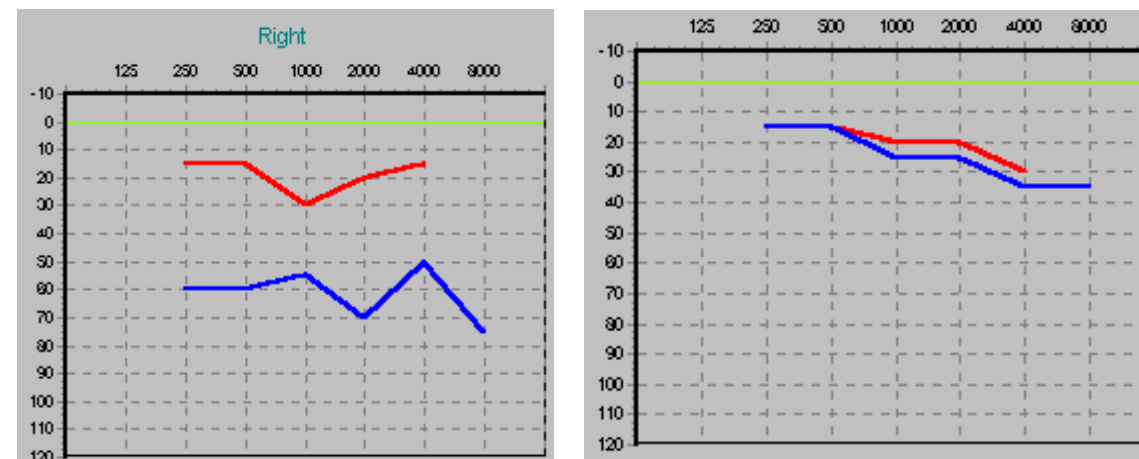
## Materials and Methods:

We have analyzed in 56 patients the preoperative and postoperative hearing.

The stapedotomies were performed with a diamond microdrill and Fisch-type manual perforators in 48 patients, posterior partial stapedectomies were performed in 5 patients and stapedectomies in 3 patients. Pure-tone audiometry with appropriate masking was performed preoperatively and approximately 6 weeks postoperatively.

The average postoperative air-bone gap was calculated as the postoperative air PTA minus the postoperative bone PTA.

**Results:** In cases of stapedotomy we encountered a somewhat beter result in the zero-to-10 dB range compared with the other two techniques. That difference was not significant, and the results in the zero-to-20 dB range were comparable among the 3 procedures.



The advantages of stapedotomy are:

Less trauma to the inner ear

Better stability of the prosthesis

## Conclusion:

In our hands 4,5/0.4 mm titanium stapes prosteses does not greatly influence the results in case of performing stapedotomy, posterior partial stapedectomy and stapedectomy. The experience and manual skill of the surgeon remain very important factors in providing a successful outcome.