

Journal of Andrology, Vol. 26, No. 3, May/June 2005  
Copyright © [American Society of Andrology](#)  
DOI: 10.2164/jandrol.04143

# Treatment of Varicocele: Randomized Prospective Study on Open Surgery Versus Tauber Antegrade Sclerotherapy

ALESSANDRO ZUCCHI\*, LUIGI MEARINI\*, ETTORE MEARINI\*,  
ELISABETTA COSTANTINI\*, VITTORIO BINI† AND MASSIMO PORENA\*

From the \* Urology Department and the † Gynecological, Obstetric and Pediatric Science Department, University of Perugia, Italy.

Correspondence to: Alessandro Zucchi, Urology Department, University of Perugia, Policlinico Monteluca, via Brunamonti, 06100 Perugia, Italy (e-mail: rob.san@libero.it).

The goal of this randomized prospective study in patients with varicocele was to evaluate the outcome following open surgery with inguinal approach versus antegrade sclerotherapy according to the Tauber procedure. From January 2002 to November 2003, we recruited 64 patients with left varicocele for this study. All patients were clinically examined, before surgery and again 8 months postsurgery, by objective examination, scrotal color Doppler ultrasound, and semen analysis. These patients were randomized in a balanced 4-block pattern: depending on randomization, the patients underwent open surgery (group A: 32 patients) or antegrade sclerotherapy according to the Tauber procedure (group B: 32 patients). At the current follow-up, it is possible to evaluate all the patients for whom we have preoperative and postoperative Doppler imaging and semen analysis. An analysis of seminal parameters shows a statistically significant improvement of the rate of fast progressive spermatozoa ( $P < .05$ ) and reduction in immotile spermatozoa ( $P < .01$ ) in those patients who underwent sclerotherapy compared to the patients who underwent open surgery. The outcomes of all other parameters (number and morphology) are fully comparable. Operating time is decidedly shorter for antegrade sclerotherapy ( $P < .01$ ), but there are no significant differences in terms of early or late postoperative complications. It is widely known that varicocele is a condition found in 9% to 23% of the male population around the world; this percentage rises to 40% among infertile males. The treatment of this condition not only resolves clinical symptoms but also stops continuous damage to spermatogenesis, thereby potentially improving fertility. Our experience demonstrates that sclerotherapy (Tauber procedure) combines shorter surgical time and faster recovery of normal daily activities with significant improvement in sperm motility.

Key words: Tauber procedure, sperm motility

## This Article

- ▶ [Full Text](#)
- ▶ [Full Text \(PDF\)](#)
- ▶ [Alert me when this article is cited](#)
- ▶ [Alert me if a correction is posted](#)

## Services

- ▶ [Similar articles in this journal](#)
- ▶ [Similar articles in PubMed](#)
- ▶ [Alert me to new issues of the journal](#)
- ▶ [Download to citation manager](#)

## Citing Articles

- ▶ [Citing Articles via HighWire](#)
- ▶ [Citing Articles via Google Scholar](#)

## Google Scholar

- ▶ [Articles by Zucchi, A.](#)
- ▶ [Articles by Porena, M.](#)
- ▶ [Search for Related Content](#)

## PubMed

- ▶ [PubMed Citation](#)
- ▶ [Articles by Zucchi, A.](#)
- ▶ [Articles by Porena, M.](#)

This article has been cited by other articles:



A. Zucchi, L. Mearini, E. Mearini, F. Fioretti, V. Bini, and M. Porena  
Varicocele and Fertility: Relationship Between Testicular Volume and  
Seminal Parameters Before and After Treatment

J Androl, July 1, 2006; 27(4): 548 - 551.

[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)

---

[HOME](#) [HELP](#) [FEEDBACK](#) [SUBSCRIPTIONS](#) [ARCHIVE](#) [SEARCH](#) [TABLE OF CONTENTS](#)

[Copyright © 2005 by The American Society of Andrology.](#)