

# Proposal for a novel and inexpensive surgical instrument to perform the tension-free vaginal tape procedure in women with genuine stress incontinence

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## Summary

The tension-free vaginal tape (TVT) technique is now commonly used in the management of female genuine stress incontinence. Short operation time, small amount of local anesthetic, fast postoperative mobilization, brief hospital stay, little residual urinary volume and little need for sick leave make TVT a simple and well-accepted minimal invasive surgery for the treatment of stress incontinence. We became suspicious of the procedure due to the very expensive cost of the instrumentation. Moreover we think that this "blind" procedure may be less dangerous by using a more familiar instrument than a large and gross steel needle.

We propose the use of an unmodified procedure with a new, cheaper and easy-to-use steel clamp-like-instrument.

The tension-free vaginal tape (TVT) technique has already been described elsewhere [1] as an easy and first-step tool in the management of female genuine stress incontinence. Short operation time, small amount of local anesthetic, fast postoperative mobilization, brief hospital stay, little residual urinary volume and little need for sick leave make TVT a simple and well-accepted minimal invasive surgery for the treatment of stress incontinence.

The procedure is highly effective and is associated with very few intra- and postoperative side-effects (e.g. bladder injury, external iliac artery rupture, retention and others) [2, 3].

Nevertheless, fear arises from surgeons using such long and heavy gross steel needles to perforate endopelvic fascia, periurethral tissues, the Retzius space and abdominal fascia. In fact this "close" procedure should be performed by a sudden, resolute, surgical movement,

down from the vaginal dissection, up to the abdominal retropubic incision, blindly and strictly following the pubic symphysis.

The very expensive cost of the instrumentation (particularly the needle and the handle) are suspicious.

We propose the use of an unmodified procedure with a new steel clamp-like instrument to avoid using the needle. This tool (Figure 1) should be more familiar, cheaper, and easier to use. Like any steel instrument, even this one is cleaned by sterilization and therefore it can be used again.

The first portion (handle) consists of finger rings to tightly hold and to securely lead the instrument across the pelvis. The two jaws have two curves. The first one (40 degrees) is close to the handle and the second one (70 degrees) is positioned five centimeters from the junction. Without considering the curves, the clamp measures 36 centimeters. Mean transverse diameter of the conical section from the junction to the end is 0.4 centimeters, rising from 0.7 to 0.1. The tip has a little hole to hold the self-made prolene sling.

This is an easier and less expensive tool which allows the surgeons to perform a closer TVT procedure, thus increasing its safety: the shorter transverse diameter, the conical section, the shape (a double curved clamp-like instrument) allow a "blind surgery" to be performed with a familiar tool.

## References

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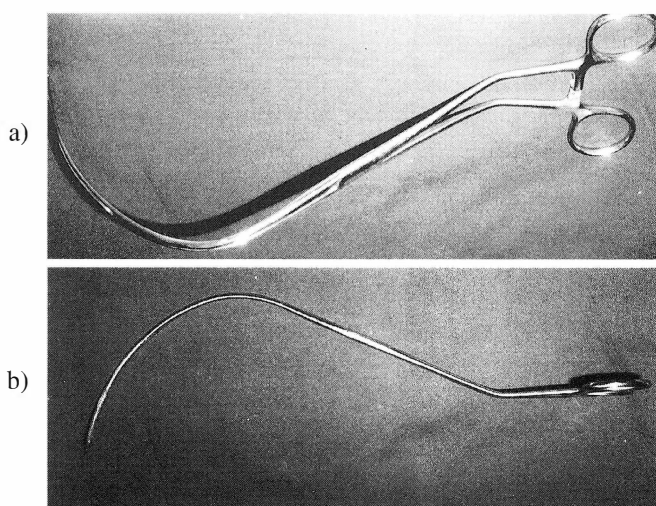


Figure 1. — The steel instrument showing the large curve at the end.

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