

# Transurethral surgery - natural orifice transluminal endoscopic surgery (TUS-NOTES) by using the Minimal Suturing Device (MSD) for the treatment of vesicovaginal fistula



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**Hypothesis / aims of study:** Vesicovaginal fistula (VVF) formation represents a condition with devastating consequences for the patient and continues to pose a significant challenge to the surgeon. Quick and accurate diagnosis, followed by timely repair is essential to the successful management of these cases. To minimize the morbidity of classical fistula repair, we hereby present a new minimally invasive surgery technique to perform a fistulae repair of inside closing without transcutaneous, laparoscopic or vaginal incision: transurethral surgery- natural orifice transluminal endoscopic surgery (TUS-NOTES) by using a new small fine needle holder - minimal suturing device (MSD-Ney) and knot pusher.

**Materials and Methods:** Setting: A rigid cystoscope with 30 degree optics is inserted into the patients bladder with CO(2) insufflation. After inspecting the bladder and finding the fistulae orifices the fistulae area is manipulated with an endoscopic hooklet. The bladder segment is excised with electrocautery. First the monocril 4-0 fibre is put into the needle holder. To fit into the needle is bended. The needle is put loose next to the cystoskope put into the bladder and after touching the wall the fibre is fixed at the end of the needle holder with a clamp. Now by a rotation the whole is at both sides stiched. With a grasp – put through the working channel- the needle is grasped and by loosing the clamp everything can be pulled out. By tying an extracorporeal knot and putting an knot pusher over the fibre, the knot is fixed. The roeder sling was preferred as an easy to learn and create extracorporeal knot. This procedure is repeated till the whole is closed. The fibres are cutted. Equipment needed: Cystoscope with 30 degree optics, CO (2) insufflation, 1mm diameter Needle holder (MSD-Ney), Monocryl 4-0, 0.5 mm diameter Knot pusher, Cystoscopic grasp, Cystoscopic scissor.

**Results:** The aim of the poster is to present the TUS-NOTES technique and teach the viewer how to apply this novel intervention to close the fistulae inside of bladder at 13 cases. The mean operative time was 55 min (35min-110min), whereas the bloodloss was less 10ml. The patients were discharged 3 days after surgery, and the catheter were removed 10 days after surgery. Before removal of the catheter a cystogram was performed. Follow-up examinations were carried out after 2, 6 and 24 weeks by means of questionnaire, clinical examination, ultrasound and, if necessary, cystoscopy.

**Conclusion:** To reduce morbidity and prolonged recovery of excision of the VVF - TUS-NOTES technique is efficacious and the preferred method of intervention. Only standard instruments, MSD and the needle holder are used for the procedure. Due to early complication management, patient satisfaction was very high. Long-term studies will confirm the shown results.

