Transvaginal Endoscopy TVE
The best views are UNDERWATER

TRANSGAVINAL ENDOSCOPY

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Transvaginal Endoscopy

**Rationale:** Transvaginal endoscopy combines transvaginal laparoscopy with vagino-cervico hysteroscopy and is designed to explore the female genital tract in patients with infertility (Fig. 1).

1. **Diagnostic hysteroscopy**
The 2.9 mm hysteroscope is inserted without speculum, and an infusion of prewarmed Ringer’s lactate solution is started. The distension fluid dilates the cervical canal and the hysteroscope can be inserted painlessly and atraumatically to inspect the cavum.

2. **Transvaginal laparoscopy including salpingoscopy**
**Aim:** Endoscopic exploration of the posterior pelvis and the tubo-ovarian structures under sedation or local anaesthesia through a small needle puncture technique of the pouch of Douglas and using an aqueous solution (Ringer lactate solution) as distension medium.

**Technique of entry/access:**
Access to the pouch of Douglas is obtained with a specially developed needle-trocar system consisting of three parts: a needle with a spring load system, a dilating device and an outer trocar. After assembling the three components, the spring-loaded needle is pre-set at a length of 1.0 cm – 1.5 cm (in obese patients 2.0 cm – 2.5 cm). The posterior cervical lip is grasped with an Allis clamp and the needle-trocar system is positioned at the posterior vaginal fornix on the midline at about 1.5 cm under the cervix. The trocar system is gently pushed forward while the ALLIS clamp is used to stabilize the trocar position and exert a slight counter-pressure. The spring-load system is released only when the system is accurately positioned (Fig. 2). Subsequently, the dilating device is disconnected from the needle and together with the outer trocar is gently pushed forwards while slightly rotating the instrument. After removal of the needle and the dilating trocar, the 2.9 mm endoscope with outer sleeve connected with the camera system is inserted and the correct intra-abdominal position of the system is verified. The irrigation system is opened and approximately 100 ml of pre-warmed Ringer lactate solution in the pouch of Douglas is started.
**Technique of inspection:** The posterior side of the uterus, which is in the upper part of the image, is used as a landmark for identification of the right and left adnexa. By rotating the 30° angled endoscope around his axis, the ovarian surface, the distal end of the Fallopian tube, the fossa ovarica and the pouch of Douglas are explored without extra instrumental manipulation. Continuous irrigation is used during the whole procedure without exceeding 500 ml.

Without additional manipulation and by using the same endoscope, salpingoscopy is feasible in 50% of the patients.

The patency of the tubes can be tested by placing a 8 Fr. urinary balloon catheter in the uterus.

An operative trocar system giving access to 5 Fr. instruments is available for minor surgical procedures such as taking biopsies. After inserting the guiding probe, the diagnostic trocar is removed and replaced by the operative sheath. The probe is then replaced by the 2.9 mm telescope.

**Patient selection:** The procedure is routinely performed at an early stage of the fertility exploration in subfertile patients without obvious pelvic pathology i.e. normal findings during clinical vaginal examination and vaginal ultrasound.

**Contraindications:**
- Obliterated pouch of Douglas
- Prolapsed tumour in the pouch of Douglas
- Recto-vaginal endometriosis
- Fixed retroverted uterus
- Acute pelvic pathology: bleeding, infection
- Narrow vagina

**Conclusion**
Transvaginal endoscopy offers the possibility of a complete endoscopy-based exploration of the subfertile female and, in combination with hysteroscopy, creates the possibility of a “One Stop Fertility Clinic”. It is performed on an outpatient basis or at the doctor’s office at an early state of the infertility exploration. Consequently, this prevents a delay in accurate diagnosis and an appropriate treatment plan can be proposed to the well-informed patient.
Fig. 3
Passage through the cervical canal

Fig. 4
Entry from the cervical canal into the uterine cavity

Fig. 5
Inside view of a normal uterine cavity using ringer lactate as distension medium.
Transvaginal Laparoscopy

Fig. 6  
Overview - visualization of normal tubo-ovarian structures

Fig. 7  
Fimbrioscopy: normal mucosal pattern

Fig. 8  
Salpingoscopy: normal aspect of mucosal folds

Fig. 9  
Fimbrioscopy while performing a methylene blue test
Pathologies

Endometriosis:
Fig. 10
Vesicular endometriotic implant on ovarian surface
Fig. 11
Biopsy of vesicular endometriotic lesion

Adhesions:
Fig. 12
Fixed adhesion between ovarian surface and fossa ovarica
Fig. 13
Free floating adhesion on ovarian surface

Hydrosalpinx:
Fig. 14
Thick-walled hydrosalpinx
Transvaginal Endoscopy

26182 Transvaginal Endoscopy Set
as recommended by Prof. GORDTS and Dr. CAMPO
including:

26182 TA  Puncture Needle, with automatic spring mechanism,
diameter 1.5 mm, length 30 cm

26182 TAA  Spare Needle, for use with Puncture Needle 26182 TA,
package of 6

26182 TB  Dilation Sheath, diameter 3.8 mm, length 30 cm,
for use with Puncture Needle 26182 TA

26182 TC  Trocar Sheath, with valve, with 1 stopcock, diameter 4.4 mm,
length 20 cm, for use with Diagnostic Sheath 26182 D

26120 BA  HOPKINS® Forward Oblique Telescope 30°,
diameter 2.9 mm, length 30 cm, autoclavable,
fiber optic light transmission incorporated,
color code: red

26182 D  Diagnostic Sheath, with stopcock, diameter 3.7 mm, length 29 cm,
for use through Trocar Sheath 26182 TC
Semi-Rigid Operating Instruments, 5 Fr.
for use with 26182 TG

26182 TD  Changing Rod, diameter 2.9 mm, length 36 cm,
for use with Operating Sheath 26182 TG

26182 TG  Operating Sheath, diameter 6.6 mm,
length 29 cm, with channel for semirigid 5 Fr. operating instruments,
with 1 stopcock and 1 LUER-Lock adaptor, with Obturator 26182 TH

39360 BK  Plastic Container for Sterilization and Storage of Variable
Instrument Sets

26160

26160 UHW  Biopsy and Grasping Forceps,
semirigid, double action jaws, 5 Fr., length 40 cm

26160 EHW  Scissors, semirigid, blunt, single action jaws,
5 Fr., length 40 cm

26160 SHW  Scissors, semirigid, pointed, single action jaws,
5 Fr., length 40 cm

26160 DHW  Punch, semirigid, through-cutting, single action jaws,
5 Fr., length 40 cm

26160 BHW  Biopsy Spoon Forceps, semirigid, double action jaws,
5 Fr., length 40 cm

Electrode for HF Surgery, 5 Fr.
for use with Operating Sheath 26182 TG

26159 BE

26159 BE  Bipolar Dissection Electrode,
semirigid, 5 Fr., length 36 cm

26159 GC  GORDTS/CAMPO Bipolar Ball Electrode, semirigid,
5 Fr., length 36 cm
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It is recommended to check the suitability of the product for the intended procedure prior to use.