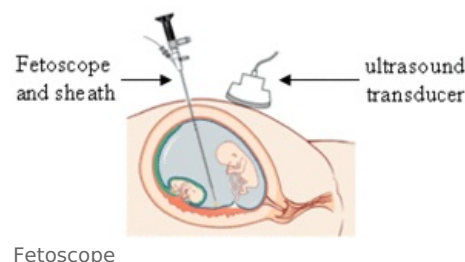


Fetoscopy

Fetoscopy is an endoscopic method used in pregnancy (formerly) for prenatal diagnosis or (more recently) for prenatal therapy of the fetus. This procedure is used to directly view the fetus in the uterus using a thin and flexible endoscopic instrument, the fetoscope^[1]. The fetoscope is inserted into the uterine cavity through a tiny abdominal incision. The whole procedure is performed under ultrasound control to avoid harming the health of the fetus or the mother. It is usually performed at 18-20 weeks of pregnancy^[2]. Since the beginning of the 21st century, there has been a significant worldwide shift away from fetoscopy as a purely diagnostic method^[2].

Indications

Currently, fetoscopy is **rarely performed**, the clinical indications are very strict, for example, it is used in the **treatment of fetal transfusion syndrome (TTTS)**^[3]. In the Czech Republic, approximately 4-50 fetal endoscopies are currently performed annually^[4]. Fetoscopy is practically **not used** as an imaging method for searching for congenital fetal defects^[5], also classical cordocentesis is used instead of fetoscopy to obtain fetal blood samples^{[5][6]}.



Fetoscopy had a great use in the **collection** of certain **tissue samples** from the fetus^{[7][6]}. Typically these samples were **skin, liver or muscle**. This was used to verify suspected hereditary diseases and defects of these organs (e.g. genodermatosis, accumulation diseases, muscular dystrophies) at a time when molecular genetic diagnosis of these diseases was not yet available and when the fetal tissue sample was the only relevant information on whether the offspring had inherited the disease or not. Nowadays, **DNA diagnostics are available** for the vast majority of these diseases, so fetoscopy is no longer practically used in these indications^[8]. Fetoscopy can be used to verify the phenotype of some skin developmental defects if DNA diagnostics are not available for the disease type (or if DNA diagnostics is not informative or fail)^[6], however, tissue samples can in some cases be obtained by fetal biopsy under ultrasound guidance (without the use of a fetoscope)^{[3][8]}.

Endoscopic procedures are again used in fetal surgery and prenatal therapy^[9]. The use of endoscopic methods in the treatment of fetofetal transfusion syndrome is already typical. The principle consists of treating placental vascular adhesions with a laser^{[10][11]}. The use of endoscopic methods in fetal surgery is potentially very wide, however, procedures of this type are (currently) not practically performed in the Czech Republic.

Performing of examination

- the course of the examination varies according to its purpose and nature,
- before the examination, the patient should not drink or eat for 8 hours,
- a local anaesthetic is applied at the site of the abdominal incision,
- the doctor checks the fetal heart rate (norm: 120-160/min),
- an ultrasound probe is used to determine the position of the baby and the placenta,
- a fetoscope is used to examine the suspicious area or to take samples.

Risks

The risk of miscarriage after the procedure is relatively high and ranges from 3-10%^{[5][2][6]} possible risks include:

- bleeding, infection;
- amniotic fluid leakage;
- induction of preterm labour.^[5]

Links

Related articles

- Prenatal diagnosis
 - Amniocentesis
 - Chorionic Villus Sampling
 - Cordocentesis

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Literature

- What Is A Fetoscopy and What Are The Risks? (<http://www.pregnancy-calendars.net/fetoscopy.aspx>)
- Fetoscopy (<https://www.enotes.com/topics/fetoscopy>)