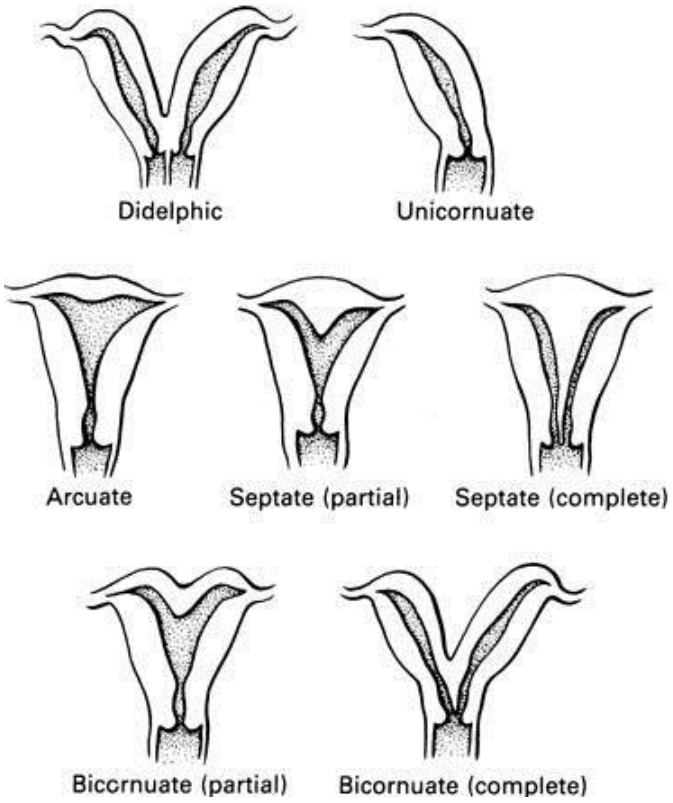
ANATOMIC FACTORS

Anatomical abnormalities of the uterus include many different pathological cases that their significance for recurrent miscarriages differs depending on the specific abnormality.

Congenital anomalies of Mullerian duct



(Mullerian ducts are two tube-like formations that during foetal life join each other on the one side and form the uterus, after the fusion of their medial walls and formation of a single endometrial cavity, while the parts of the ducts on each side of the joining become the fallopian tubes)

Unicornuate uterus: one of the Mullerian ducts fails to develop. It is diagnosed radiologically (hysterosalpingography).

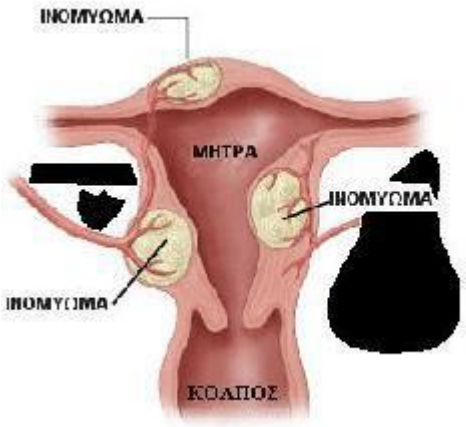
Uterus didelphys: fusion of medial walls of Mullerian ducts has failed and a double uterus with a double cervix is formed. Its clinical presentation resembles two unicornuate uteruses joint together, while sometimes there is a septum in the cervix.
It is diagnosed radiologically (hysterosalpingography) and with a direct view in the uterine cavity (hysteroscopy).

Bicornuate uterus: Mullerian ducts are partially joined ending in a common cervix. It is diagnosed radiologically (hysterosalpingography) and with a direct view in the uterine cavity (hysteroscopy).

Septate uterus: a septum exists in the uterine cavity, starting from the bottom of the uterus but with a different length in each case. It is diagnosed radiologically (hysterosalpingography) and with direct view in the uterine cavity (hysteroscopy); a septum can be resected with surgery, i.e. hysteroscopic removal, with surgery success rates of 80-85%.

PATHOLOGY OF THE UTERUS

Fibroid: A fibroid is a benign tumour consisting of collagen tissue fibres, as stated by its name, and smooth muscle fibres of the uterus.



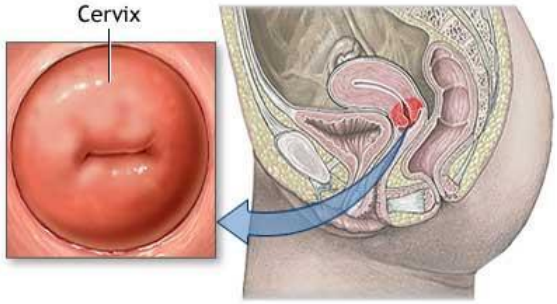
Sometimes, fibroids in the external surface of the uterus (sunserosal) may cause contractions of the uterus resulting in a miscarriage or a premature birth.
They have to be considered when detected in the uterine cavity (submucosal) preventing fertility (as they obstruct a fallopian tube) or presenting a mechanical barrier to implantation. The large ones may block blood flow at the implantation area.

Intrauterine adhesions: they are adhesions of the opposing surfaces of uterus, as a result of a destroyed endometrium. Etiologically, adhesions most commonly occur after certain medical actions (curettage, other interventions in the uterus), but also after intrauterine inflammations. It is diagnosed radiologically (hysterosalpingography) and with a direct view in the uterine cavity (hysteroscopy). Operative hysteroscopy is used for the removal or resection of adhesions (adhesiolysis), with very good post-operative success rates.

CERVICAL INCOMPETENCE

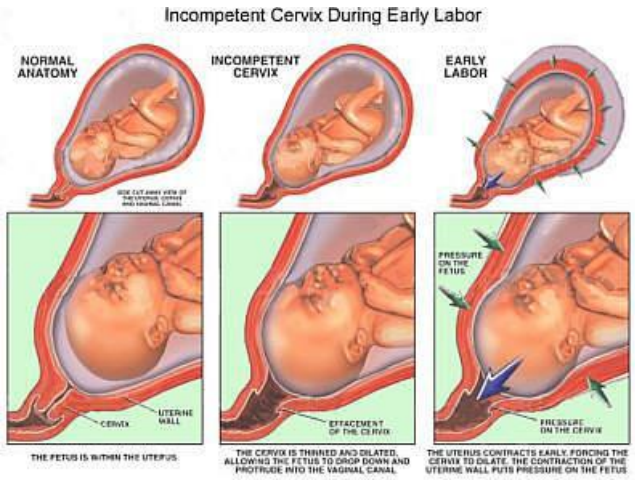
Cervix is the lowest portion of the uterus (one third of uterus approximately) that ends to the vagina. If we imagine it as a tube, it has two sides: the internal os (towards the internal part of the uterus) and external os (towards the vagina). Physically, its structure is different that the rest of the uterus, as it mainly consists of delicate fibres and a few

muscle fibres. This makes the cervix hard in composition. Therefore, during pregnancy the cervix keeps its internal os closed and remains tight.

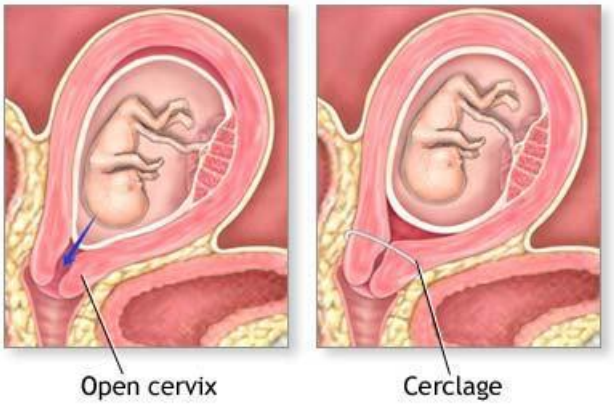


A.D.A.M.

Incompetence of cervical internal os is the condition that the cervix is not able to remain closed in its internal os (the part towards the uterus) and therefore it is not able to hold the weight of the fetus above it. It gradually opens (dilates) and because of the pressure it increases the diameter of its tube. The result is that it opens that much that the fetus cannot be held and it is therefore miscarried due to this technical abnormality.
It can be congenital or acquired abnormality. Acquired abnormality is more often mainly as a result of medical actions (labor, pregnancy disruption, surgeries). It is present in 5% of recurrent miscarriage cases.



It can be easily diagnosed either by inserting an 8mm catheter or by hysterosalpingography.



A.D.A.M.

Cervical cerclage is the treatment that is offered. It involves placing a stitch high up around the cervix to try and keep it closed (just like we close a pouch). This procedure is performed at the end of first trimester.