

A microscopic view of red blood cells (erythrocytes) in a blood vessel. The cells are biconcave discs, appearing as bright red, oval-shaped structures with a lighter center. They are surrounded by a network of fine, reddish-brown fibers, likely collagen or elastin, which form a mesh-like structure. The overall color is a deep red, with some areas appearing darker due to the concentration of cells and fibers.

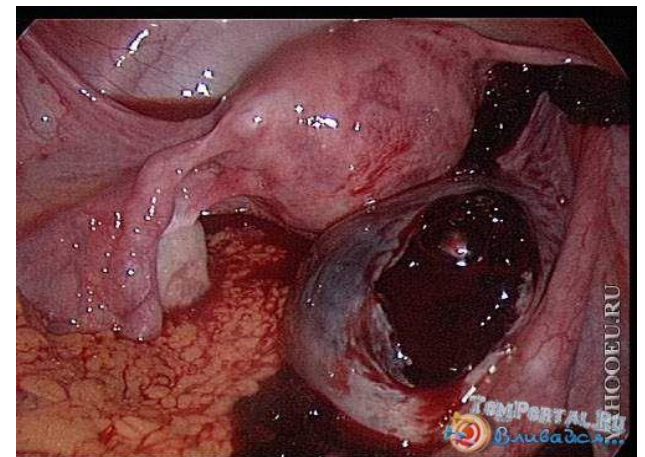
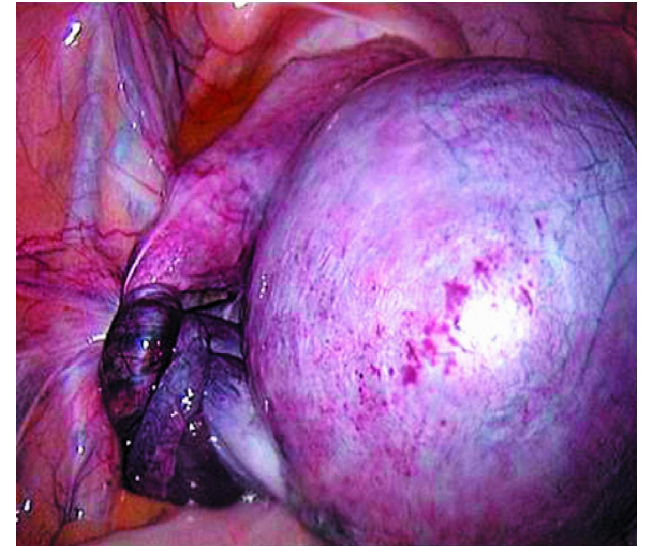
# Urgent conditions in gynaecology

# Acute abdomen

- it is a clinical situation, the origin of that is conditioned by influence of certain factors the removal of that requires urgent and mainly operative interference;
- arises up mainly suddenly, on a background complete prosperity, therefore realizations of operative intervention in a good time save not only a health but also life of patient;
- difficulties of diagnostics of syndrome of acute abdomen mainly consist of determination of reasons of this state
- .

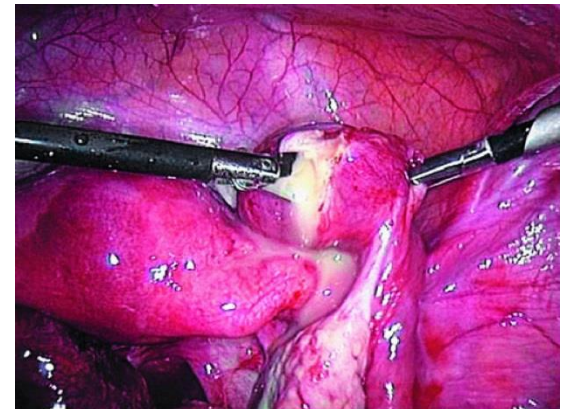
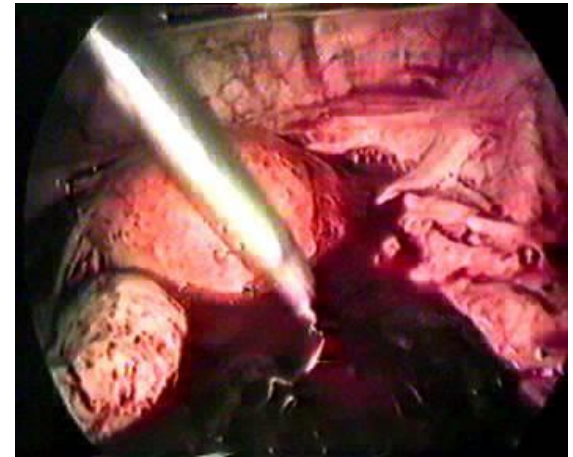
Pathosiss that show up the syndrome of acute abdomen, it is possible to divide into next basic groups:

- sudden violations of circulation of blood in the organs of abdominal region because of thrombosis, compression and torsion (torsion of crus of tumour ,of ovary, violation blood supply of fibromatous node);
- perforation of organs of abdominal region(perforation of uterus at operative interventions, break of oothecoma);



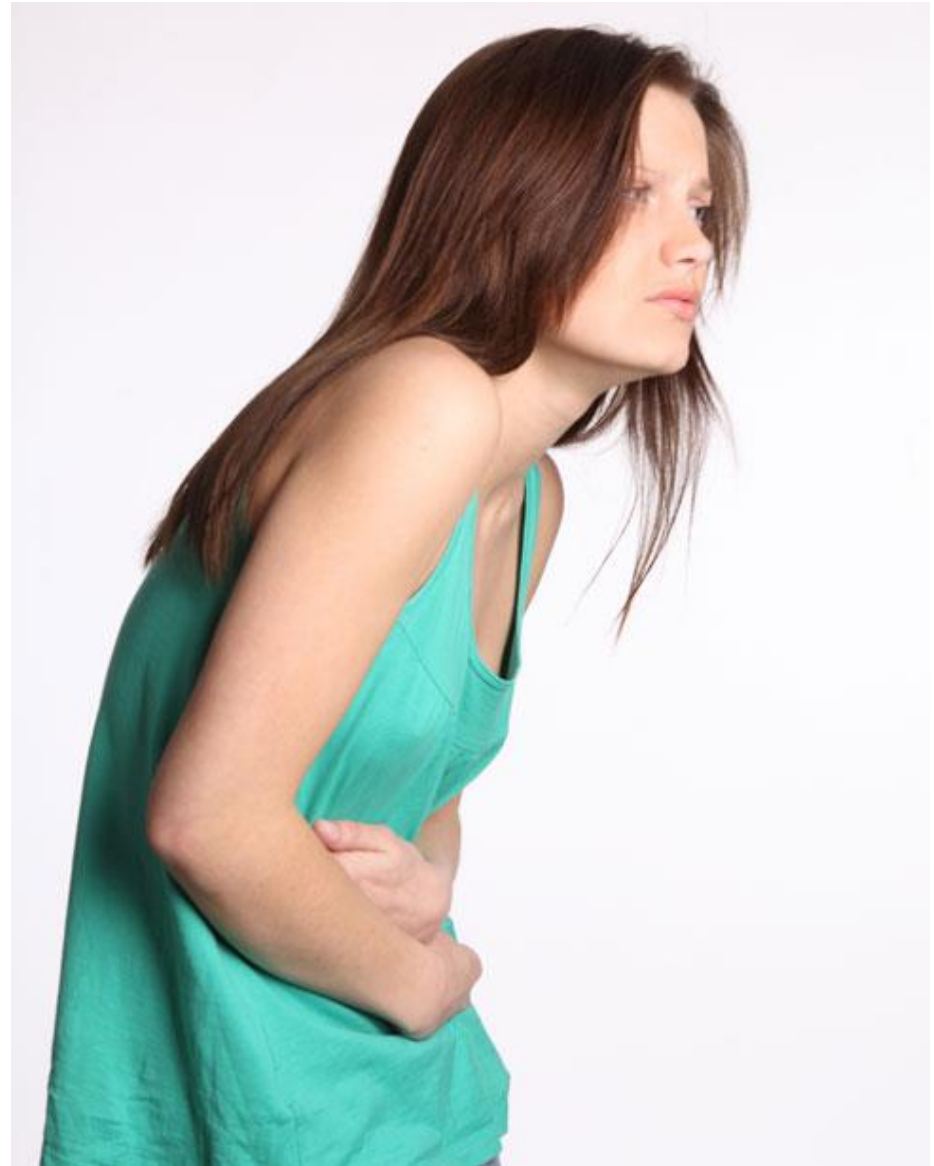
Pathosiss that show up the syndrome of acute abdomen, it is possible to divide into next basic groups:

- diseases related to the intra-abdominal bleeding(tube abortion, apoplexy of ovary of and other);
- inflammatory diseases of organs of abdominal region.



# Clinical presentation of acute abdomen

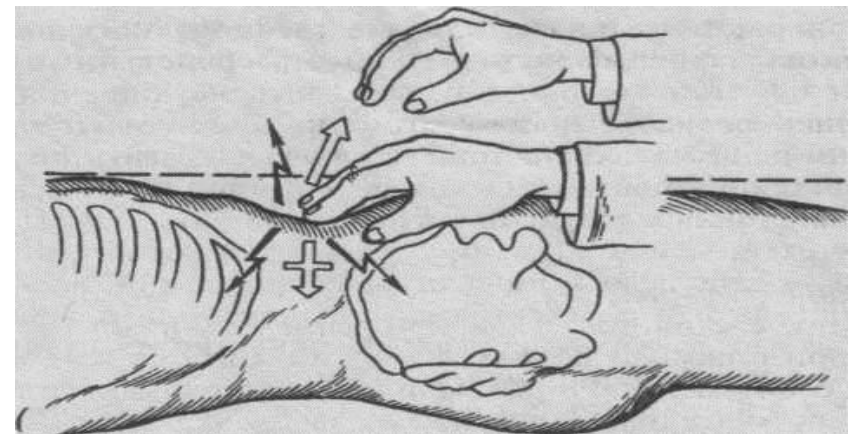
- pain syndrome (sharp, knife-like pain (during the perforation of organs), cramp-like (at tube abortion) or aching pain (at the inflammatory diseases of muliebriasis);





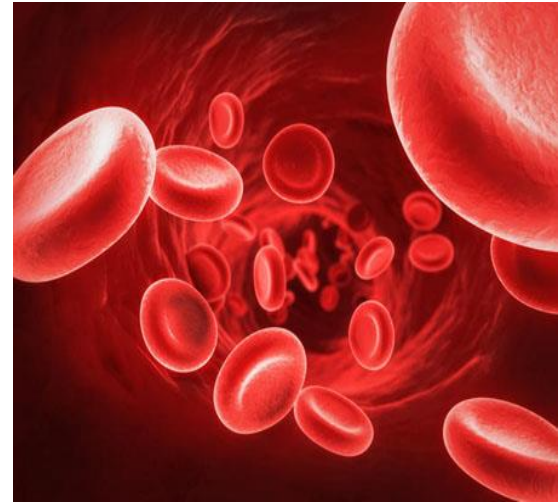
# Clinical presentation of acute abdomen

- changes from the side of digestive tract(nausea, vomiting, hiccup, violation of departing of gases and defecation, dryness of tongue, expressed signs of irritation of peritoneum, aperistalsis; muscular defance is determined by palpation, during percussion- tympanitis or dulling sound of percussion, if auscultation is noise of falling drop).



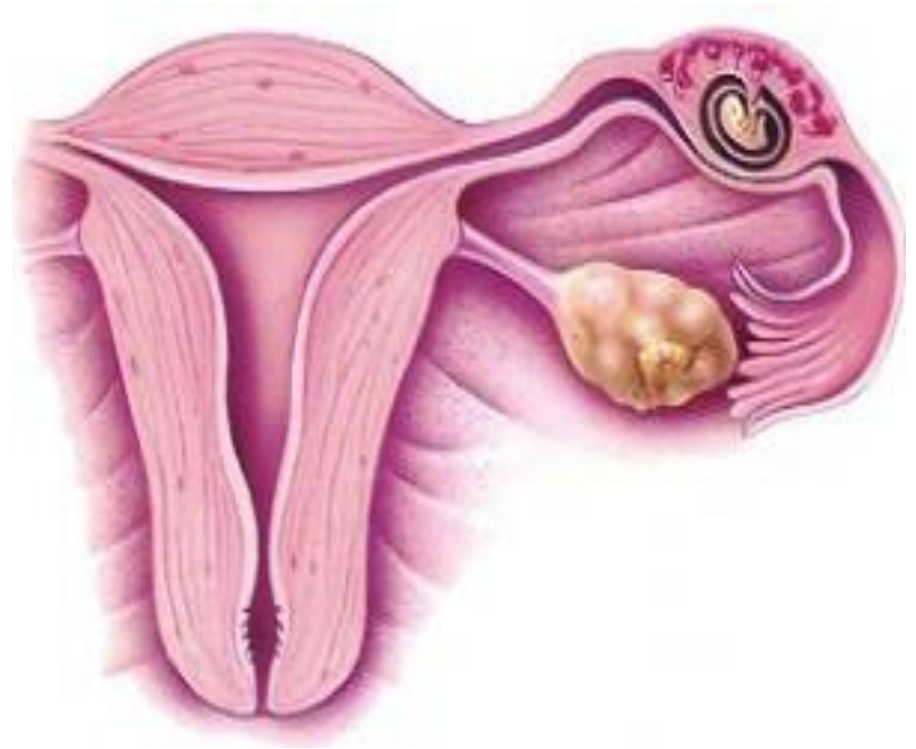
# Clinical presentation of acute abdomen

- in addition, the symptom of acute abdomen often combines with the symptoms of hemorrhagic, traumatic and pain shock, that shows up the decline of hemodynamics, violation of microcirculation, forming of polyorganic insufficiency or "shock organs".



# Ectopic pregnancy

- the state when a fetal egg is implanted and develops out of the cavity of uterus.





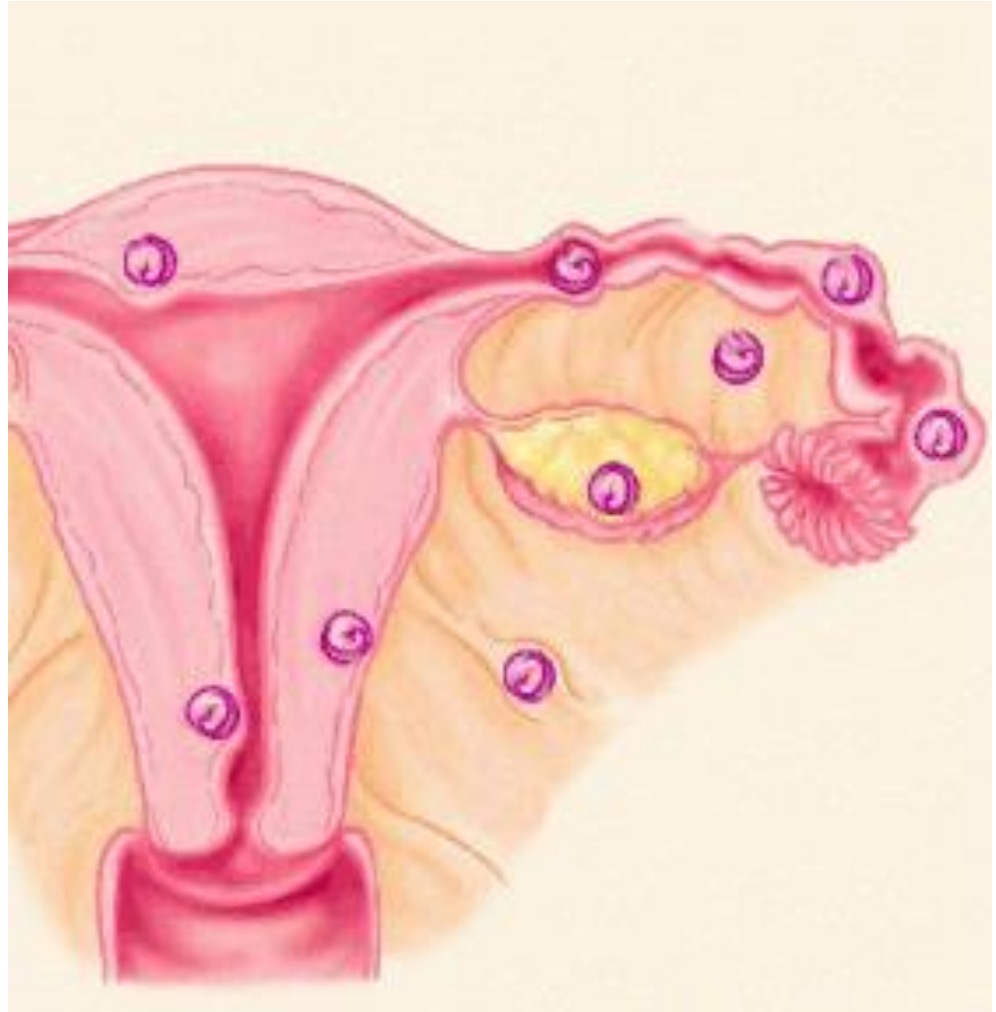
# Classification

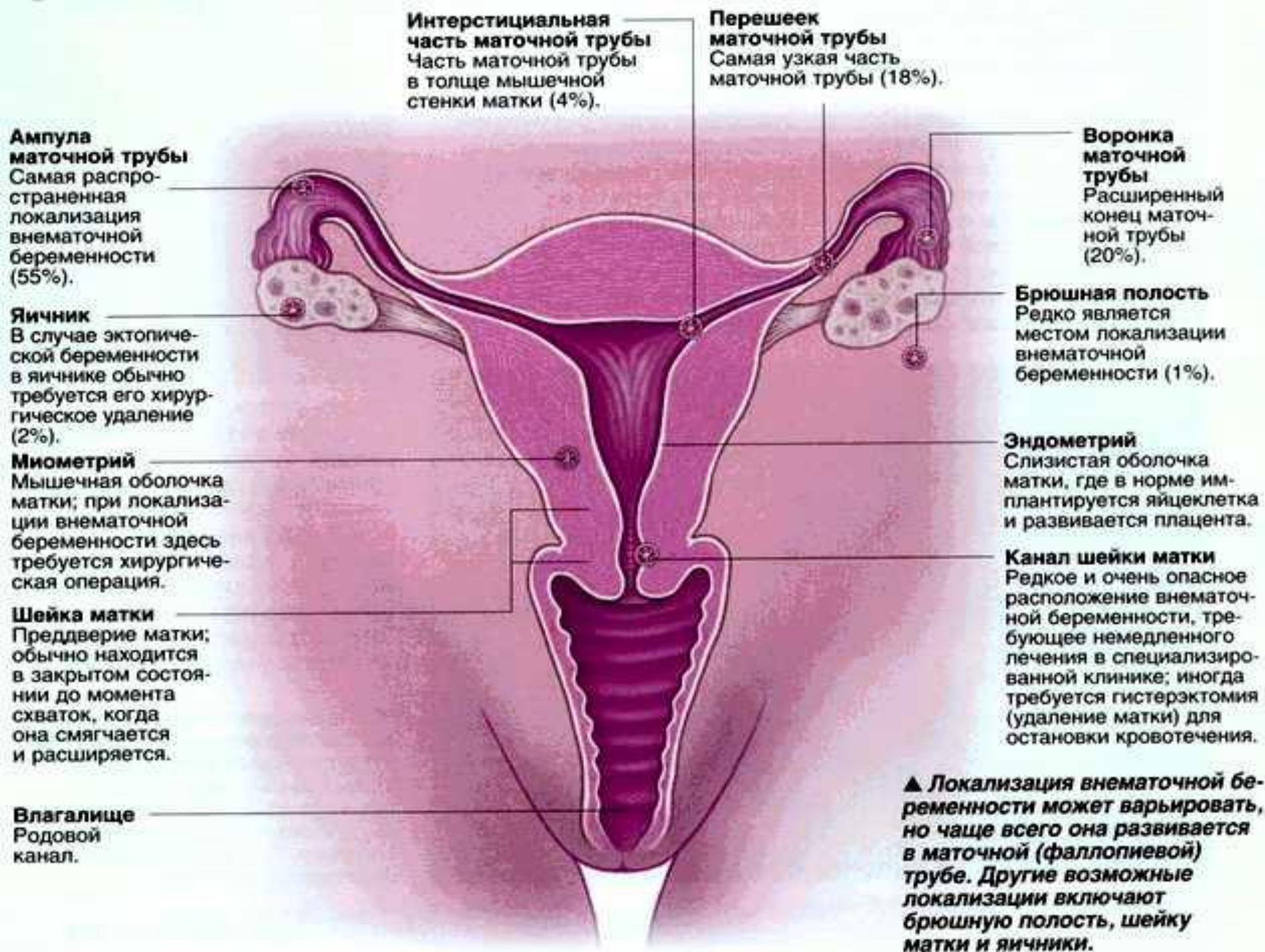
- on localization:
  - tubal;
  - ovarial;
  - abdominal;
  - cervical;
  - in the rudimentary horn, cervix of the uterus



# Classification

1. Abdominal(abdominal);
  2. Tubal:
    - it is pregnancy in a salpinx;
    - it is a break of salpinx because of pregnancy;
    - it is tube abortion;
  3. Ovarial;
  4. Other types of ectopic pregnancy :
    - cervical;
    - combined;
    - in the rudimentary horn of uterus;
    - intraligamentous;
  5. Ectopic pregnancy of the unspecified etiology.

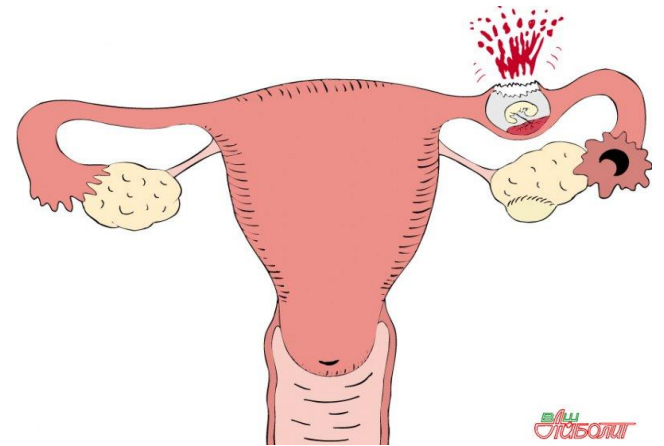
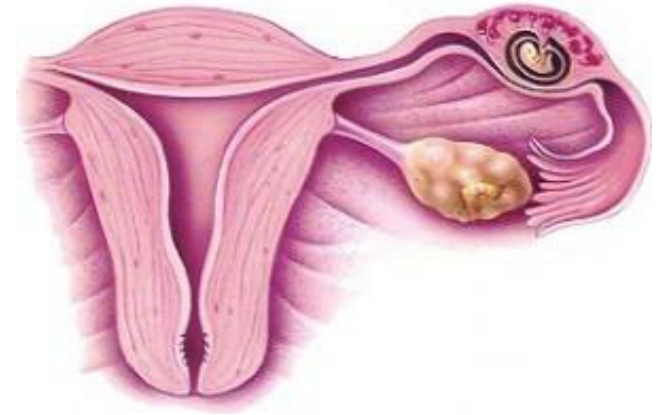






# Classification

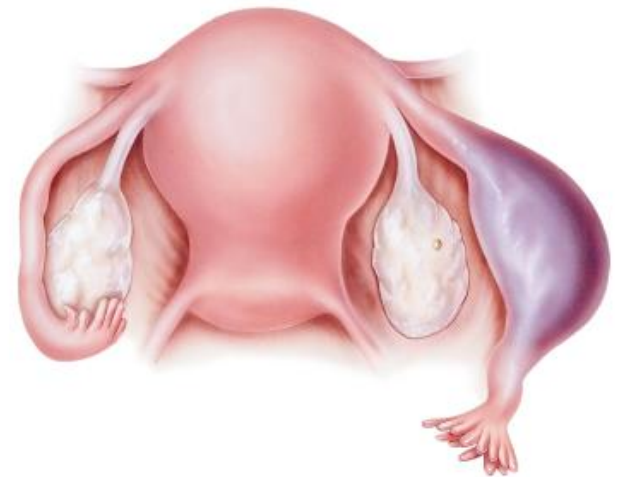
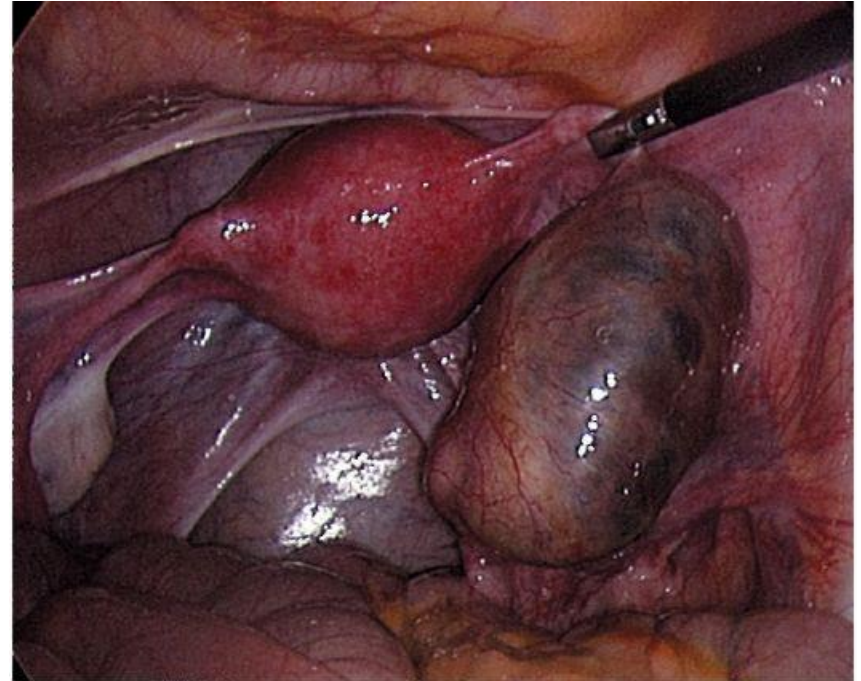
- duration:
  - progressive;
  - broken(tube abortion, break of salpinx);
  - it is stopping beating pregnancy(missed)



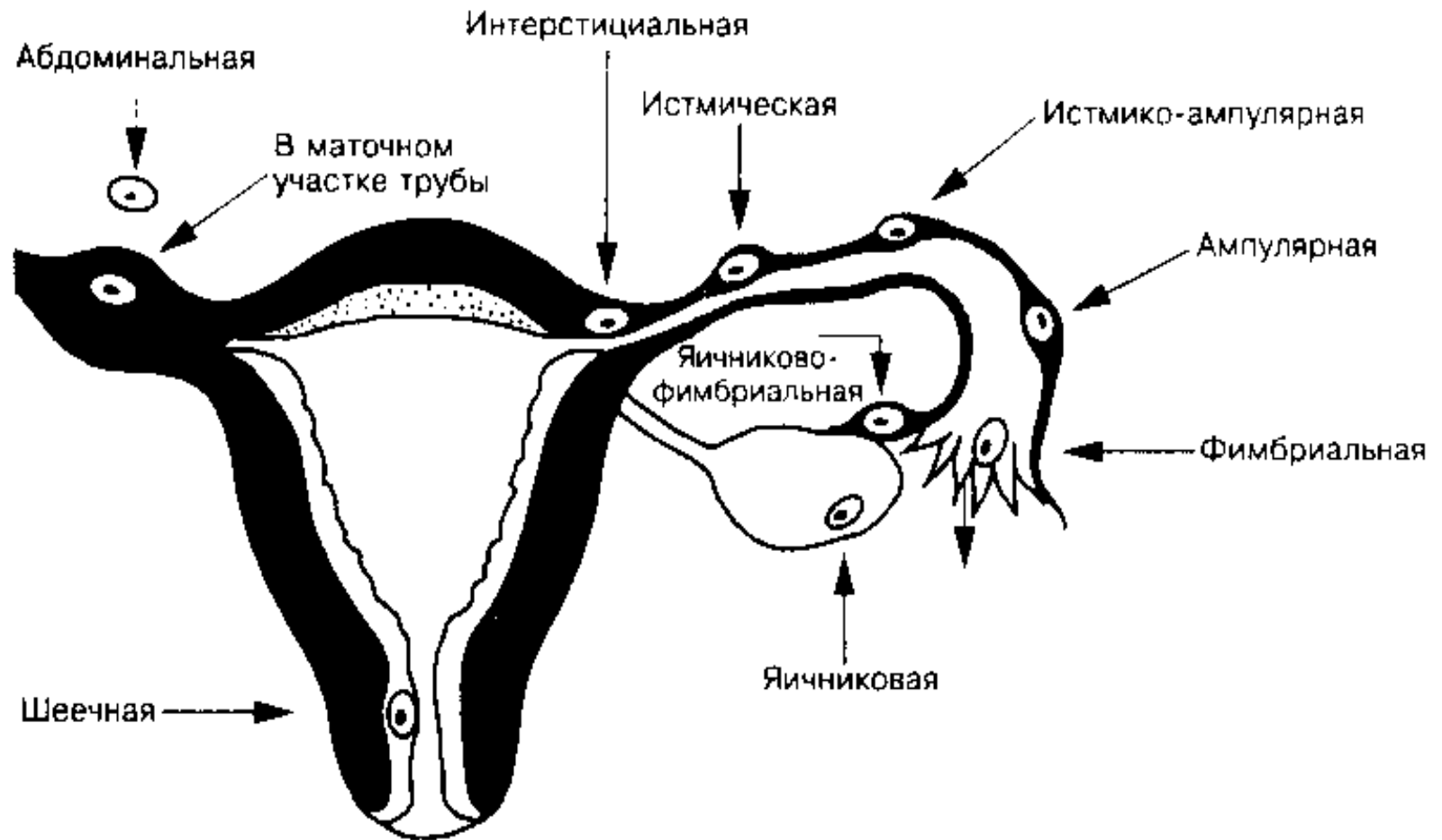


# Tubal pregnancy

- frequency - 98-99 %
- forms(depending on the place of attachment of the impregnated ovule) :
  - 1) in the ampular department of salpinx;
  - 2) in isthmus
  - 3) interstitial(intramural).

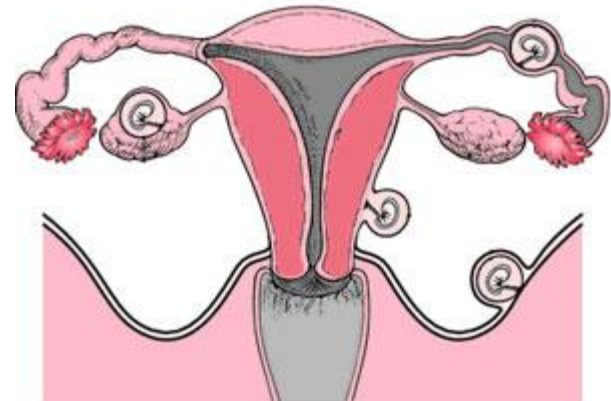
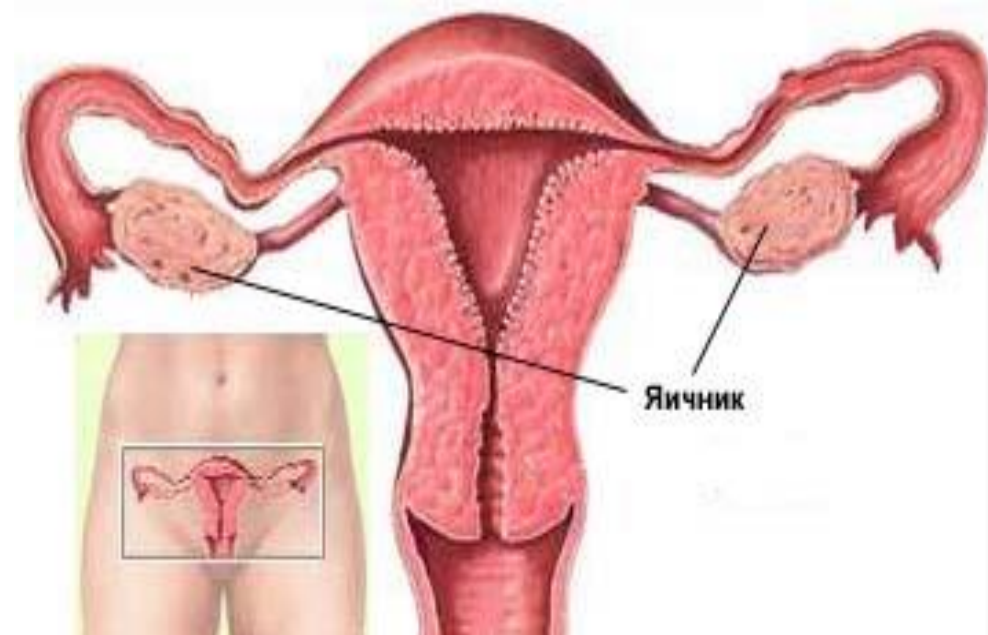


# Tubal prgnancy



# Ovarial pregnancy

- frequency 0,1-0,7%
- forms:
  - 1) Epiovarial(extrafollicular) (pregnancy developing on the surface of ovary);
  - 2) intrafollicular(pregnancy developing into a follicle).



# Abdominal pragnancy

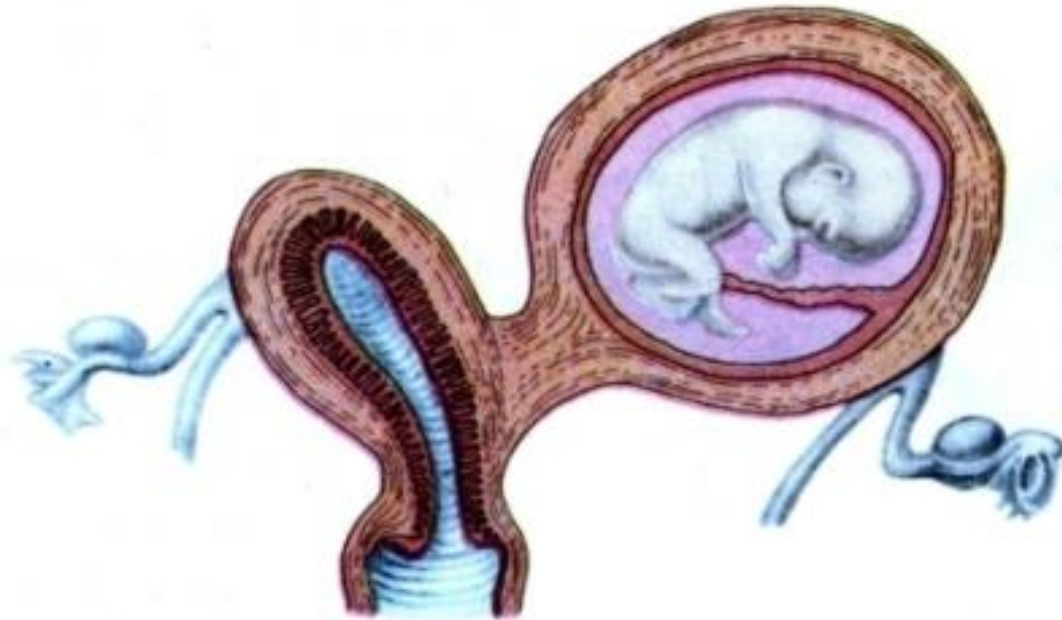
- frequency 0,3-3,4%, forms:
  - 1) primary(implantation takes place at once on a (parietal) peritoneum, omentum or any organs of abdominal region;
  - 2) secondary(a fetal egg registers in an abdominal region after the excursion of it from a salpinx because of tube abortion).





# Pregnancy in rudimental horn of uterus

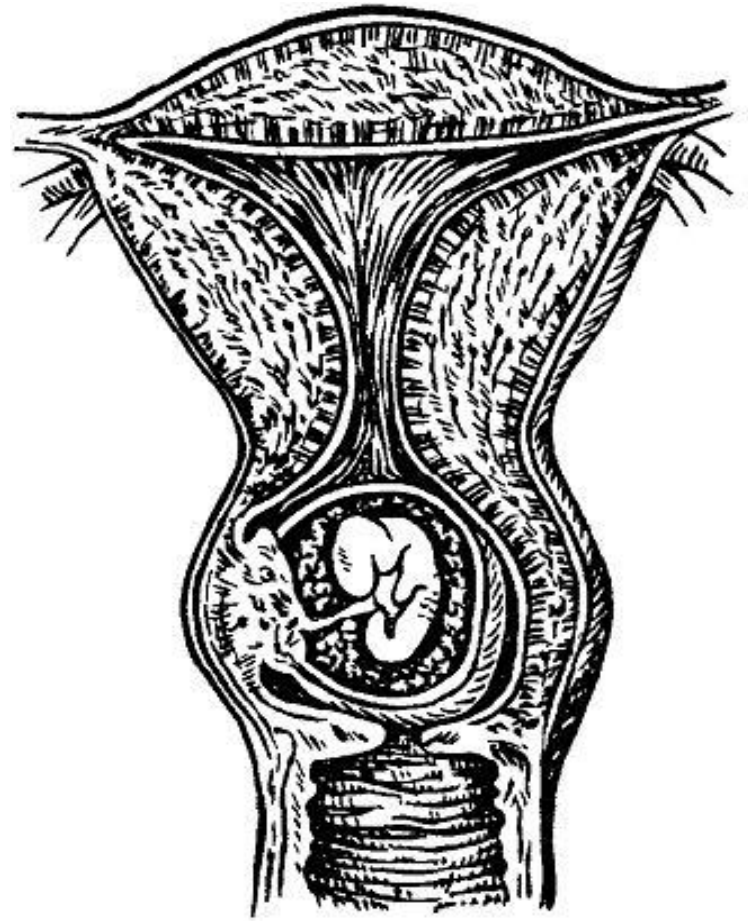
- frequency 0,1-1,9 %,anatomically it can be attributed to uterine, however for lack of connection of rudimentary horn with a vagina clinically such pregnancy flows as extra-uterine.



*ВНЕМАТОЧНАЯ БЕРЕМЕННОСТЬ. Беременность в рудиментарном роге матки.*

# Cervical pregnancy

- frequency 0,3-3,4 %  
forms:
  - 1) true cervical (a fetal egg is implanted and develops only in a cervical canal;
  - 2) isthmus-cervical (the place of attachment of fetal egg is a cervix and area of isthmus).



# Etiology and pathogeny

- a fetal egg is implanted out of cavity of uterus because of violation of transport of the impregnated ovule or in connection with the change of its properties;  
in ordinary terms the impregnation of ovule takes place in the ampular department of salpinx, then impregnated ovule moves to the uterus due to peristaltic motions of tube and twinkling of mucociliary of the endosalpinx.

# Risk factors of ectopic pregnancy

- inflammatory diseases of uterus and appendages of uterus are in anamnesis (especially gonorrhoea, clamidiosis, tuberculosis);
- scars and adhesions changes of organs of small pelvis because of the operations carried before on sexual internalss, pelvioperitonitis, abortions;
- violation of hormonal function of ovaries; genital infantilism;
- endometriosis;
- protracted use of intrauterine contraceptives;
- Assistant reproductive technologies.

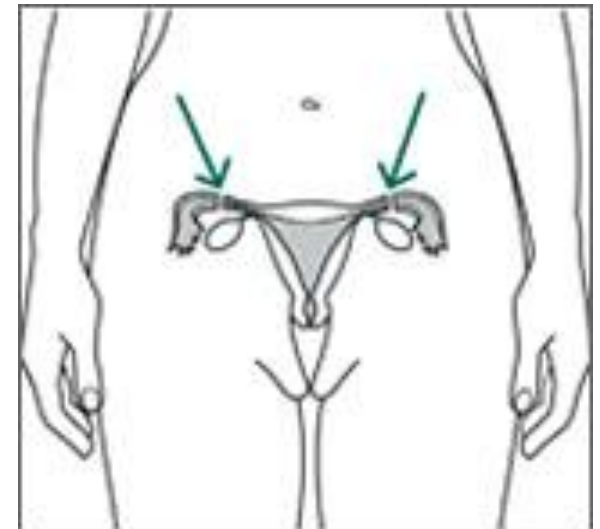
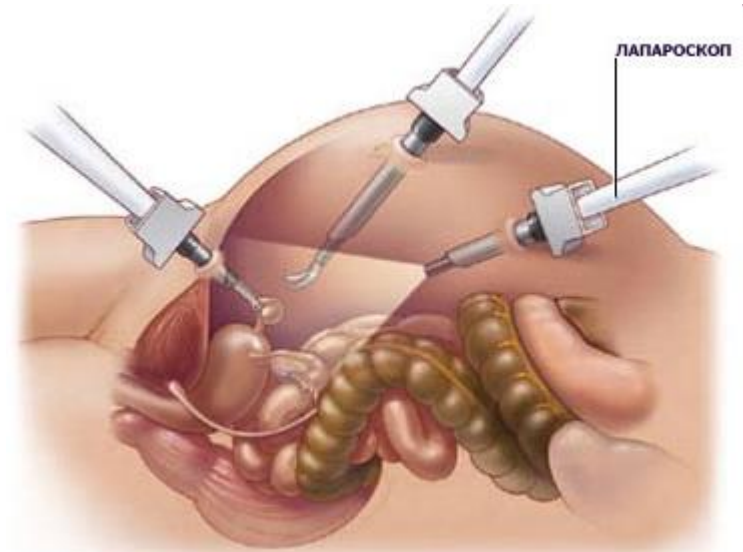




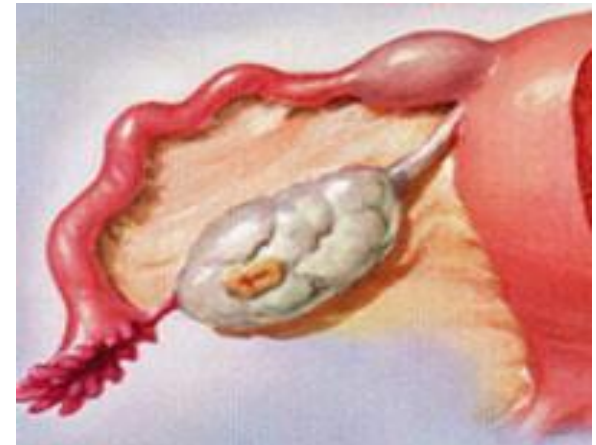
- except violation of structure and function of salpinxs because of inflammation, in development of considerable adhesive process described with all above- an endometriosis is played significant role, that also can result in the origin of ectopic pregnancy



- last years frequency of microsurgical operation on tubes increase, the aim of that is renewal of their passableness; thus there is a danger of development of tubal pregnancy on a background of the aperistalsis of the salpinxs; the cases of offensive of ectopic pregnancy are known after laparoscopy sterilization

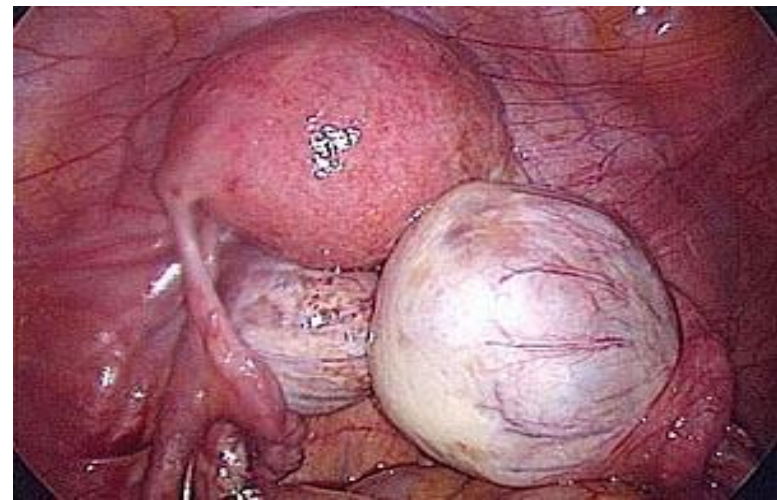
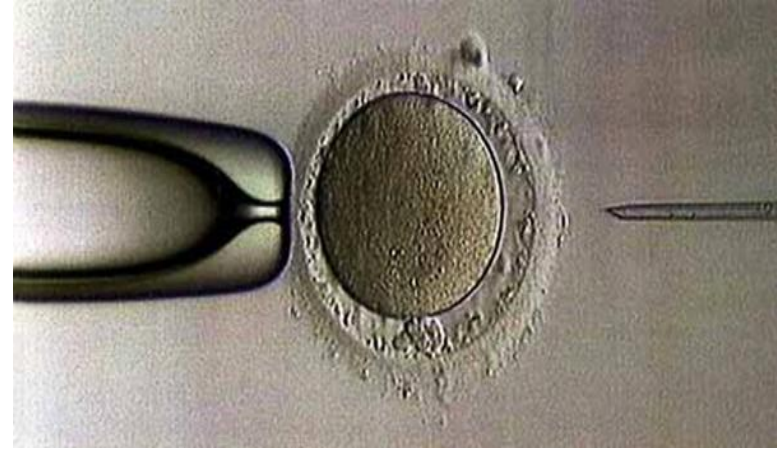


- one of the reasons of ectopic pregnancy is a parafunction of ovaries as a result of pituitary disfunction, as it is set that the peristalsis of salpinxs and state of sphincter located in the interstitial department of tube depend on influence of estrogens and projesterone; taking into account it is possible to explain high-frequency of ectopic pregnancy among women with genital infantilism; in such situation in connection with hypofunction of ovaries there are anatomic and physiologic changes in salpinxs(long, coiled, with a weak peristalsis), that results in implantation of the impregnated ovule in fallopian tube

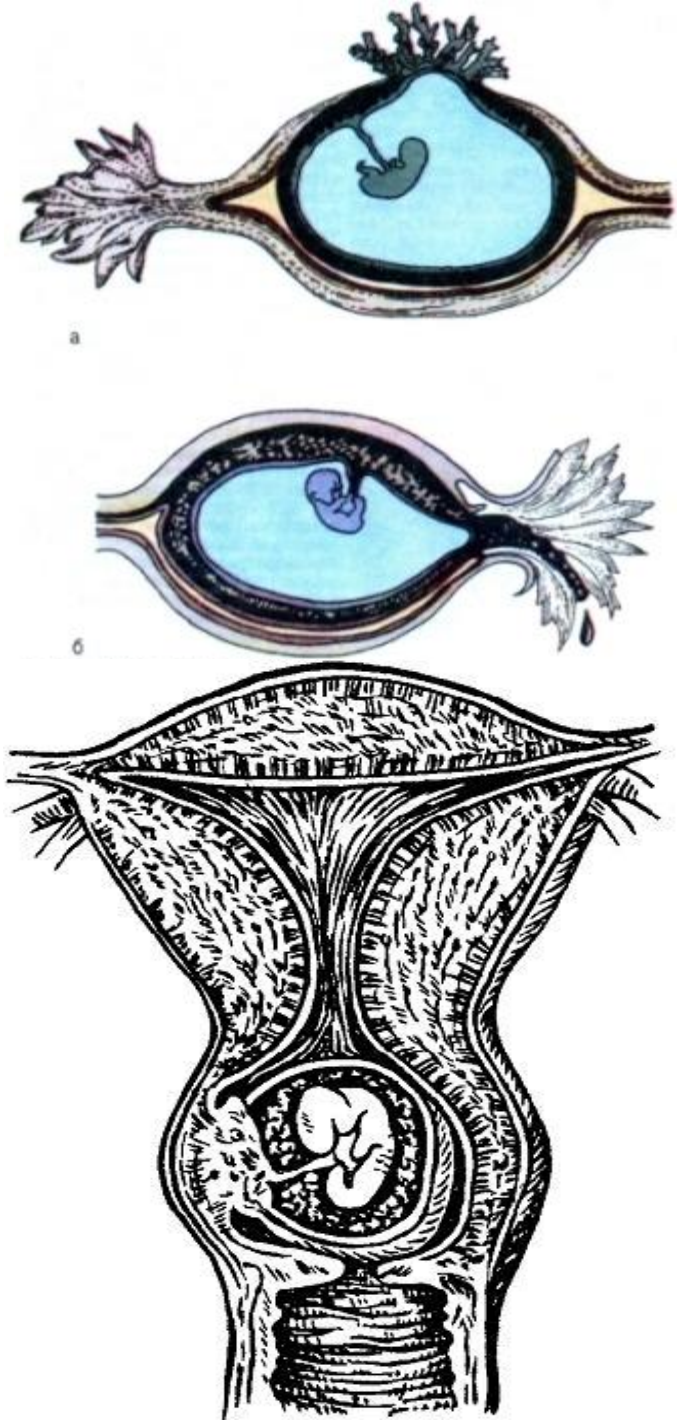




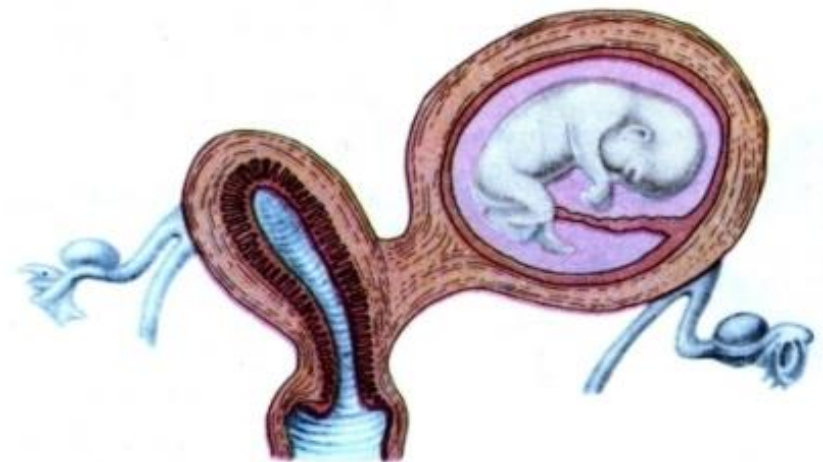
- the cases of offense of ectopic pregnancy are the last years registered as a result ECF, that it contingently the spasm of myosalpinx under influence of medicamental preparations, stimulation of superovulation, or due to migration of blastocyst after transplantation in the uterus;  
a certain role in the etiology of ectopic pregnancy is played by the tumours of uterus and appendages, that results in the compression of tube and violation of transport of the fetal egg.



- last years the etiologic factors of offensive of ectopic pregnancy are violation of proteolytic activity of trophoblast
- at the overactivity -nidation of fetal egg takes place in a salpinx-it is tubal pregnancy - at mionectic activity of trophoblast or in case of its slow formation a fetal egg is implanted in the cervix of the uterus, i.e. there is cervical pregnancy.



- causes of the formation of pregnancy in the rudimentary horn of the uterus or fallopian tube can act migration of a fertilized egg from one fallopian tube to other;
- In the period of migration the fertilized egg is crushed and developed and falling into another fallopian tube in the phase of implantation ,resulting in ectopic pregnancy.



ВНЕМАТОЧНАЯ БЕРЕМЕННОСТЬ. Беременность в рудиментарном роге матки.

# Clinical presentation of progressive ectopic pregnancy

- Diagnostic of ectopic pregnancy is very difficult last time, as here there are the same changes in the organism of woman, as well as at in uterine pregnancy;
  - basic clinical displays : aching pains in a lower abdomen , delay of menstruation, now and then are with blood discharges from the genital tract;
  - at bimanual research a soft megascopic uterus falling short of to the term of pregnancy , tumular formation of soft consistency is determined from one side in the area of appendages during palpation,;
  - at USE is absence of fetal egg in the cavity of uterus on a background of sharply expressed hyperplasia of endometrium; determination of HGT
- in urine or blood.

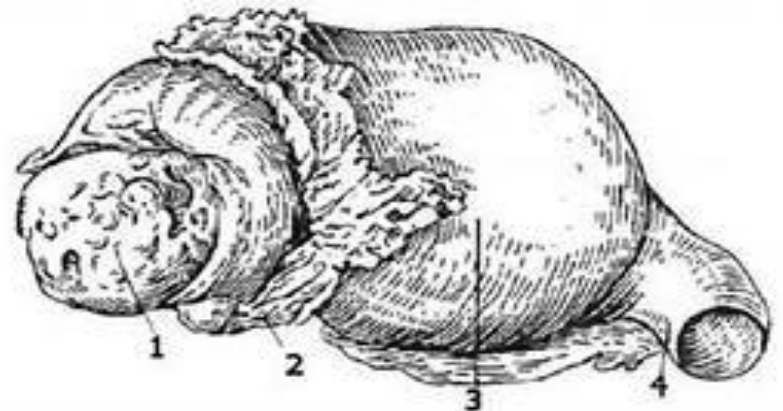


# tubal abortion

- **Clinical picture:**

- 1) cramping pain in the lower abdomen radiating to the rectum, scapula, clavicle;
- 2) general weakness, dizziness, blackouts, cold sweat, nausea;
- 3) periodically appear minor dark spotting caused with rejection of decidua;

- **Objectively:** moderate tachycardia, pallor of the skin and mucous membranes, the abdomen is soft, painful in the lower abdomen during palpation, tonus of the muscles is absent, defined more or less severe symptoms of peritoneal irritation;



- Specula examination: visible cyanosis of the mucous membrane of the vagina and cervix, blood spotting from the cervical canal;
- bimanual – external os of the cervix is closed, the uterus is enlarged, but not as a term of pregnancy, painful, soft formation with limited mobility palpated on the adnexal side;
- If it is suspected tubal abortion- performe puncture of the abdominal cavity through the posterior vaginal fornix ; obtained blood of dark color , contains small clots , without coagulation in vitro;
- Treatment - surgical (radical - tubectomy or conservative, plastic - removal of the ovum from the fallopian tube for the saving its generative function ).

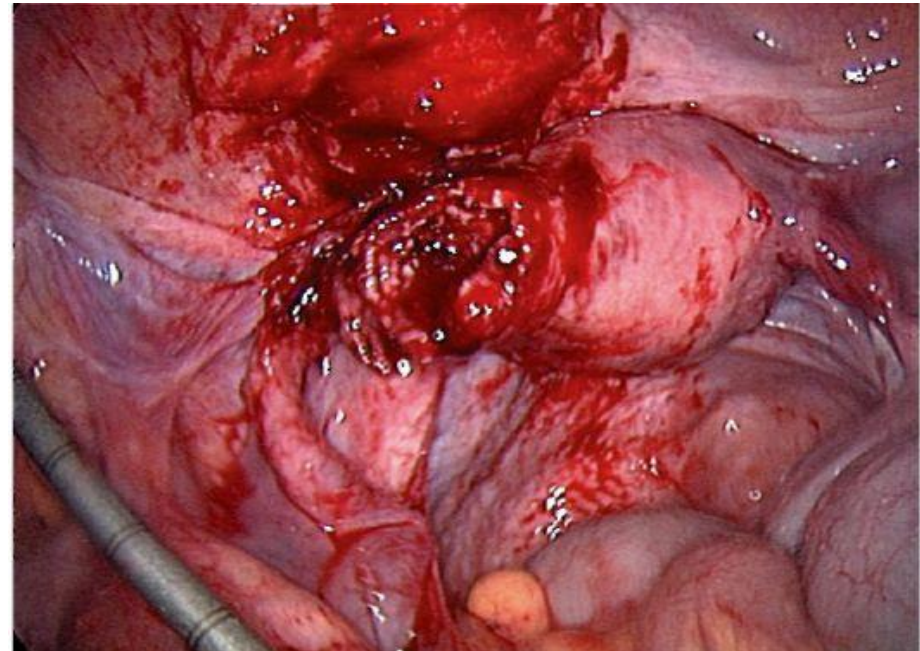


# Rupture of the tube

- **Clinical picture:**

- 1) acute abdominal pain on a background of physical exertion, radiating to the rectum and sometimes in the shoulder blade (phrenicus-symptom);
  - 2) general weakness, dizziness, blackouts, cold sweat, possible momentary loss of consciousness;
- **objectively:** Belly moderately swollen, painful on palpation, marked symptoms of peritoneal irritation;

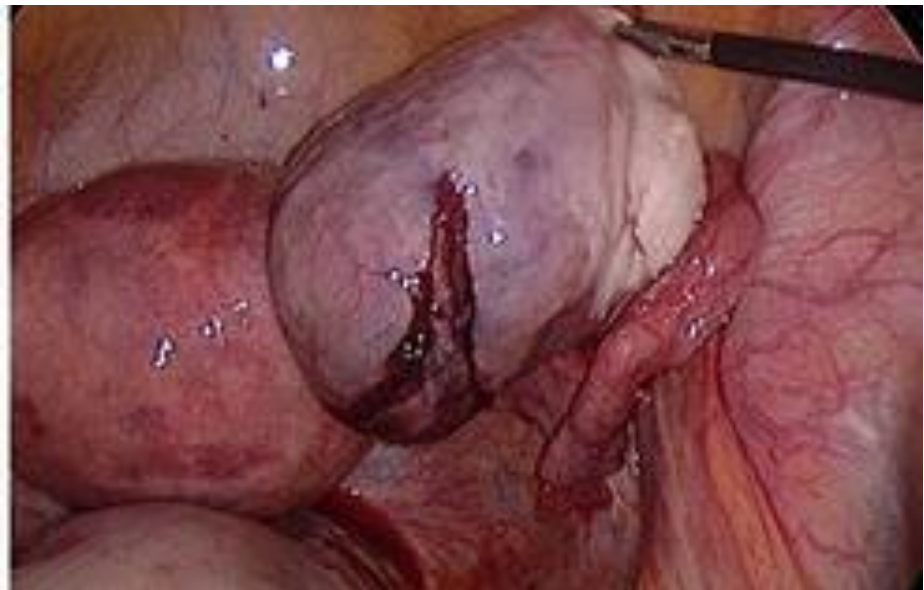
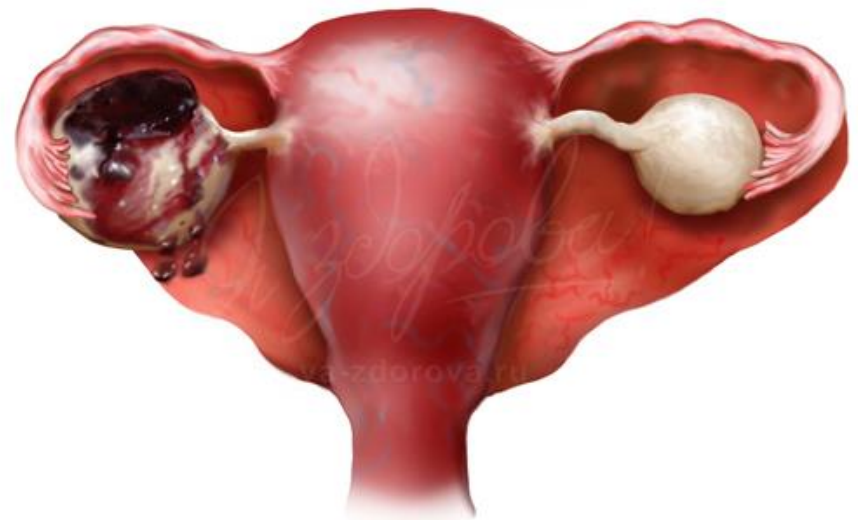
- **bimanual:** painful formation without clear contours in the adnexal is palpable, posterior fornix overhangs and sharply painful, there is a symptom of "floating" uterus;



- informative diagnostic test is puncture of the abdominal cavity through the posterior vaginal fornix, which allows you to confirm the presence of blood in the abdominal cavity;
- final diagnosis is established during laparoscopy, which allows you to visually assess the condition of the fallopian tubes;
- Treatment - surgical (radical - tubectomy or conservative plastic - removal of the ovum from the fallopian tube for the saving of its generative function).

# Apoplexia of ovary

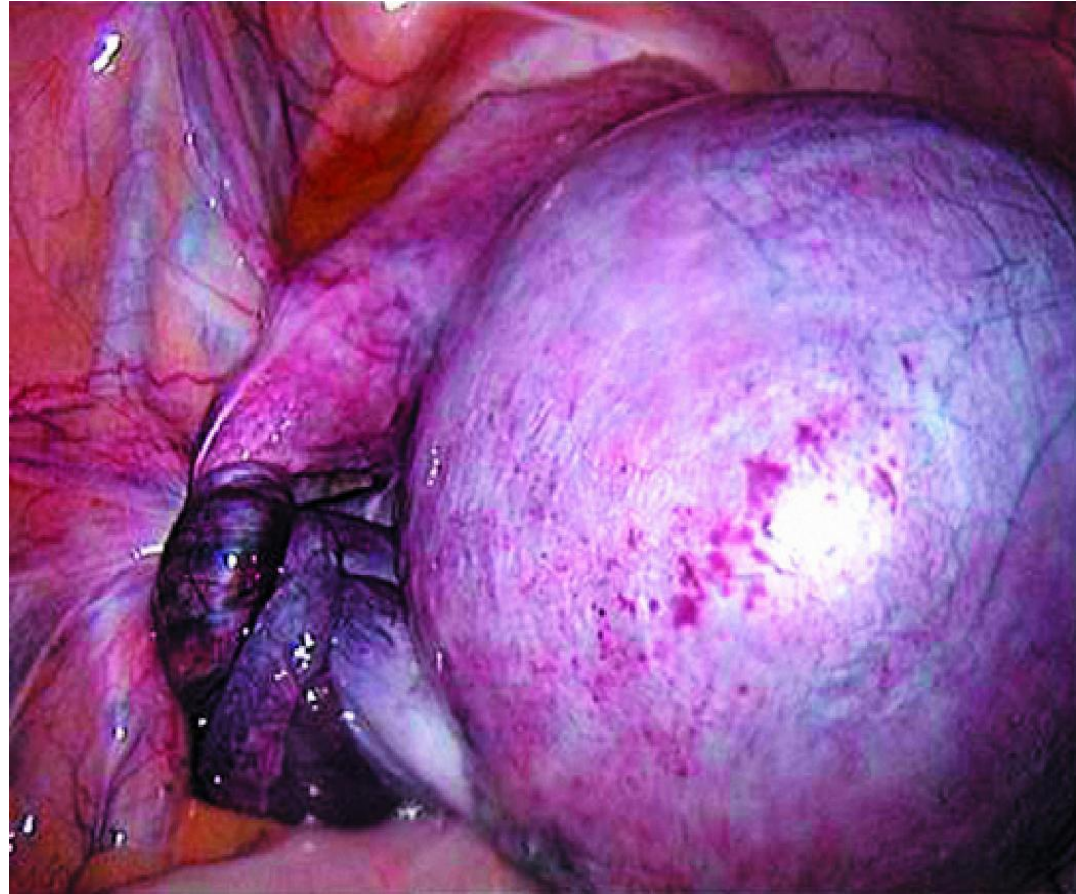
- conditioned by a sudden hemorrhage that is accompanied by violation of integrity of tissues of the ovary and quite often intra-abdominal bleeding;  
causes: trauma, physical tension, etc.



- disease begins suddenly, against a background of well-being: in the period of ovulation appears acute abdominal pain radiating to the rectum;
- distinguish between pain and hemorrhagic ( anemic ) forms of ovarian apoplexy;
- objectively : pale skin and mucous membranes, tachycardia, hypotension ; if intra-abdominal bleeding is massive, develop symptoms of anemia, collapse, shock; painful abdomen palpation determined tenderness of anterior abdominal wall on the affected side and peritoneal signs;
- With bimanual study: appendages on the affected side sharply painful ; the puncture of the abdominal cavity through the posterior vaginal fornix receive blood;
- Differential diagnosis is carried out with a broken ectopic pregnancy and acute appendicitis;
- Treatment - surgical resection or laparoscopic suturing of the ovary or laparotomic access.

# Torsion of the cyst

- distinguish: anatomic crus of tumour, including mesentery of ovary, propria ligament of ovary, suspending ligament of ovary, blood vessels(ovary artery, vein), lymphatic vessels, nerves, and surgical, appearing because of torsion anatomic and including salpinx; torsion is rapid and gradual, complete(on 360 degrees and more) and partial(less than, than on 360 degrees).

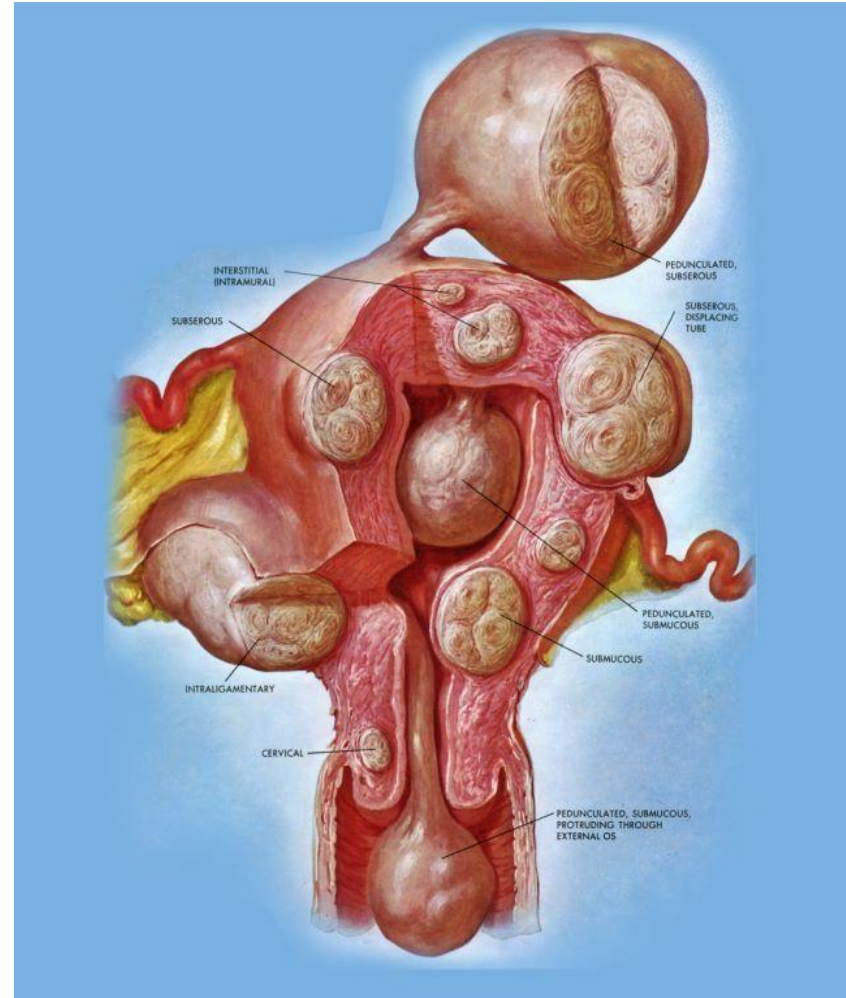




- Disease begins with severe pain, radiating to the lumbar region and lower limbs , then join tachycardia, low-grade fever , nausea, vomiting , constipation and gas ;
- objectively : belly swollen, marked muscle rigidity palpation of the anterior abdominal wall and peritoneal signs ;
- With bimanual study : adnexal determined sharply painful tumor formation , elastic consistency, limited in mobility ;
- disease must be differentiated from ectopic pregnancy and impaired acute appendicitis ;
- operative treatment – ectomy of the ovary without retorsion of the leg ( to avoid embolism of vessels) ; immediately after removal of the tumor is necessary to conduct express diagnosis of the tissue for the expanding of the volume of operation .

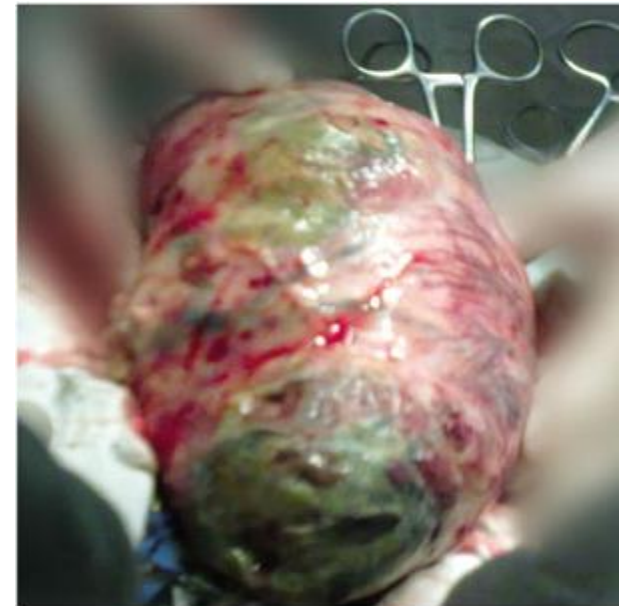
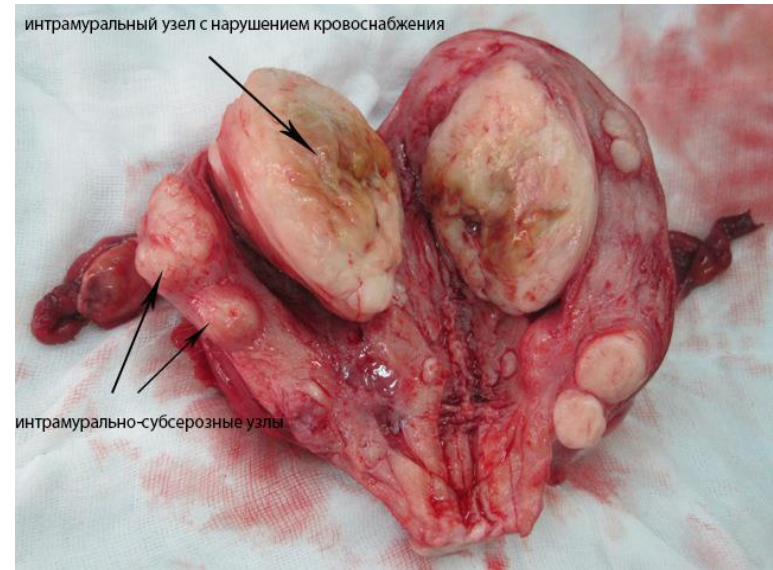
# Fibroid

- Distinguish submucous nodes: a particular form - born tumors that grow in the uterus towards the inner os;
- Birth fibroids leads to smoothing of the edges and dilation of the uterine os;
- process is accompanied by profuse uterine bleeding, cramping pain and disorders of blood circulation in the organ;
- If the removal of the node through vaginal access failed (impossible), laparotomy with hysterectomy is recommended.



# Necrosis of fibromatous node

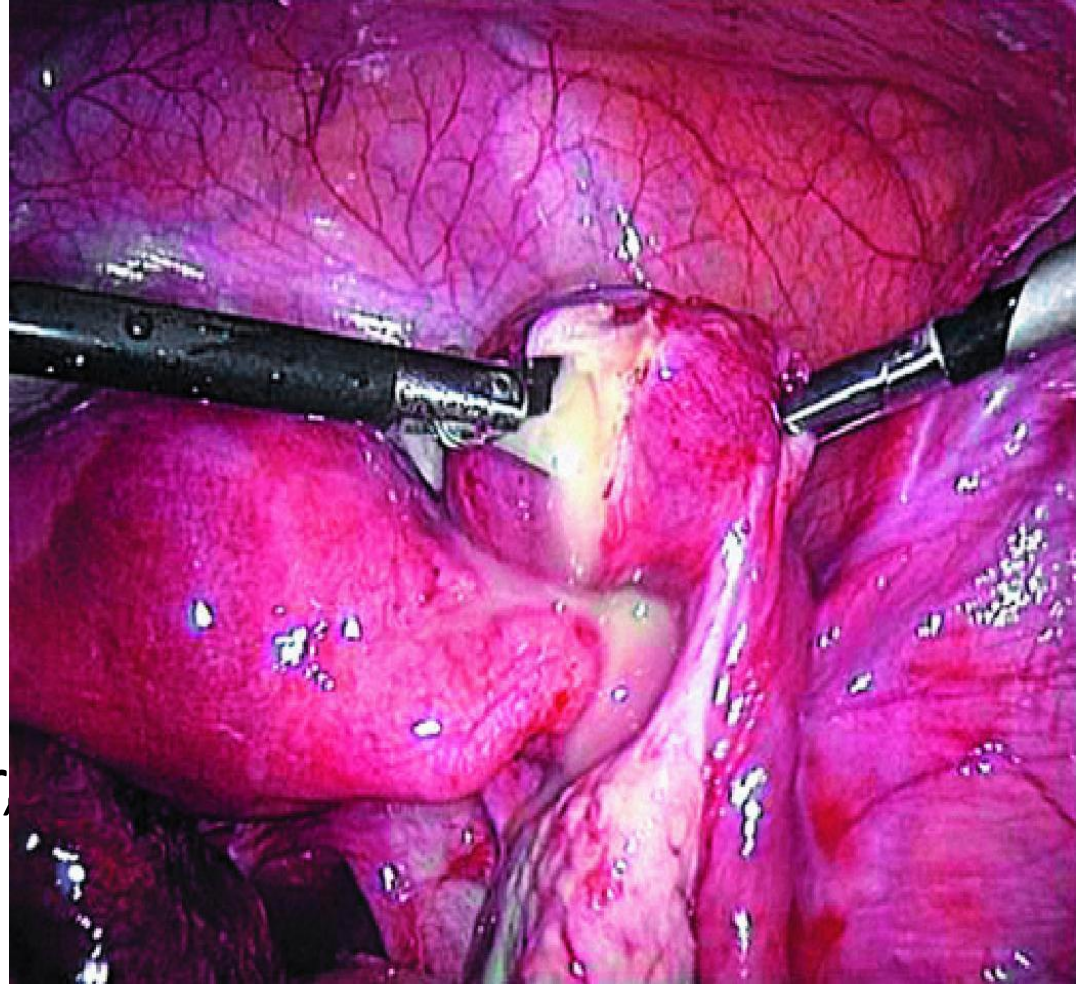
- degenerative changes in the nodes (due to violation of the biochemical processes in the vessels which supply the tumor), as well as torsion of the crus of subserous nodes;
- node becomes gray-black color, the tumor tissue becomes brittle, easily torn;
- accompanied by a clinical picture of acute inflammatory process and then development of the state of acute abdomen;
- the ineffectiveness of conservative treatment (antispasmodics, AB and infusion therapy) - surgery.





# Pyosalpinx and pyovar

- the inflammatory process is in the presence if it is pyosalpinx and pyovar, often involved the peritoneum, omentum, bowel loops with formation of a single inflammatory conglomerate;
- Symptoms of acute abdomen with high fever, chills, nausea, vomiting, leukocytosis, increased
- ESR are present



- during gynecological examinations reveal painful tumor formation with a tight capsule and indistinct contours due to adhesions to adjacent organs ;
- symptoms of acute abdomen appear with rupture of pyosalpinx ( pyovar ) ,with pus outcome into the abdominal cavity and the development of diffuse purulent peritonitis ;
- pus may also spill over into the bladder, rectum and vagina , causing inflammation in these organs ;
- Fistula in the rectum accompanied by tenesmus , mucus , often - diarrhea , fistula in the bladder - frequent and painful urination ;



# Diagnosis and treatment

- **Diagnosis** is based on :
  - 1) a relatively long data history of inflammation of the uterus with frequent exacerbations ;
  - 2) sudden acute onset , which is sometimes accompanied by symptoms of infectious-toxic shock or pain ;
  - 3) typical clinical picture of peritonitis;
  - 4 ) the results of gynecological examination (detection of inflammatory conglomerate with indistinct contours );
- **treatment** selected individually for each patient : in young patients with unilateral process - adnexectomy , in old age shows supravaginal amputation or hysterectomy with appendages ; It should be noted that due to prolonged inflammation formed adhesions affected the uterus, bowel , omentum , bladder , so surgical intervention in the technical aspect presents considerable difficulties .

# Perforation of the uterus

- occurs during medical abortion at any stage of the operation – probing, uterine cervical canal dilation, scraping the cavity;
- may be due to improper position of the uterus (hyperanteflexio, retroflexio) and the destructive changes in the uterine wall, and decay caused by proliferation of tumor tissue, such as cancer, chorioncarcinoma, etc.

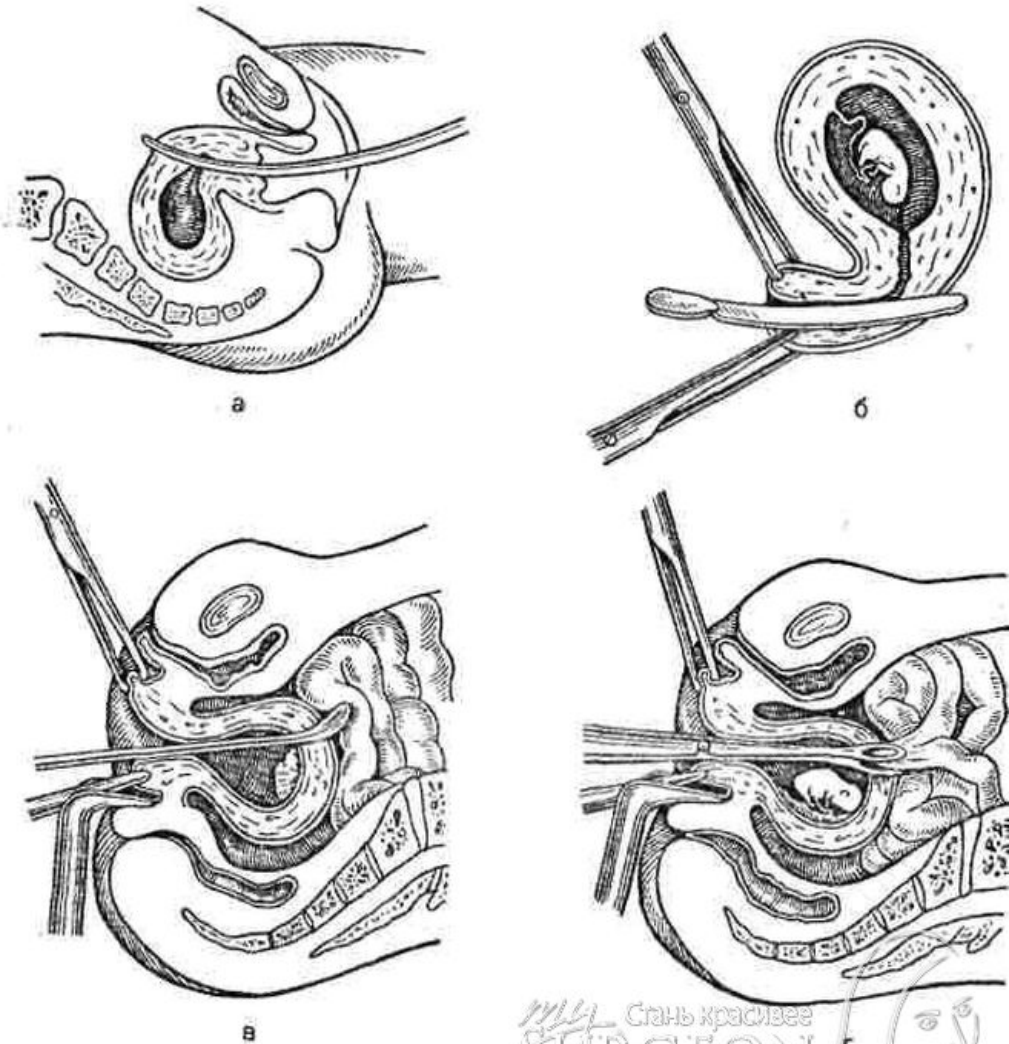
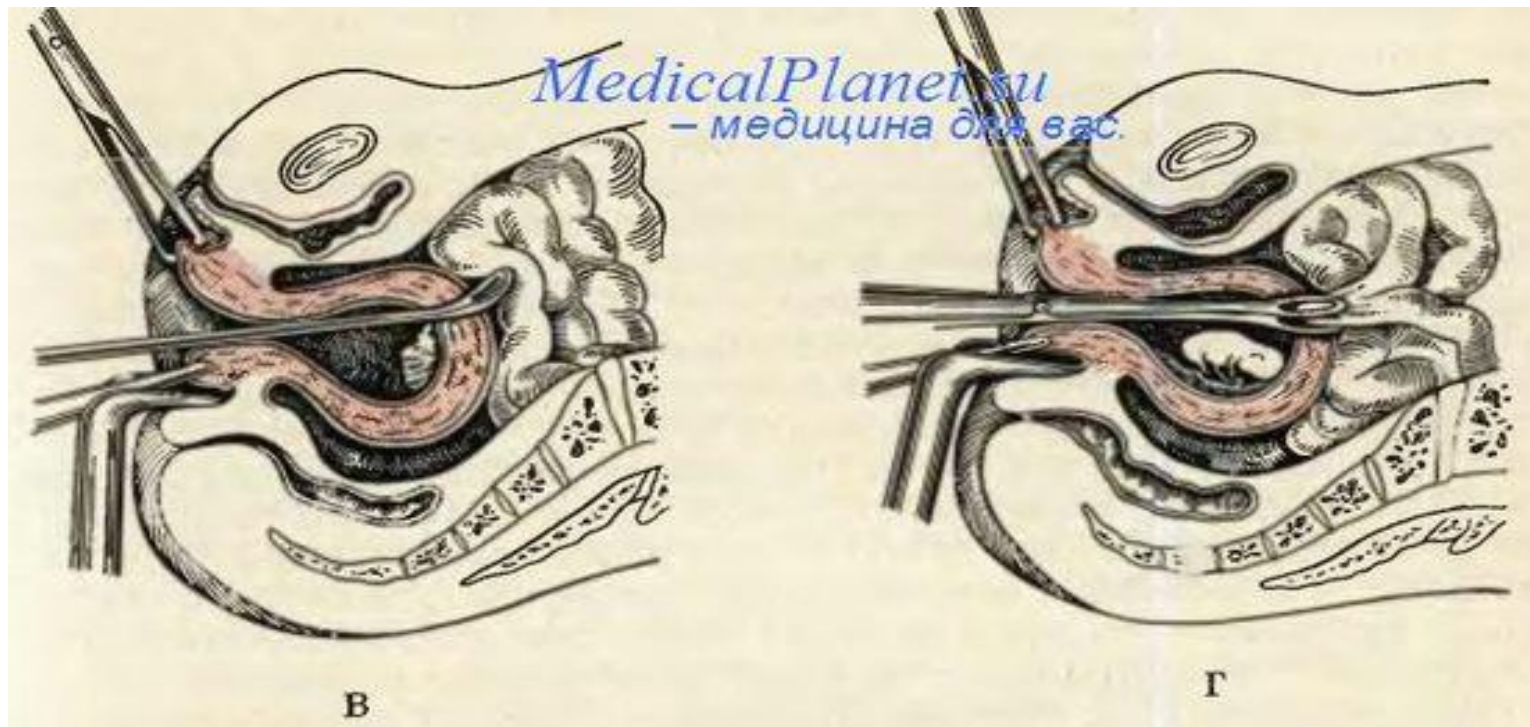


Рис. 49. Перфорация матки.

а — зондом; б — расширителем; в — кюреткой; г — абортангом.

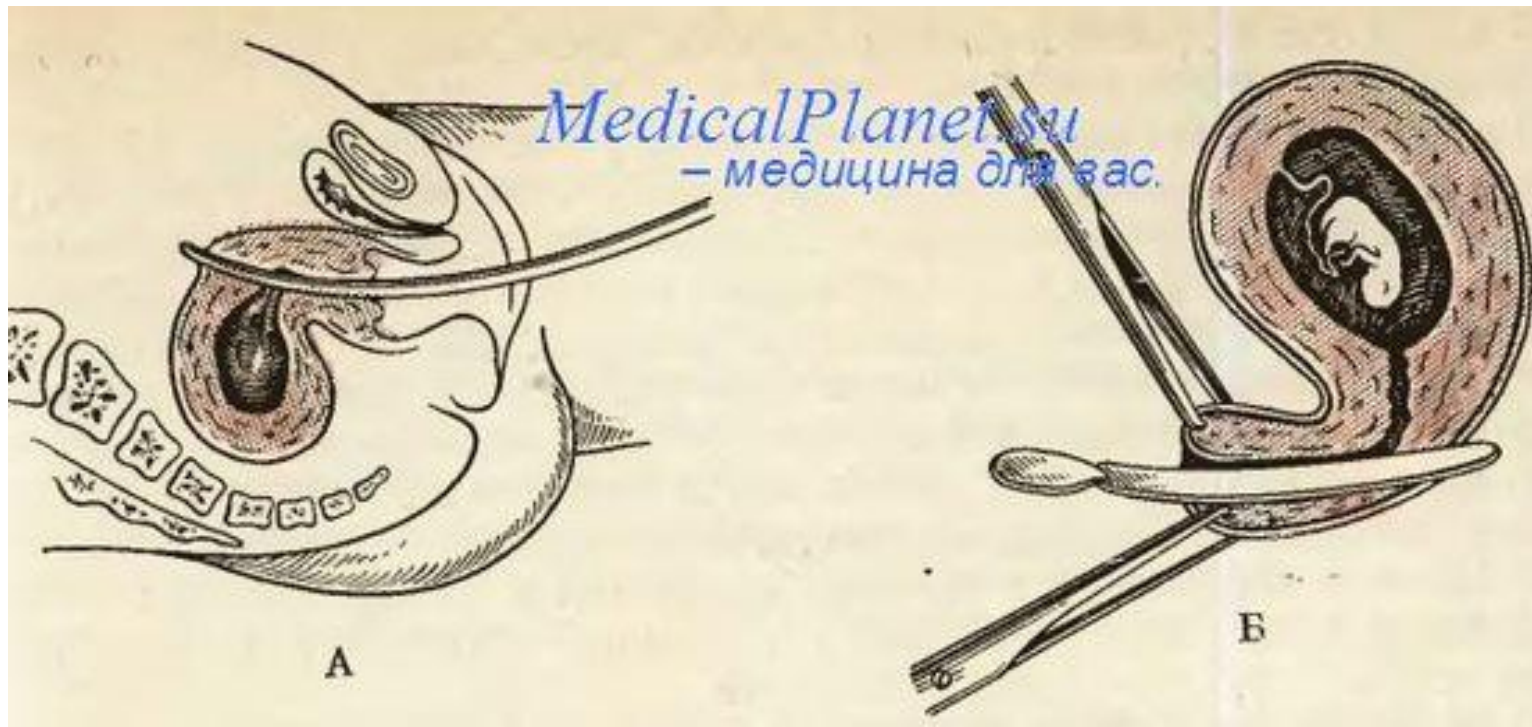
# Perforation of the uterus

- distinguish uncomplicated perforation (without damage of adjacent organs) and with complications (bowel injury, gland, urinary bladder, the uterus, etc.);
- considered the most serious injury damage during curette and embryo forceps



# The clinical picture

- determined by the localization, degree of damage and the violation of the integrity of adjacent organs;
- If it is perforation of the uterus by uterine probe without damaging the peritoneum and in the absence of bleeding may be asymptomatic; perforation with peritoneal injury accompanied by acute pain up to the development of shock.



# The clinical picture

- perforation of the uterus in the vascular bundle present clinical picture of massive internal or external bleeding;
- uterine perforation is the penetration by the tool (probe, curette) to a depth much greater than the length of the uterine cavity with trauma of intestinal loops which lead to a sharp change in the patient's condition (severe pain, shock and internal bleeding).



# Tactics

- perforation or suspected this complication tactics of the doctor is to the immediate cessation of all further manipulation ;
- in the case of uterine perforation by probe or small dilator- dynamic observation ( palpation of the abdomen to detect symptoms of peritoneal irritation , watching the emergence of external bleeding , diuresis , systematic measurement of blood pressure, heart rate , evaluation of clinical blood );
- administering of drugs and analgesics are contraindicated ;
- the absence of symptoms of peritoneal irritation and internal bleeding continued conservative treatment ( detoxification , antibacterial therapy , drugs for reducing the uterus , etc.);
- with increased heart rate, increasing body t ,visible symptoms of pelvioperitonitis -puncture of the abdominal cavity through the posterior vaginal fornix , if it is blood - immediate laparotomy; increased symptoms of peritoneal irritation and internal bleeding - indications for urgent laparotomy even if it is negative puncture.