

CASES OF THE CENTURY

Atypical Ectopic Pregnancies

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ATYPICAL ECTOPIC PREGNANCY



Atypical Ectopic Pregnancy



Atypical Ectopic Pregnancy



Sonographic Findings

- 27 year old female G1P0, asymptomatic pregnancy.
- Ultrasound showed a normal 17.1 week fetus and an empty uterus at the left side
- A thin wall was seen surrounding the fetus
- The placenta was implanting at anterior wall.

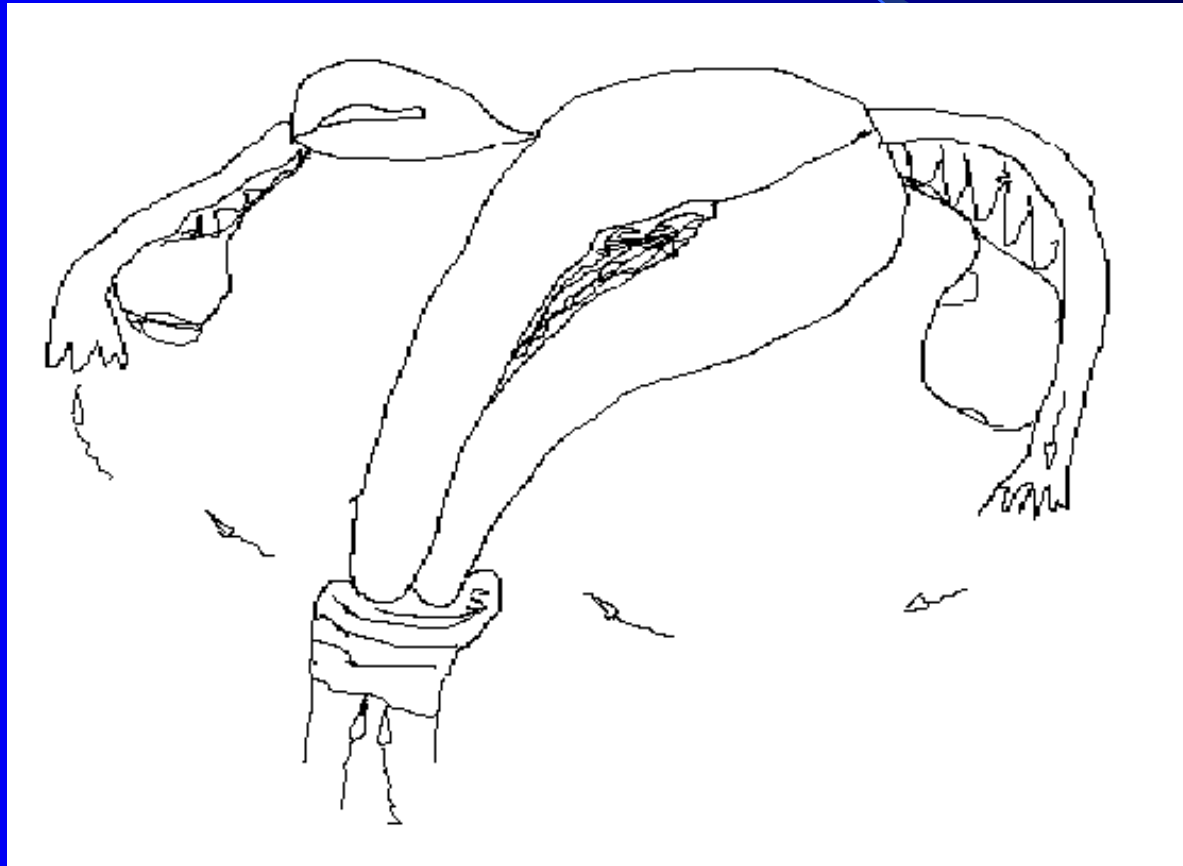
Atypical Ectopic Pregnancy

- Is this a Cornual Pregnancy ?
- Is this an Abdominal Pregnancy ?
- Is this a Rudimentary Horn Pregnancy ?

What Is the Diagnosis

- It is definitely not a tubal pregnancy.
- It is unlikely a cornual pregnancy due to the sac was seen separate from the uterus.
- It is also unlikely an abdominal pregnancy due to the normalcy and placenta location.
- **These ultrasound findings strongly suggested a Rudimentary Horn Pregnancy.**

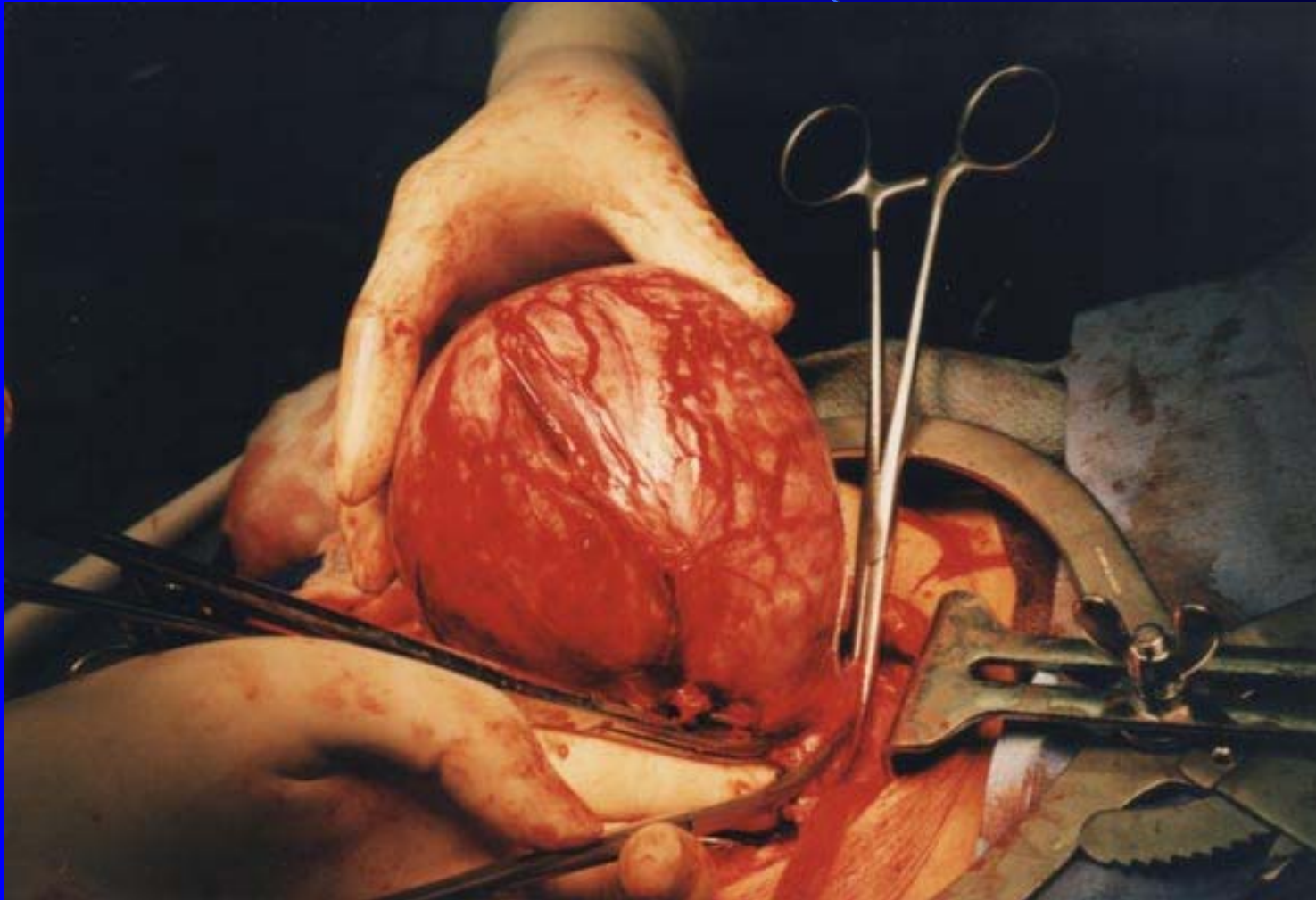
Unicornuate Uterus with Rudimentary Horn



Risks of Uterine Horn Pregnancy

- Severe internal bleeding with hypovolemic shock may be the first symptom of ruptured Rudimentary Horn Pregnancy. (RHP).
- Only 5% of reported cases have been diagnosed prior to rupture.
- 90% of RHP ruptured at 20 weeks in majority of cases reported.
- **Around 87% of maternal mortality when it ruptured.**

Management of Rudimentary Horn Pregnancy



Value of Ultrasound in the Early Diagnosis of Prerupture Uterine Horn Pregnancy

A Case Report

Cau Van Vo, M.D., Tung Van Dinh, M.D., and Gary D. V. Hankins, M.D.

BACKGROUND: The poor outcome of rudimentary horn pregnancies is due to delayed diagnosis.

CASE: Pregnancy in a rudimentary uterine horn was detected by ultrasound prior to rupture. The rudimentary horn was resected without complications.

CONCLUSION: Ultrasonography is essential in the early diagnosis of pregnancy in a rudimentary horn. (*J Reprod Med* 2003;48:471-473)

Keywords: pregnancy, ectopic; ultrasonography; rudimentary uterine horn pregnancy.

Pregnancy in a rudimentary uterine horn is a rare form of ectopic pregnancy. Although the vast majority of ectopic pregnancies are extrauterine, pregnancy that develops within a rudimentary horn is still considered ectopic. The real incidence is unknown; in some studies, however, the incidence was estimated at 1 per 100,000-140,000 pregnancies.¹⁻⁴

Prior to the advent of diagnostic ultrasound, 80-90% of rudimentary horn pregnancies were diagnosed after rupture, and only 5%⁴ of the reported cases were diagnosed preoper-

Ultrasound is essentially the only tool for detecting asymptomatic rudimentary horn pregnancy prior to catastrophic rupture.

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Second-Trimester Rudimentary Uterine Horn Pregnancy

Rupture After Labor Induction With Misoprostol

*Terri-Ann Samuels, MD, and
Awoniyi Awonuga, MD, FRCOG*

BACKGROUND: Uterine anomalies are often first suspected after bimanual or ultrasonographic examination. Currently there are no specific recommendations for further evaluation of asymptomatic women with suspected uterine anomalies in pregnancy.

CASE: A young primigravida with a history of an ultrasound diagnosis of bicornuate uterus presented with mild abdominal pain. An ultrasound examination showed a viable 18-week

fetus with anhydramnios in the left uterine horn. Labor induction with misoprostol culminated in uterine rupture. At laparotomy, a ruptured left noncommunicating rudimentary uterine horn of a unicornuate uterus was noted.

CONCLUSION: Pregnancies within noncommunicating uterine horns significantly increase the risk of potentially catastrophic outcome, therefore, consideration should be given to performing 3-dimensional ultrasonography and/or magnetic resonance imaging examinations to determine the nature of uterine anomalies. Caution should be exercised if prostaglandins are considered for use in this setting.

(Obstet Gynecol 2005;106:1160-2)

Congenital uterine anomalies affect 1 in 201 women in the general population and are present in 1 in 594 fertile women.¹ However, only approximately 1 in 76,000 pregnancies resides in a rudimentary horn.^{2,3} They are often initially suspected after bimanual or ultrasound pelvic examination or exploration of the uterine cavity during hysteroscopy or dilatation and curettage. Although percentages vary based on the type of uterine anomaly, most women with undiagnosed anomalies go through pregnancy unaware of their diagnosis and without complications.⁴

Unicornuate uteri comprise 5% of all uterine anomalies, and the vast majority of these have a contralateral rudimentary uterine horn of the noncommunicating

See related editorial on page 1150.

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CASE

A young primigravida at 18 weeks of gestation with a history of an ultrasound diagnosis of bicornuate uterus at 16 weeks presented with mild, throbbing left lower quadrant abdominal pain of sudden onset. The patient was afebrile, and her other vital signs were stable. Her abdomen was soft, with no rebound, guarding, or rigidity. An abdominal ultrasound examination showed a viable 18-week sized fetus, compatible with her dates. The pregnancy was in the left horn, and anhydramnios was also noted. There was no free fluid in the abdominal or pelvic cavity. The placenta seemed compressed, with signs of separation consistent with an abruption.

After extensive counseling, a decision was made to terminate her pregnancy with intravaginal misoprostol. Ninety minutes after intravaginal placement of 200 μ g of misoprostol, the patient's pain became constant, increased to a pain scale score of 10 of 10, and the patient seemed pale. A bedside ultrasonogram was performed that showed free fluid in the peritoneal cavity, with demise of the fetus in the left uterine horn. A repeat complete blood count revealed that the hematocrit had dropped from 27% to 11%. A blood transfusion was started and the patient was taken to the operating room. At laparotomy, the fetus was found in the abdomen with 2 L of hemoperitoneum. A ruptured left noncommunicating rudimentary uterine horn was found and excised. The patient was managed in the intensive care unit postoperatively subsequent to transfu-

sion-related acute lung injury after 7 units of packed red blood cells. Subsequently, she made an uneventful recovery and was discharged home on postoperative day 5. Surgical pathology confirmed an 18-week grossly normal fetus with a 3-vessel cord and placenta accreta in the ruptured noncommunicating rudimentary horn of a unicornuate uterus.

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Subj: **Manuscript ARCH-06-179R1 for review**
Date: 8/2/06 6:48:28 AM Pacific Daylight Time
From: prof.ludwig@bluewin.ch (Hans Ludwig)
To: cauvarvo@aol.com

Dear Dr. CV Vo,

In view of your expertise I would be very grateful if you could review the following manuscript which has been submitted to Archives of Gynecology and Obstetrics.

Manuscript Number: ARCH-06-179R1

Title: An Early Diagnosis and Successful Local Medical Treatment of a Rudimentary Uterine Horn Pregnancy: A Case Report

Abstract: ABSTRACT

BACKGROUND: It is hard to diagnose an asymptomatic rudimentary horn pregnancy antenatally. Early diagnosis prevents future obstetric complications.

CASE: Rudimentary horn pregnancy was detected in a woman and medical treatment was planned. Methotrexate was administered into the cavity of the rudimentary horn transvaginally.

CONCLUSION: In early gestational weeks in selected cases, medical treatment of a rudimentary horn pregnancy is an alternative of surgical treatment.

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We hope you are willing to review the manuscript. If so, would you be so kind as to return your review to us within 35 days of agreeing to review? Thank you.

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If you have any questions, please do not hesitate to contact us. We appreciate your assistance.

With kind regards,
Hans Ludwig
prof.ludwig@bluewin.ch

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Return-Path: <prof.ludwig@bluewin.ch>

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From: "Hans Ludwig" <prof.ludwig@bluewin.ch>

Conclusion

- Ultrasound is essentially the only tool for detecting asymptomatic Rudimentary Horn Pregnancy prior to catastrophic rupture.
- Laparotomy with excision of a Rudimentary Horn Pregnancy is urgent when diagnosed to avoid maternal mortality and morbidity.

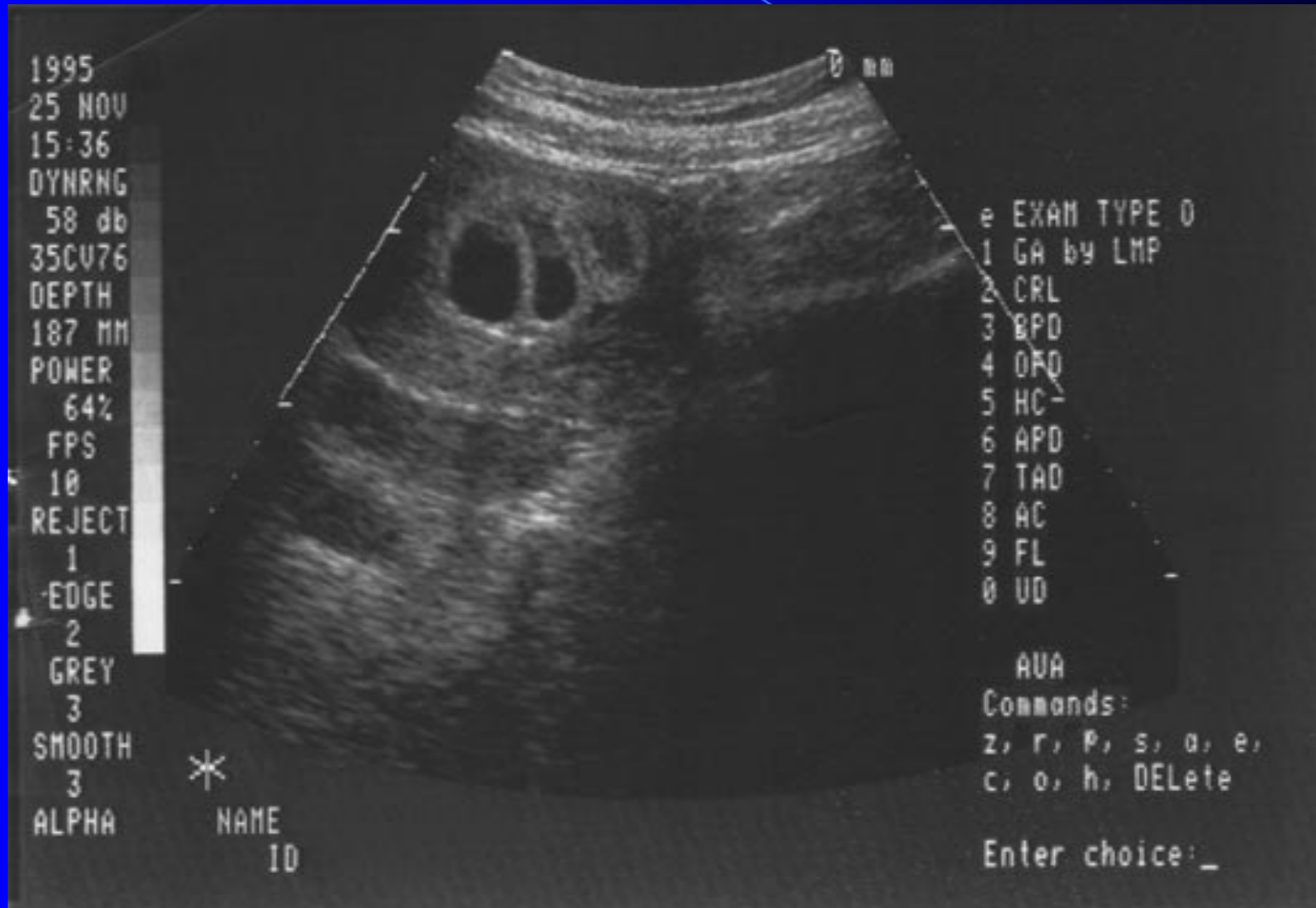
Perfume River, Hue, Vietnam



MULTIPLE PREGNANCY

- 36 year old female who has pituitary microadenoma with hyperprolactinemia.
- Primary infertility due to anovulation.
- Ovulation was induced with Clomid and Bromocriptine.
- Quadruplets (4 fetus) were detected by Ultrasound at 7 weeks of pregnancy.

Early Ultrasound of Quadruplets



Late Ultrasound of Quadruplets



Successful Outcome

- Most Quadruplets delivered at at 32.2 weeks by other studies, this Quads delivered at 33.5 weeks.
- 36 weeks is considered postdates for Quads.
- C/section is a preferred method of delivery.
- This is the first Quadruplets in Vietnamese medical history. This is also the first Quads of Fountain Valley Hospital.
- Quad A:1616g boy, Quad B: 1845g boy, Quad C: 2135g boy, Quad D: 1978g girl.



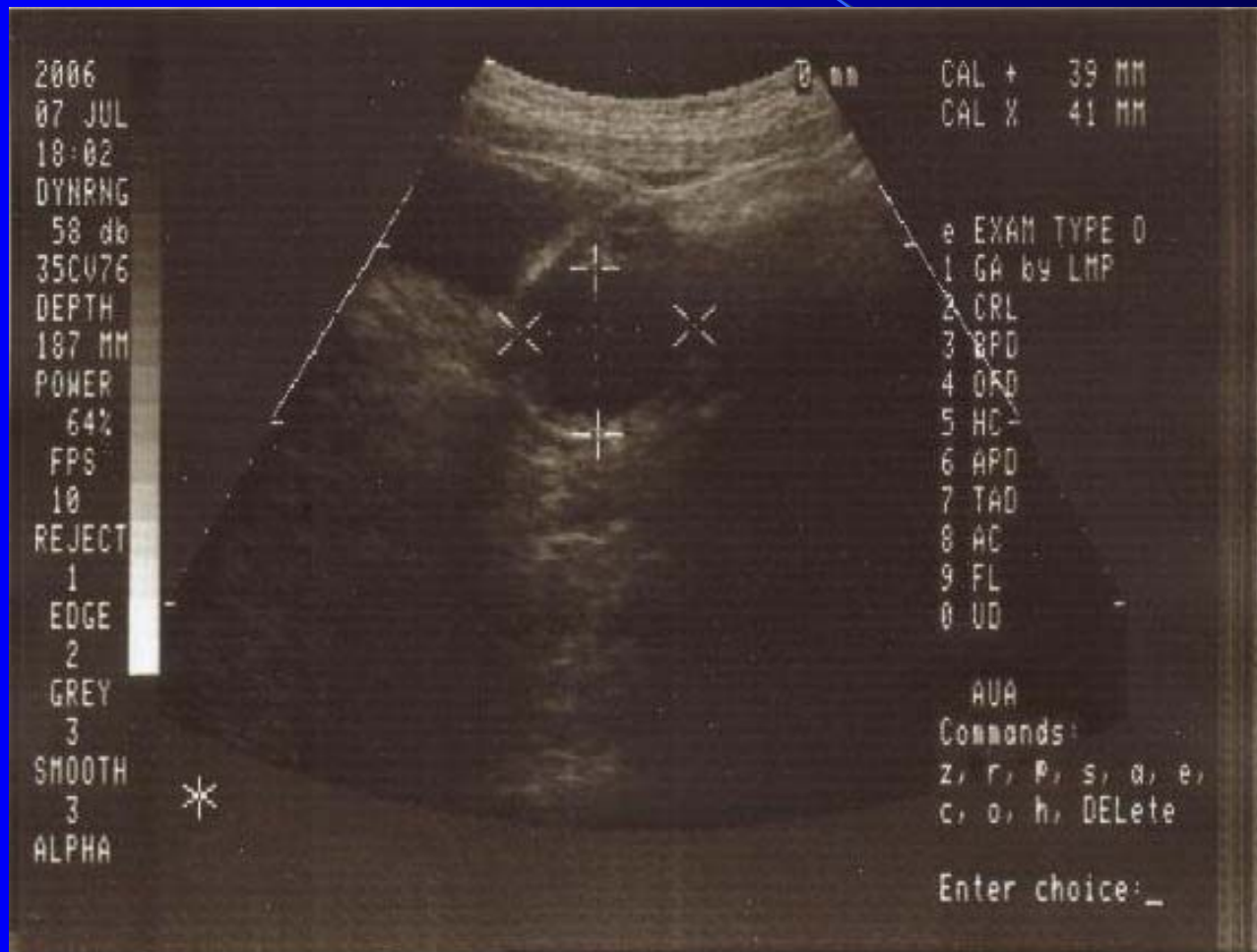
OVARIAN ECTOPIC PREGNANCY

- Ovarian Pregnancy is a rare variant of Ectopic Pregnancy. The incidence is less than 1% of all ectopic pregnancies.
- It is about 1 in 59,740 to 100,000 in all pregnancies. However the real number is unknown.
- **It is very difficult to diagnose an Ovarian Ectopic Pregnancy before its rupture.**

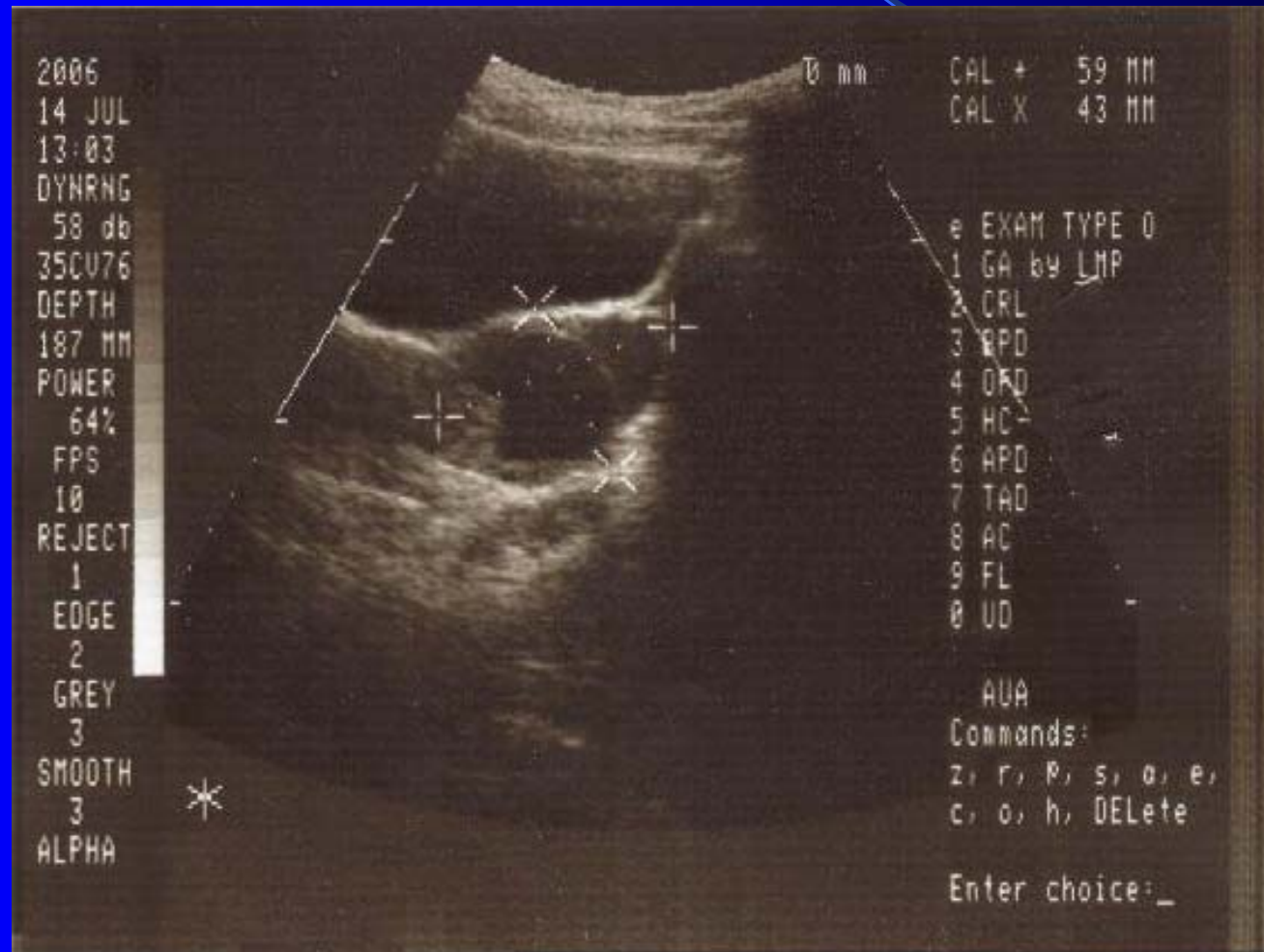
Case History

- 30 year old, primigravida, 7.4 weeks, normal on first prenatal visit.
- Ultrasound revealed a left ovarian cystic mass, size 41x39 mm, no intrauterine gestational sac
BhCG 1656.13 mIU/ml.
- Minimal structure change at ultrasound 4 days later. BhCG increased to 1714.29 mIU.
- Significant changes in size and structures of USG 3 days later (59x43 mm & echoic area)

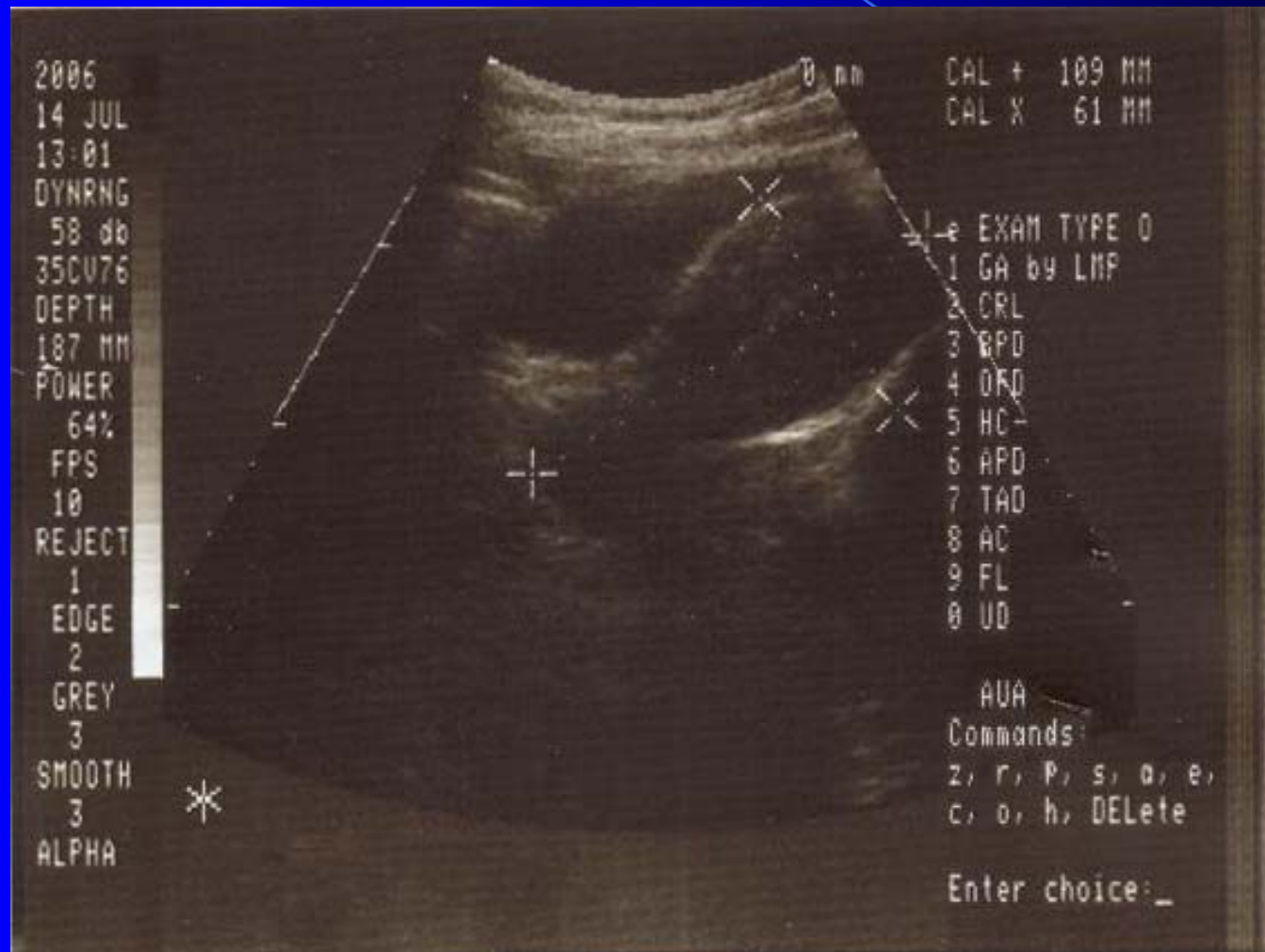
Cystic Mass at Left Ovary



Cystic Mass is bigger



No Gestational Sac in the Uterus



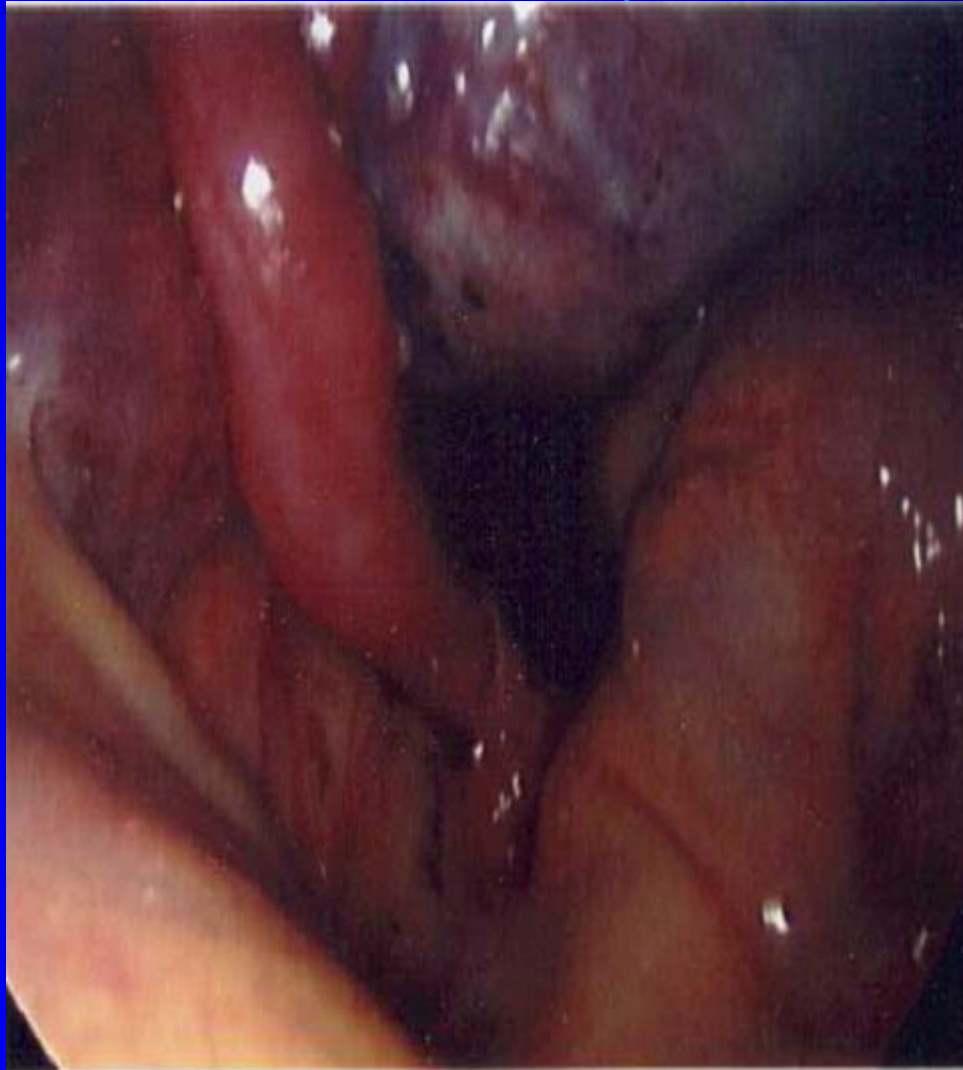
Preoperative Findings

- The size of Ovarian Cyst changes with time.
- BhCG levels are always lower than expected and above the discriminatory level (1,200).
- No intrauterine gestational sac.
- Pelvis exam may change from normal to discomfort and vaginal spotting.
- Combination of serial Ultrasound and BhCG strongly suggests an ovarian ectopic pregnancy

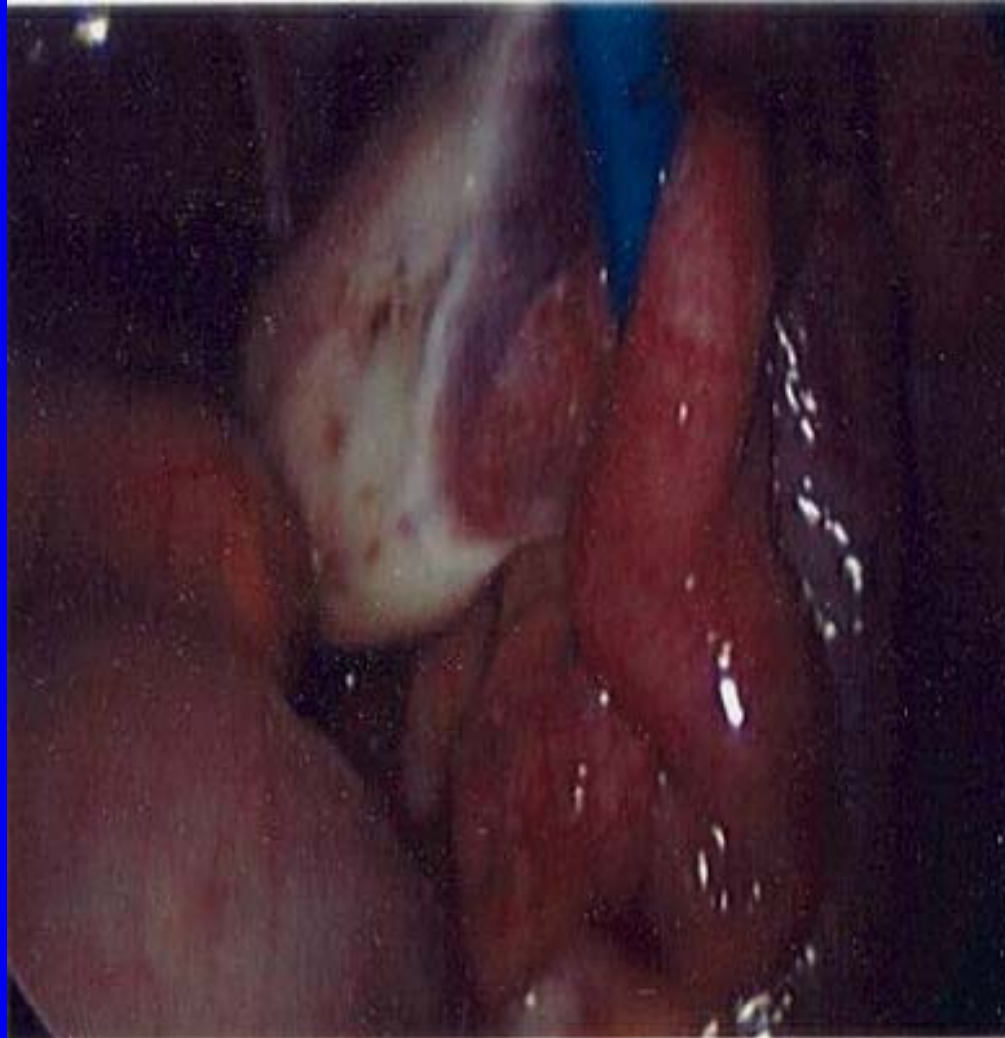
Management of Ovarian Rctopic Pregnancy

- Treatment of choice in this case is Laparoscopic wedge resection or cystectomy (before rupture).
- If it ruptures with hypovolemic shock Laparotomy is required.
- Methotrexate is only for selected cases.

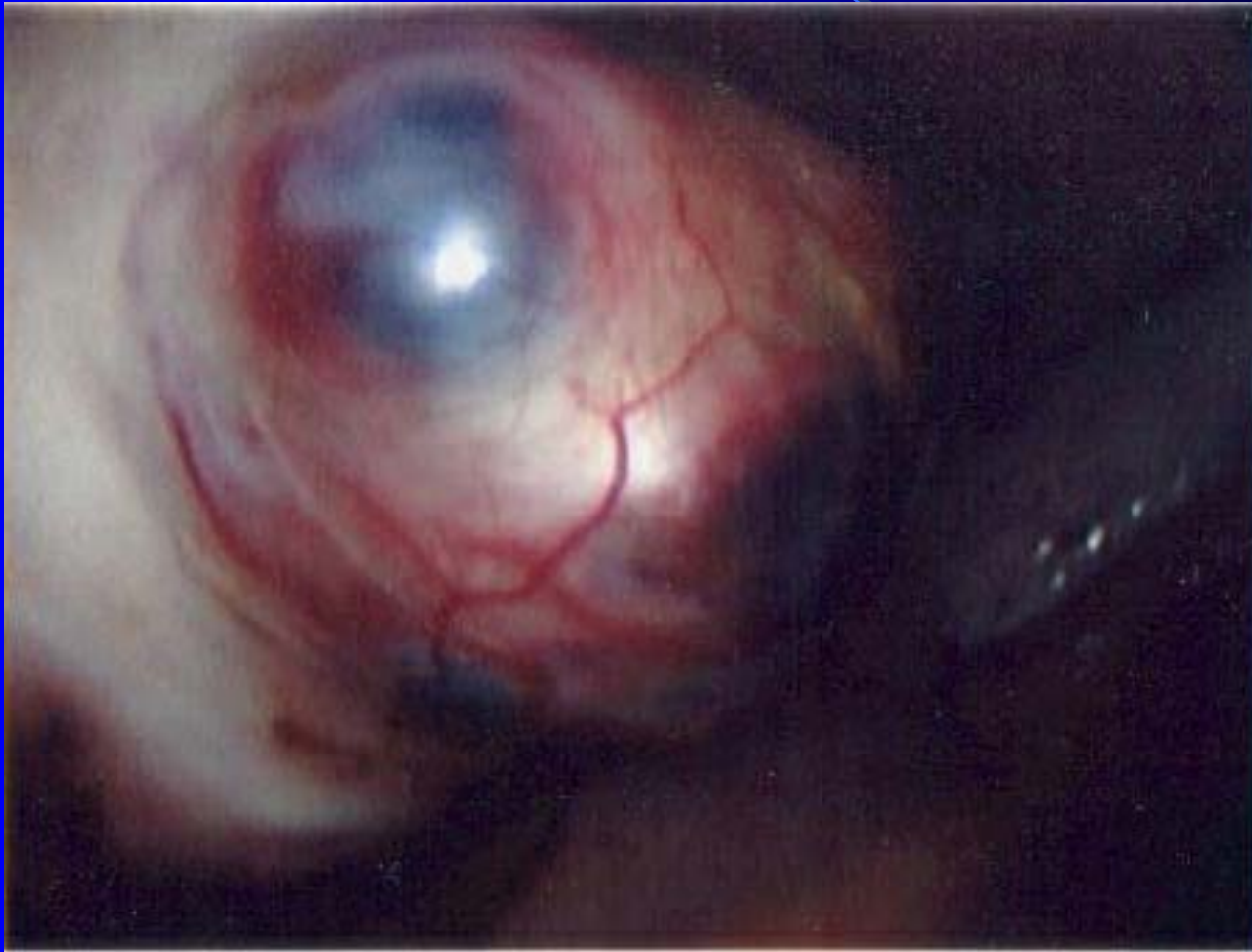
Normal Left Tube



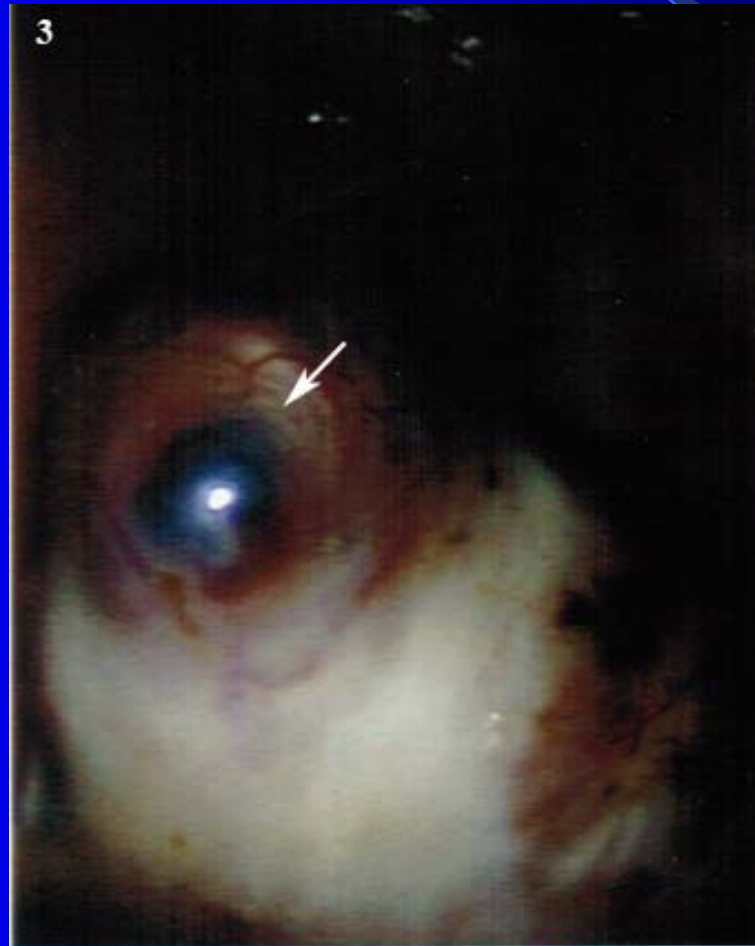
Normal Right Tube



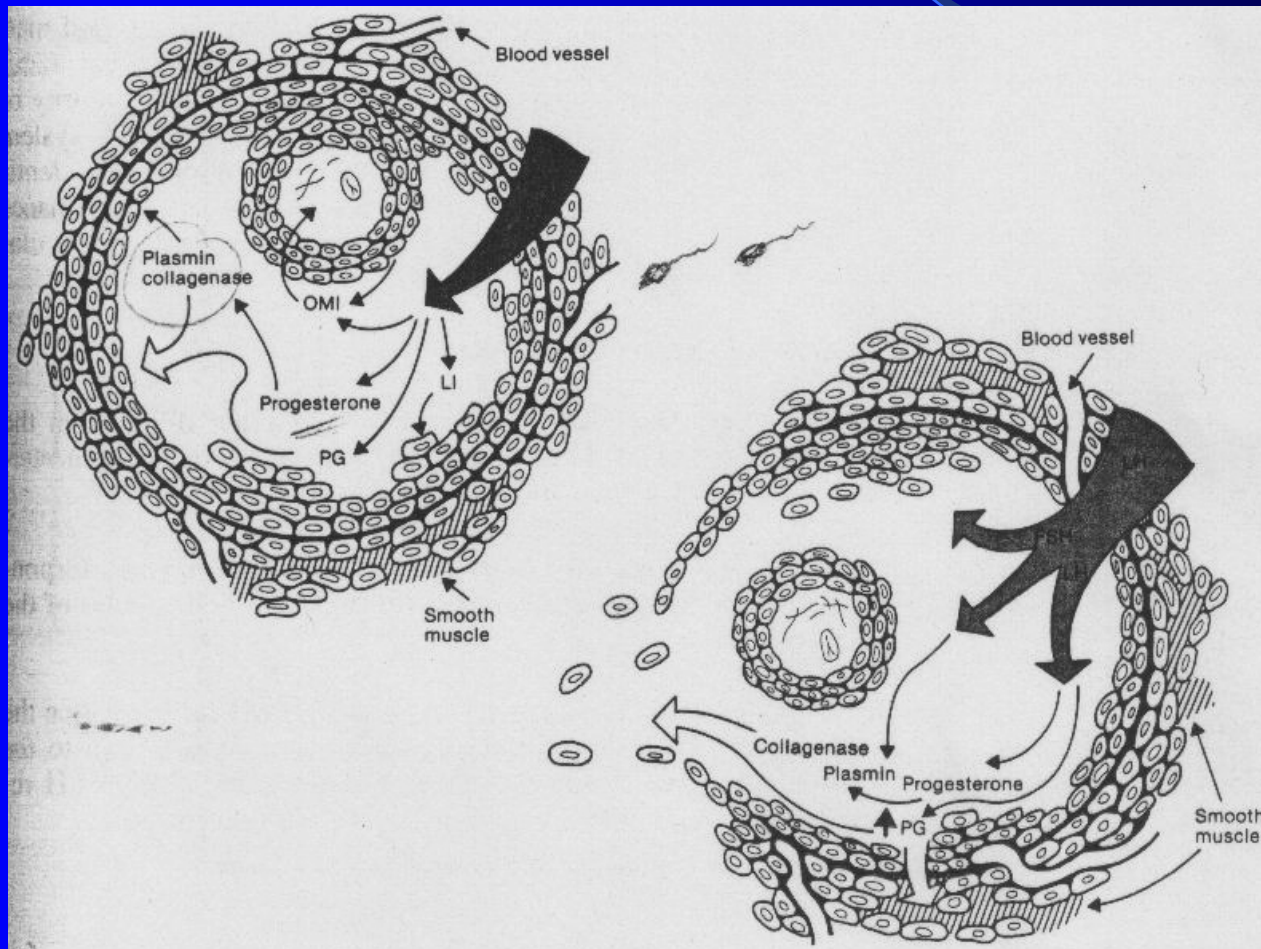
Ovarian Ectopic Pregnancy



Ovarian Pregnancy



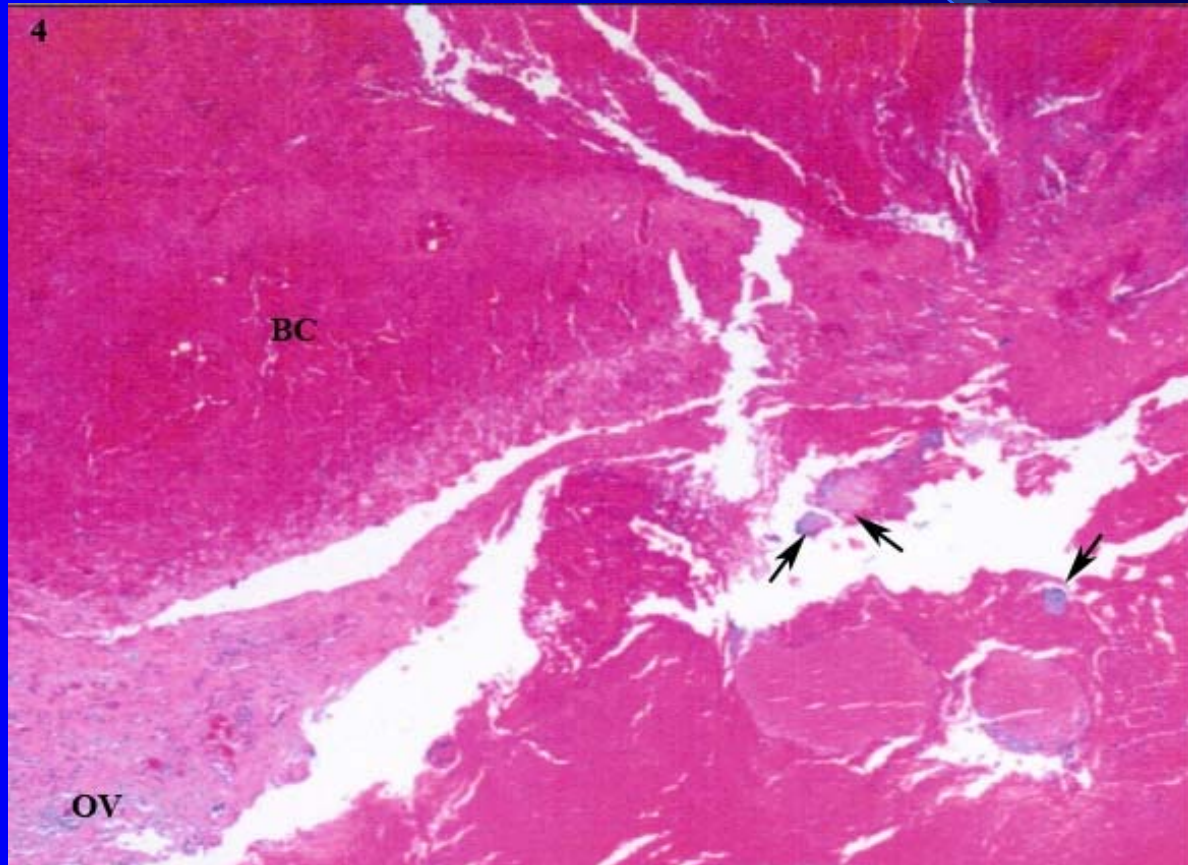
The Sperm penetrate into the Follicle Graaf



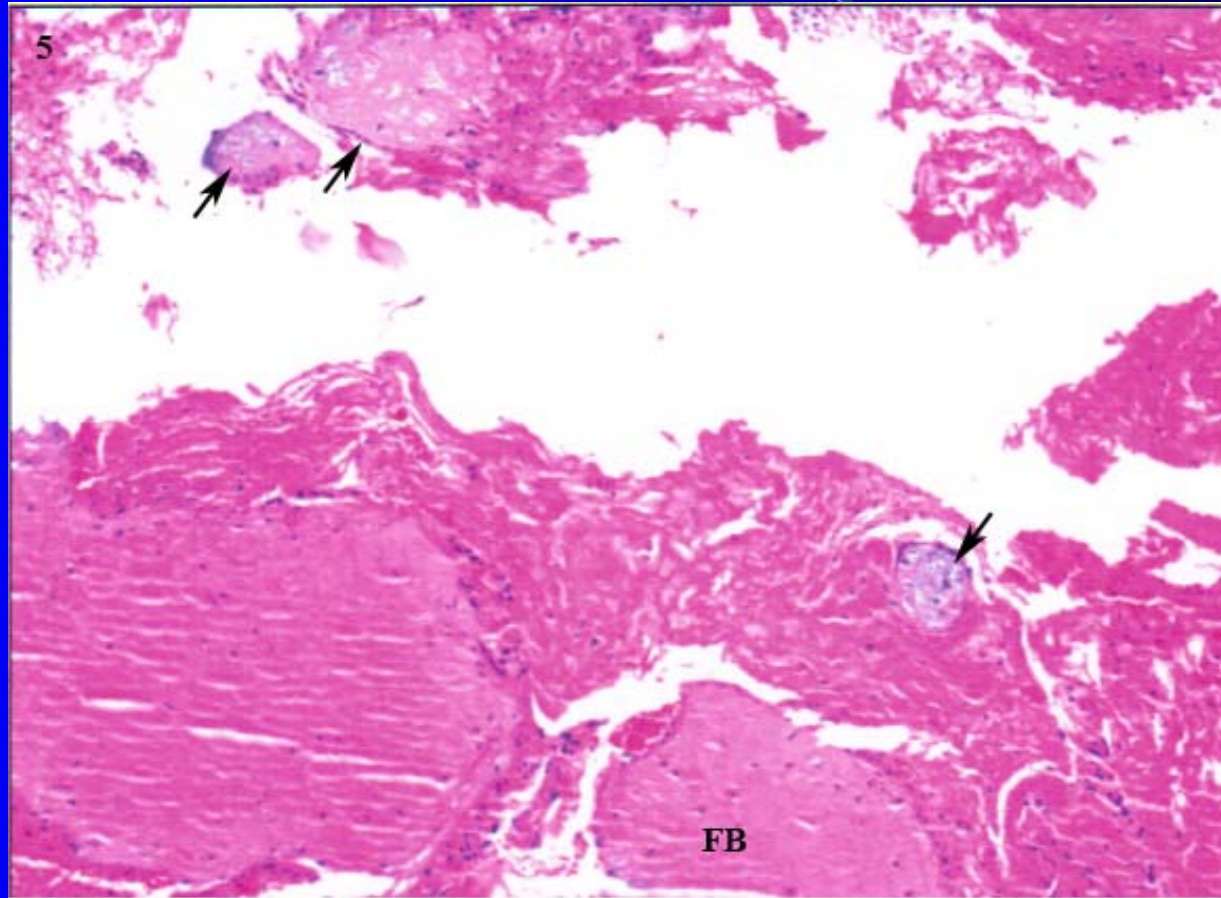
Left Ovary after Wedge Resection



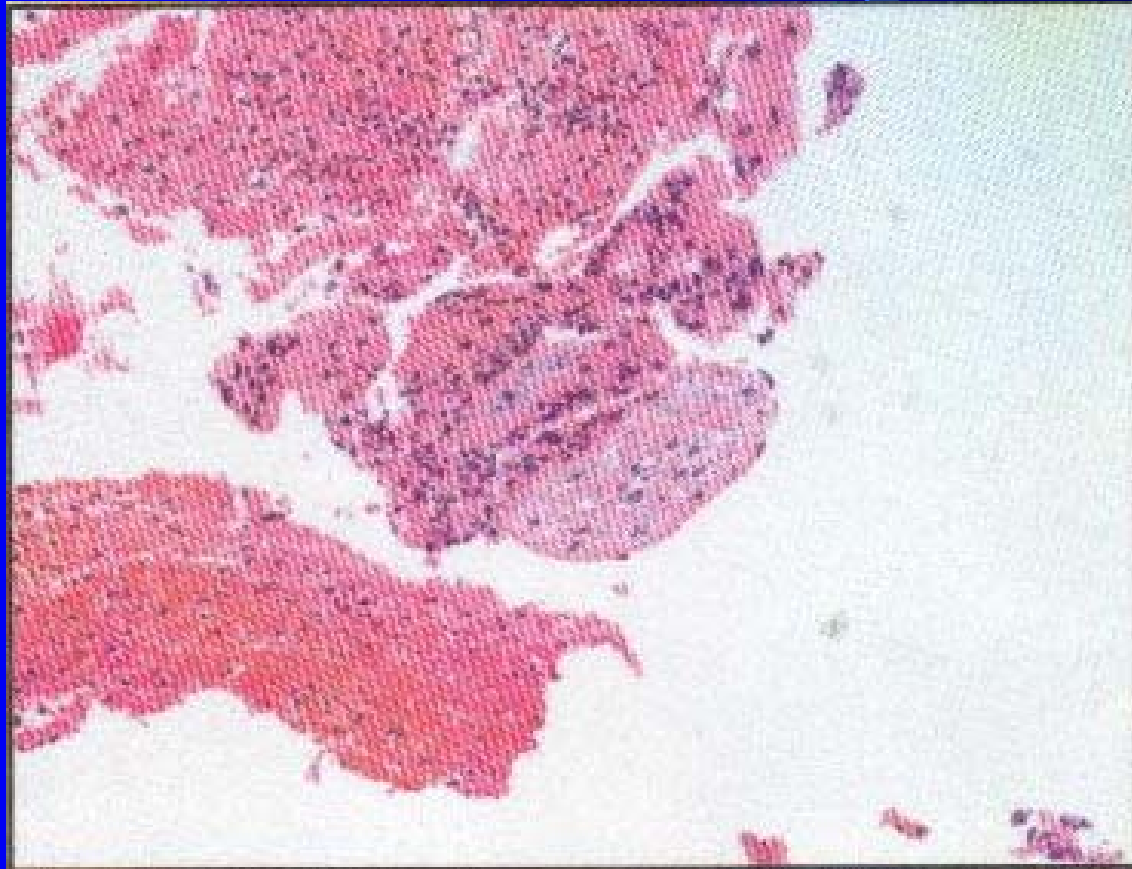
Pathology Report



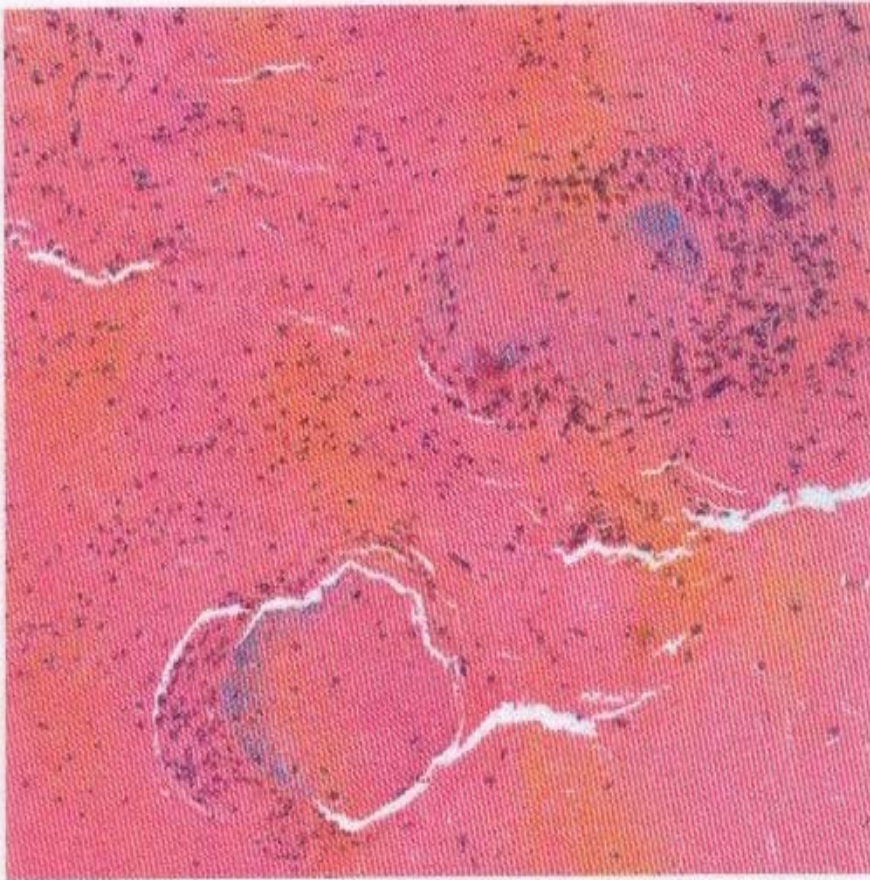
Pathology Report



Pathology Slide



Pathology Slide



High Power View of Villi/Trophoblast

Pathology Report

A. Endometrial Curettage:

- Proliferative Phase Glands.**
- No Evidence of Hyperplasia or Malignancy.**

B. Left Ovarian Cyst:

- Chorionic Villi and Syncytiotrophoblasts.**
- Hemorrhage and Blood Clot.**
- Consistent with Ectopic Pregnancy.**
- No Ovarian or Tube Tissue Present.**