**Background Information**

- Ectopic pregnancy (EP) affects a large segment of the fertile population in the United States.
- It is the leading cause of pregnancy-related deaths during the first trimester.

- In recent years, the incidence of ectopic pregnancy has increased.
- In 1985, an estimated 76,940 EP occurred in the United States, representing a 300% increase since 1970.\(^1\)
- Fortunately, the death rate per EP declined almost sevenfold during the same time period.\(^2\)

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The increased occurrence of EP in the United States is consistent with the trend in increased prevalence of important risk factors for EP, including chlamydia and other sexually transmitted infections, induction of ovulation, and tubal sterilization. (3)


II. Risk factors for ectopic pregnancies
   1. Sexually transmitted diseases
   2. Previous ectopic pregnancy
   3. Current IUD usage
   4. Previous tubal sterilization or repair
   5. Infertility and/or fertility drugs
   6. Progestin only contraception
   7. Increasing age
III. Screening of high risk populations

A. HCG concentrations
B. Progesterone concentrations
C. Ultrasound

III. Screening of high risk populations

A. Serum HCG concentrations
   1. Doubling time 2.0 days during 5th gestational week
   2. Doubling time 3.4 days during 7th gestational week

B. Serum progesterone concentrations
   - Yablo: <15 ng/ml strongly correlated with abnormal pregnancy
   - Stovall: <15 ng/ml 81% of patients with ectopic pregnancy, 11% normal pregnancies
   - McCred: >17.5 ng/ml strongly suggests normal pregnancy
   - 15-20 ng/ml Suggestive of normal pregnancy
   - <15 ng/ml Suggestive of nonviable pregnancy
IV. Methotrexate therapy

III. Screening of high risk populations
   C. Ultrasound
      1. Gestational sac visible 28 days post conception (6 weeks)
      2. 15-25% ectopic pregnancies develop to the point of yolk sac and/or cardiac activity
      3. 97% of pregnancies with endometrial stripe <6 mm were abnormal
      4. Free peritoneal fluid present in 4-83% of ectopic pregnancies

DISCRIMINATORY ZONE
hCG > 6,000 - 6,500 mIU/ml: gestational sac on 6/8 in > 90% normal pregnancies
If no sac is seen, assume ectopic.

V. Surgical treatment

A. Indications

1. Active bleeding or hemodynamically unstable
2. Large adnexal mass (>3.5 cm)
3. Abdominal pain
4. Heterotopic pregnancy
   (1/6,000 - 1/50,000 pregnancies)
5. Failed methotrexate (4-16)
6. Patient preference
3. Technique
   a. Salpingotomy
   b. Salpingectomy
   c. Segmental resection
      1. Tubo-ovarian adhesions
      2. Isthmic tubal pregnancy
   d. Cornual resection

FIG. 2. Linear salpingotomy.
V. Surgical treatment

B. Laparoscopy versus laparotomy

1. Relative contraindications

   a. Hemodynamic instability
   b. Marked obesity
   c. Location and accessibility of ectopic pregnancy
3. Technique
   a. Salpingotomy
   b. Salpingectomy

1. Does not desire fertility
2. Tubal rupture
3. Excessive bleeding
4. Contralateral hydrosalpinx