

Ectopic pregnancy is a pregnancy outside the uterus, usually in the fallopian tube. Eighty percent occur in the outer part of the fallopian tube. The fertilised egg and early embryo spend 3 days in the fallopian tube and pass into the uterus by the 4th day. If this passage is delayed the pregnancy is at risk of implanting in the tube itself. It occurs in approximately 1% of all pregnancies. The risk increases to about 10-20% in women who have had damage to the fallopian tube, or in whom the fallopian tube has been operated on. Risk factors for an ectopic include:

- Women having surgery on their fallopian tubes
- Previous pelvic infections or sexually transmitted disease
- In women with previous ectopic pregnancies

Ectopic pregnancies occur in about 1-2% of all IVF pregnancies.

Clinical Presentation and Diagnosis of Ectopic Pregnancy.

Although pain and vaginal bleeding are the characteristic symptoms of an ectopic pregnancy, they are highly variable depending on the various outcomes of the tubal implantation. For instance, on the one extreme presentation is acute, with rupture of the pregnancy through the tube into the abdomen. This causes severe pain and shock. On the other hand, early expulsion of the pregnancy from the distal tube may result in no or few symptoms.

As the ectopic pregnancy grows inside the tube it produces the same pregnancy hormones as in a normal pregnancy. The main hormone that is measured is hCG. In the first 8 weeks of pregnancy this hormone doubles in value about every second day. It starts at <5 IU, and by 5 weeks of pregnancy (ie: 3 weeks after ovulation) it should be at about 2000 IU. At 6 weeks it up to about 12,000 IU.

The other test that helps distinguish a normal pregnancy from an ectopic pregnancy is an ultrasound scan. In a normal pregnancy we should see a pregnancy sac on ultrasound exam at about 5 weeks. The ultrasound scan suggests an ectopic pregnancy if:

- There is no sac present and the hCG is at or above 2000 IU
- There is a mass near the fallopian tube or ovary
- There is lot of fluid that may be blood

The Modern Management of an Ectopic Pregnancy

Nowadays most ectopic pregnancies can be diagnosed with the help of hCG and ultrasound. The common perception is that everyone with an ectopic needs an operation to deal with it. Not so. A number of treatment options are available.

1. If there is evidence of serious bleeding producing shock, immediate treatment is essential. This is a surgical emergency and in most case a bigger operation (**laparotomy**) is performed. An experienced surgeon may also perform laparoscopic treatment. If pain or moderate blood loss is a significant feature most New Zealand gynaecologists offer laparoscopic treatment. Conservative surgery may be employed when the ectopic has not ruptured and where the tube appears normal. The conservative surgical approach is called **salpingotomy**, where the ectopic is removed and the tube allowed to heal on its own. **Salpingectomy** (tubal removal) is the principle treatment, especially where there is tubal rupture. Surgical treatment usually requires 1-2 days in hospital.

2. **Expectant management** is used when pain is less (or lessening) and there are indicators that the ectopic is a small one or it is not bleeding too much. It is also dependent on social circumstances, employment issues, previous history, etc. The expect-

ant approach involves a close follow-up with hCG tests every 2-7 days until the levels have returned to normal. The expectant management is successful in 90% of selected patients. Living in a rural setting need not hinder an expectant plan providing the risk of rupture is considered to be low and the patient has ready access to secondary care hospital (less than 3 hours by car). In general, management of ectopics in a rural setting should only proceed providing the hCG is less than 500 UI/L.

3. **Methotrexate** is a drug that destroys actively growing tissues such as the placental tissues that are supporting the pregnancy. It may be used as an injection in selected cases to avoid the need for surgery. Side effects include abdominal pain for 3-7 days in 50% of cases and mild symptoms of nausea, mouth dryness, mouth soreness and diarrhoea.

Reproductive Future Following an Ectopic Pregnancy

Approximately 50% of women who need a tubal removal for an ectopic will have a normal pregnancy subsequently. This will be slightly better (55-60%) if expectant or medical management is successful. In cases where conservative, expectant or medical treatment is done, about 5-10% of women will have another ectopic in the same tube. If it happens a second time the risk for a third goes up to 40-50%. In this case most gynaecologists with advice removal of a tube after a second successive ectopic.

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