DIAGNOSIS OF TUBAL PREGNANCY

BASED ON 310 CASES

by

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Diagnosis of tubal pregnancy is a difficult problem. In most of the cases the tubal pregnancy is already disturbed, and undisturbed tubal pregnancy is rarely met with in clinical practice. In a series of 310 cases of tubal pregnancy studied by us, in only one patient the tubal pregnancy was undisturbed. Undisturbed tubal pregnancy does not cause any symptoms and is met with accidentally.

The present study is based on 310 cases of tubal pregnancy treated at the Calcutta Medical College from 1942 to 1955 and N.R.S. Medical College from 1956 to 1966.

Types of Disturbed Tubal Pregnancy

There are two distinct clinical types of disturbed tubal pregnancy.

(1) *Acute* cases in which there is sudden shock and fainting which are usually due to acute haemoperitoneum following sudden rupture of a tubal pregnancy.

(2) *Subacute* cases which are also called "old ectopics". The symptoms and signs are not so dramatic and the patient complains of pain in the abdomen and irregular vaginal bleeding. These are mostly due to tubal abortion or tubal mole.

In the present series there were 103 cases of acute ectopics, 30%, whereas the majority, 207 (70%) were of the subacute variety.

Nature of Disturbance

Rupture was found in 158 cases (51%), tubal abortion in 104 (33%), and tubal mole in 47 cases. Undisturbed tubal pregnancy was found in one case only.

Differential Diagnosis

The clinical diagnosis was correct in 72% and incorrect in 28% of cases. In acute cases, a wrong diagnosis of acute gastro-duodenal perforation and other medical emergencies was made. In subacute cases a wrong diagnosis of tubo-ovarian mass, ovarian cyst, fibroid and uterine abortion was made.

Diagnosis of tubal pregnancy is arrived at by (a) clinical methods and (b) by special investigations.

Clinical diagnosis

Menstrual history: Amenorrhoea was present in 58% of cases only and absent in 42%. Amenorrhoea is

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usually of short duration. Out of 179 cases, in 142, 79%, the amenorrhoea was of less than 8 weeks duration, whereas in 28 cases it was 8-12 weeks and in 9 cases the duration was more than 12 weeks.

The site of gestation in the tube, and the nature of disturbance influence the period of amenorrhoea. Isthmical rupture—of a tubal pregnancy occurs very early, whereas gestation in the ampullary and interstitial parts continues longer.

Obstetric History

Twenty-two per cent of cases were nulliparous and 78% multiparous. In 171 cases the parity was between 1 and 3, in 52 it was between 4 and 6 and in 23 it was 6 and above. Thus parity has very little significance in diagnosis.

Clinical features

Symptoms vary according to the type of ectopic pregnancy, whether acute or subacute. Severe *abdominal pain* was complained of in 94% of cases. *Fainting attack* and *collapse* were found in 21% and all these were acute cases with ruptured tubal pregnancy. *Irregular vaginal bleeding* was found in 80% of cases, all being old ectopics. In not a single case was there a history of decidual cast being passed though a lot of stress is given to this fact in diagnosis. *Rise of temperature* was found in some of the old ectopic group. This is due to irritation of the peritoneal cavity by the presence of blood and not necessarily due to secondary infection as is commonly believed. This rise of temperature causes confusion in the diagnosis and many cases are wrongly diagnosed as tubo-ovarian mass. In a small number of cases dysuria and dyschezia were found in old ectopics.

Severe shock was found in 16% of cases and moderate shock in 22%. Shock was absent in 62% of cases of old ectopics.

Extreme *pallor* was a very significant finding in cases of acute rupture, whereas in old ectopics pallor was slight or absent. The haemoglobin in acute cases was below 6 gm% in 24% cases and between 6 and 10 gm.% in 66% cases. In the subacute or old ectopics the haemoglobin was above 10 gm.% in 14% of the cases.

In the acute cases, when the foot end of the bed was raised the patient complained of *shoulder pain* due to fluid blood irritating the diaphragm. I have diagnosed many cases on this sign alone.

Extrauterine pelvic mass was palpated in 85% of cases which was very tender and cystic in nature. The mass was found in the lateral fornix in 63% of cases, and in 46% in the posterior cul de sac as well. In only 5% of cases the mass was found in the anterior fornix. The mass was mostly unilateral and in many cases extended into both the lateral and posterior fornices. In some cases of old ectopics the mass had the uterus incorporated in it so that the extrauterine nature could not be ascertained and these were misdiagnosed as fibroid uterus or abortion. In the acute rupture cases where there was distension of the peritoneum with fluid blood, no definite mass could be felt by vaginal examination. These

were misdiagnosed as surgical emergencies.

In acute cases with haemo-peritoneum there was generalised tenderness and distension. Cullen's sign was not found even in one case.

Special Investigations

Some special investigations were undertaken for confirmation of diagnosis, but these are of secondary significance. Clinical findings are most important.

(1) *Examination under anaesthesia* is a very valuable method for the diagnosis of disturbed tubal pregnancy. In fact I insist on examination under anaesthesia in all the cases before the diagnosis is finalised. Pelvic findings can be ascertained under anaesthesia much better in those cases where the patient resents proper examination due to pain and tenderness.

(2) *Aspiration of the Pouch of Douglas* is a very valuable method. Drawing of fresh or old blood by a lumbar puncture needle is definitely of value in suitable case. In ruptured ectopics, demonstration of fluid blood in the peritoneal cavity is very helpful to rule out other surgical emergencies. Mass in the anterior fornix is unsuitable for aspiration and should not be undertaken. Those who are not in favour of aspiration method are biased against it because of false negative results due to improper technique.

(3) *Biological test for pregnancy:* This has a limited value in the diagnosis. In unruptured or recently ruptured ectopic, it is positive but it does not rule out uterine pregnancy. In old ectopic it is invariably negative.

(4) *Endometrial Curettage* is of limited value provided uterine pregnancy has been excluded. In recently ruptured ectopic pregnancy, decidual changes may be found. In old ectopic cases the endometrium may be of any nature—scanty or proliferative and is of no value in diagnosis.

(5) *Arias Stella Reaction:* In some of the cases of ectopic, peculiar type of cells called Arias Stella cells may be found. But its diagnostic value is limited.

(6) *Hysterosalpingography:* It is of very limited value in old ectopic cases. It is dangerous and I am not in favour of it.

(7) *Culdoscopy and coelioscopy* are useful in some cases provided these instruments are available. I have no experience of these techniques.

(8) *Arteriography* of the pelvic vessels has been found helpful in some cases by some workers. I have no experience of this.

(9) *Posterior colpotomy* has been done by some in old ectopic cases with pelvic haematocele with a view to diagnose and treat the ectopic. I personally think that needling is a better method than posterior colpotomy.

(10) *Exploratory* laparotomy: Whenever in doubt about the diagnosis an exploratory laparotomy should always be undertaken even if the diagnosis proves to be otherwise.

Remarks and Conclusions

Findings regarding symptoms and signs of 310 cases of tubal preg-

nancy have been discussed with a view to diagnosis.

Diagnosis of tubal pregnancy is always difficult because of the fact that there are no typical symptoms and signs which are applicable to all cases. There are two distinct clinical types of tubal pregnancy which are quite different in symptoms and signs. To diagnose tubal pregnancy one has to be ectopic minded. Whenever in doubt laparotomy should be done. Needling of pouch of Douglas is a valuable aid in diagnosis. The diagnosis of tubal pregnancy is done clinically rather than by special investigations. Overall clinical picture helps in the diagnosis rather than a single clinical symptom or sign. There are many pitfalls in the diagnosis which have been discussed.

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