

## TRANSABDOMINAL HYSTEROGRAPHY IN THE DIAGNOSIS OF HYDATIDIFORM MOLE

by

S. DAS GUPTA,\* F.R.C.S., M.R.C.O.G.

It is quite easy to diagnose hydatidiform mole clinically in a patient who presents with intense toxæmic manifestations, vomiting, pallor, tense and disproportionately bigger uterus, compared to the period of amenorrhoea in the second trimester of pregnancy. Persistent vaginal bleeding associated with these features leaves very little doubt as to the diagnosis. In this category of cases any one of the accepted methods of diagnosis gives positive information, viz., high urinary gonadotrophin titre, high serum gonadotrophin titre (Teoh 1967) or the plain x-ray film negative for foetal skeleton.

On the other hand, patients in the first trimester with persistent vaginal bleeding offer a difficult diagnostic problem. Surprisingly the cases where clinical diagnosis is difficult, prove to be difficult diagnostic problems for conventional methods of investigations, also. It may be difficult to differentiate from multiple pregnancies by urinary gonadotrophin estimation. The difference in serum gonadotrophin levels between normal

pregnancies and molar pregnancies in first trimester is not significant (Teoh 1967). The question of plain film does not arise in view of early pregnancy. Tow (1964) missed 44% of moles in a series of 142 cases in the first trimester.

Acosta Sison's test (1958) of passing a sound through internal os in the hope of feeling the resistance of amniotic sac is undecisive. Kurtz's method of amniocentesis, quoted by Cheng (1967) may not yield liquor amnii even in normal pregnancy. Borell *et al* (1961) and Cockshot *et al* (1964) described pelvic angiographic techniques to diagnose mole, but the question of too much irradiation hazard and femoral arterial puncture limits the use of such techniques. Donald (1969) while advocating use of ultrasonics in diagnosis of mole admits that difficulties may arise in cases associated with co-existent foetus or myxomatous degeneration of fibroid. The cost of ultrasonic installation may also be prohibitive for an average hospital.

Recently, Cheng (1967) emphasised the value of amniography in early diagnosis of hydatidiform moles. By this method in 10 out of 11 cases the presence of moles was confirmed.

Wilson *et al* (1966) referring to the work of Hertig and Mansell regarding pathogenesis of hydatidiform

\*Obstetrician & Gynaecologist, Tata Main Hospital & Prof. of Obst. & Gynec., Mahatma Gandhi Memorial Medical College, Jamshedpur.

Paper read at the 15th All-India Obstetric and Gynaecological Congress held at Margao-Goa in December 1969.

moles admit that amnion may be very rudimentary as also the chorionic sac which may be very small or occupy significant portion of uterine cavity. As it is unlikely that this rudimentary amniotic sac will be punctured by the needle, the term amniography appears to be a misnomer. In spite of this fact, Wilson *et al* had no objection to the use of this term. However, we have, on a rational basis, chose to describe this method of investigation as trans abdominal hystero-graphy.

**Technique:** After adequate preliminary sedation and aseptic preparation of abdomen, a point in midline 4 c.m. below the umbilicus is locally anaesthetised. A 20 gauge lumbar puncture needle is inserted through the anaesthetised point on the abdominal skin transfixing the uterine muscle. Having confirmed the absence of liquor amnii by aspirating with a syringe, 25 c.c. of urograffin is injected into the uterine cavity in all directions. After the injection, the patient is rolled from side to side for proper diffusion of the dye in uterus. Within 2 to 3 minutes anteroposterior and anterior oblique films are taken. Another film taken after 25 minutes outlines the kidney pelves and the ureters. The technique described is similar to that employed by Cheng (1967). Preliminary test to detect sensitivity to iodine is of great importance.

Five patients between 12 and 16 weeks of pregnancy admitted in Tata Main Hospital, Jamshedpur, were subjected to this method of investigation. Of these, 3 turned out to be hydatidiform moles and two showed foetal shadows. In the fifth case a foetus and low lying placenta could also be demonstrated. No complications that could be attributed to hystero-

graphy were encountered in any of these 5 patients. One patient had abdominal pain requiring close watch for about 12 hours. Pregnancy in the two patients showing foetal shadows continued after hystero-graphy. They required interference much later because of abortion between 5th and 6th months. One of Cheng's cases showing foetal shadow went to term.

#### Discussion

Amniography was originally devised by Meness *et al* (1930) to locate the placenta in near term pregnancies. Even though these workers claimed effectiveness and safety of their techniques, Cornell and Case (1934) felt that the use of irritant sodium or strontium iodides was dangerous to the foetus. These authors also warned against the danger of piercing the placenta, vital organs or umbilical vessels of the foetus with needle. Onset of premature labour was also a frequent complication.

Bayen and Apelo (1957) reported on the value of amniography in diagnosis of hydatidiform moles and McLain in 1964 reported one case of mole in his series. Wilson *et al* 1966 combined angiography with amniography in 4 cases. These authors have described two types of amniograms. In the first type, there was a diffusion of dye throughout the uterus with the vesicles appearing as filling defects. In the second type, described also by McLain, there was a peripheral diffusion of dye with a central cavity, probably chorionic sac outlined. Absorption of the dye from this type takes a long time.

This method of transabdominal hystero-graphy in our small series of cases has shown both the types of

radiological appearances and we consider this technique a valuable aid in the diagnosis of early hydatidiform mole.

#### Acknowledgement

I am deeply indebted to Dr. K. D. Reddy, D.M.R.D., D.M.R.T. (R.C.P. & S. (Eng.)), Radiologist, Tata Main Hospital, for his valuable help and guidance.

#### References

1. Acosta Sison, H.: *Obst. & Gynec.* 12: 205, 1958.
2. Bayen, F. and Apelo, R.: *Philippine J. Surg.* 12: 1, 1957.
3. Borell, U. and Fernstron, I.: *Acta Radiol.* 56: 113, 1961.
4. Cheng, Wei-chen.: *J. Obst. Gynec. Brit. Comm.* 74: 753, 1967.
5. Cockshot, W. P., Evans, K. T. and Hendrickse, J. P.: *Dev. Clin. Radiol* 15: 1964.
6. Cornell, E. L. and Case, J. T.: *Am. J. Obst. & Gynec.* 27: 894, 1934.
7. Hertig, A. T. and Mansell, H. (1956): *Atlas of Tumour Pathology—Tumours of Female Sex Organs, Part I*, Washington, DGAFIP.
8. Donald, I.: *Practical Obstetric problems*, ed. 4, 1969. London, Lloyd Luke Ltd.
9. McLain, C. R. Jr.: *Obst. & Gynec.* 23: 45, 1964.
10. Menees, T. O., Miller, J. D. and Holly, L. E.: *Am. J. Roentgenol* 24: 363, 1930.
11. Teoh, E. S.: *J. Obst. & Gynec. Brit. Comm.* 74: 74, 1966.
12. Tow, W. S. H. (1964): *Doctoral Thesis, University of Singapore*, p. 41 (quoted by Cheng, Wei-chen: *J. Obst. & Gynec. Brit. Comm.*, 74: 753, 1967).
13. Wilson, G., Colondy, S. and Widner, W.: *Radiol.* 87: 1076, 1966.

---

*See Figs. on Art Paper III*