

## TRANSABDOMINAL HYSTEROGRAPHY IN DIAGNOSIS OF VESICULAR MOLE

by

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Vesicular mole is a well known abnormality of pregnancy posing a diagnostic problem. This dilemma results in unnecessarily prolonged hospitalization of patients and delay in treatment. Most commonly used diagnostic aids in our country at present lack 100% reliability. Pelvic angiography is technically difficult and ultrasonics have still to arrive. Diagnosis of early vesicular mole therefore remains a challenge. Recently transabdominal hystero-graphy in diagnosis of vesicular mole is suggested to solve this problem. Documented safety of amniocentesis in Rh-iso immunization has paved the path and observation that accidental introduction of the dye in the amniotic cavity does not damage the foetus together with the fact that the newer contrast media are non-irritant—all these make the procedure of hystero-graphy safe and practicable for performance where x-ray facilities are available.

### *Technique*

The procedure is very simple. The patient is prepared by giving a mild

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sedative and atropin 1/00 gr. half an hour before the procedure. Abdomen is prepared surgically, Previous lower abdominal surgery and/or sensitivity of the patient to the iodated radio opaque contrast medium to be injected constitute absolute contraindications for this procedure. Patient is preferably investigated on an empty stomach. Bladder is emptied. The procedure is done under most aseptic conditions in the x-ray room using screening control. Supine trendelenberg position is given. We use Con-ray-420 (May & Baker) for the transabdominal hystero-graphy. Intravenous test dose of the dye to be injected is carried out. If there is no sensitivity reaction, main procedure is started. Site of puncture usually selected is midway between symphysis pubis and umbilicus. The area selected is isolated by autoclaved towels. Use of local anaesthesia is preferred. Long spinal needle of 20 gauge is pushed through the anesthetized zone for about 5 cms. Now suction is attempted with a syringe, if no amniotic fluid or frank blood is aspirated through the needle, 5 to 10 c.c. of the dye is injected under screening control, after making the patient horizontal. Dye is injected in various directions to facilitate uniform diffusion. Moment the operator sees the dye entering the uterine cavity and dispersing around the intervillous spaces giving

a honeycomb appearance, x-ray in A.P. view is taken. No more dye is injected now. Needle is removed and patient is sent to the ward after seeing the wet-plate.

#### *Material and Results*

Seven cases were investigated by transabdominal hystero-graphy. All the cases suspected of vesicular mole were admitted in our unit at S.C.L. General Hospital, Ahmedabad. All the patients complained of bleeding per vaginam at the time of admission. None of them had any previous abdominal surgery. No case under investigation showed any sensitivity reaction to conray 420. The duration of amenorrhoea ranged between 16 to 28 weeks, in six patient, while one patient did not know the term of pregnancy as she had conceived during lactational amenorrhoea. The size of the uterus was between 20 to 28 weeks' of pregnancy.

The other diagnostic investigation for vesicular mole i.e. pregnancy test and x-ray of abdomen were carried out with the following results:—

Pregnancy test by immunological method showed diagnostic titre in 4 cases, while one case refused the test, and for two patients the test was not available. Plain x-ray of abdomen was taken in five cases. It was definitely diagnostic in only one case, where the uterine size was of 28 weeks. The x-rays could not give definite opinion in four cases, as the absence of foetal shadow could have been due to early pregnancy. In one case, due to acute shortage of x-ray films, it was decided to proceed straight for transabdominal intrauterine dye injection.

All the seven cases investigated by transabdominal hystero-graphy show-

ed characteristic honeycomb appearance diagnostic of vesicular mole. This shadow was uniformly distributed in three cases and was localized and patchy in distribution in four cases. The instantaneous diagnosis of vesicular mole could be done in all. Overall time taken from the moment of dye-injection in the uterus to obtaining the wet x-ray plate for confirming diagnosis hardly took more than ten minutes. No significant complication was observed in any of these cases. Examination of products of conception in all cases confirmed the diagnosis of vesicular mole.

#### *Discussion*

The small diagnostic study of 7 cases by transabdominal hystero-graphy in diagnosis of vesicular mole is presented. It is found to be very useful in early diagnosis of vesicular mole. It is rightly commented by Senties and his colleagues that the procedure should be called hystero-graphy in molar pregnancy and not amniography, as there is total absence of amniotic sac in hydatidiform mole. This is the only method that combines the virtues of safety, simplicity, speed and accuracy. It could be carried out in any hospital with x-ray facilities. Rochet and Garmier have suggested transcervical route for the same in molar pregnancy but it is thought to be associated with high incidence of sepsis. None of the cases showed any significant complication during or after the procedure. Large series reported by Senties *et al* confirm this point. No case with previous abdominal operation and/or dye sensitivity should be investigated by this method. Wilson *et al* report the observation, that exploration of abdo-

men after abdominal hystero-graphy did not show bleeding from the site of needling. Additional precaution of injecting the dye in trendelenberg position is suggested to avoid intestinal puncture. Cheng has reported a case with normal maternal and foetal out come, where the dye was injected in amniotic sac by mistake. Though the dye in the amniotic cavity does not cause any complication has been shown by many, precautions should be taken to avoid such accidents. All the cases showed typical honeycomb appearance due to dye diffusing along the intervillous spaces and around the cysts. This shadow was localized and patchy in the first four cases due to technical defects. On giving horizontal position and injecting the dye in various directions uniform patterns were obtained in the rest of the cases. The study shows the 100% diagnostic correctness by this method. The diagnosis is difficult in early stages and according to Tow 70% of cases of molar pregnancy came to hospital in the first two trimesters. Early diagnosis is, therefore, very essential. Kuratz and Siqueria advocated transabdominal amniocentesis to diagnose molar pregnancy, but failures in the first trimester of pregnancy are frequent because of the difficulty in tapping the liquor amnii. Estimation of chorionic gonadotropin is the most commonly used method of diagnosing molar pregnancy, but many a times lack of availability of animals and necessary sera for pregnancy test specially when most needed, put a serious practical limitation to its use. Abnormally high titres of chorionic gonadotropin in first 100 days of normal pregnancy is a textbook fact. Again

multiple pregnancy may cause rise in the level of serum chorionic gonadotropin and suggest molar pregnancy. In our series immunological test gave diagnosis in four cases, while in two cases it was not available and in one patient it was refused by the patient. Pregnancy test using animals are time consuming while in hystero-graphy result is available in ten minutes. The limitations of plain x-ray of abdomen in diagnosing early molar pregnancy are known and this method could help us in establishing diagnosis in one case only. Pelvic angiography is technically difficult though it competes with this procedure in its diagnostic value. Ultrasonics though very useful in early vesicular mole have still to arrive in our country. Additional advantage offered by the procedure is that it provides convincing diagnostic x-ray picture of molar pregnancy for teaching purposes.

No case in the present series or in any reported literature has given false positive results. The products of conception in all the cases confirmed the diagnosis of vesicular mole.

#### *Summary*

The study of seven cases of vesicular mole diagnosed by transabdominal hystero-graphy is presented. The technique is safe and simple and gives 100% diagnosis. No significant complication was noted during or after transabdominal intrauterine dye injection.

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Hyderabad. The higher incidence in extreme South India as compared to other centres is known and is in accord with the higher geographical distribution of trophoblastic tumours as one goes further towards South-East Asia.

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#### EDITOR'S COMMENTS

The high incidence of trophoblastic tumours in South West Asia, Far Eastern and Latin American countries is an established fact. High fertility, malnutrition, folic acid deficiency and chronic infections are considered to be contributory factors for this high incidence.

At the 15th Obstetric and Gynaecological Congress a total of 1,094 trophoblastic tumours, were reported in the 12 papers, from 8 centres in India. The incidence of hydatidiform mole varied from about 1 in 200 from the centres in the South (Madurai and Visakhapatnam) to 1 to 654 in Hyderabad. The incidence of chorio-carcinoma was 1 in 500 in South India (Trivendrum) to 1 to 10,000 in

#### *Hydatidiform mole*

Consecutive 2 or 3 molar pregnancies are now and again reported but 5 consecutive molar pregnancies as reported in one case by Kanaka Durgamba and Rajaram is quite exceptional. In as many as 9 cases a foetus was associated with a mole which can only happen when there is hydatidiform degeneration of one of the two plancetae of a binovular twin pregnancy. Clinically molar pregnancy was suggested in 60 to 74 per cent by the disproportionately enlarged uterus as compared to the term of amenorrhoea. In 11 to 30 per cent the size of the uterus corresponded to the term of amenorrhoea and in 12 to 24 per cent the uterus was smaller in size than the term of amenorrhoea. When the uterus is of the size of term of amenorrhoea or smaller the diagnosis is necessarily delayed. The diagnosis in these cases is made on spontaneous expulsion of the mole, passage of vesicles in the blood-stained vaginal discharge or during curettage. Repeated positive biological or immunological tests in greater dilutions may, in some cases, be helpful. Radiological diagnosis, either for detection of foetus or a hystero-graph is not likely to be undertaken when the size of the uterus is the same or smaller than the term of amenorrhoea.

Vaginal evacuation of the mole is done in 90-95 per cent of cases in India. High doses of pitocin has been

a useful adjunct and affords greater safety from bleeding during vaginal evacuation. Vaginal delivery is possible in the hospital class of patients because most of them come under observation after bleeding starts, that is when the mole has already commenced to separate.

It is noteworthy that hysterotomy was performed in only 2.5 to 10 per cent of cases as an emergency operation when the uterus was tense and rapidly increasing in size due to internal haemorrhage.

Unlike in Singapore and other Far South-Eastern countries, hysterectomy was performed only in patients of high parity over 35 years of age. In the Far South-Eastern countries the incidence of choriocarcinoma is so high that age is not taken into consideration and in grand multiparae of even 25-30 years hysterectomy is performed.

Prophylactic chemotherapy after a molar pregnancy has a definite place. Rao and Ammini prefer a single course of methotrexate, 15 mg daily for 5 days. In most of their patients severe anaemia had to be corrected before giving chemotherapy.

#### *Chorioadenoma Destruens*

It almost always follows a molar pregnancy. Histologically, the diagnosis may be arrived by finding active or degenerating villi but when the tumour is within the myometrium curettage does not show any chorionic tissue. Biological or immunological tests may or may not be positive depending on whether the villi are active or degenerated.

Diagnosis is not readily arrived at except in those cases where perfora-

tion with severe intraperitoneal haemorrhage demands an immediate laparotomy. In most of the cases it is suspected after repeated curettage performed to arrest the bleeding episodes after a molar pregnancy have failed. Histological diagnosis depends on whether the tumour is in the uterine cavity or has buried into the myometrium. In the former, well formed or degenerated villi are seen and in the latter no chorionic tissue is seen.

Secondaries in the lung and vagina are not uncommon and were present in 10 out of 42 cases.

Chorioadenoma destruens is not likely to lead to choriocarcinoma and, therefore, a conservative approach in therapy is to be preferred. In the parous women, hysterectomy is advisable to avoid the risk of intraperitoneal perforation and consequent severe intraperitoneal haemorrhage. In a multipara, chemotherapy and if that fails, surgery by resection of the tumour bearing area and conserving the uterus has been done by Rao and Ammini.

#### *Choriocarcinoma*

Rao and Reddy had a case of choriocarcinoma in a girl of 15 and they state that in the literature the youngest patient who developed choriocarcinoma was 14 and the oldest 79 years of age. One case was observed with intrauterine pregnancy of 32 weeks.

It is noteworthy that in a few histologically confirmed cases biological tests were repeatedly negative (Chatterjee; Rao Ammini). In some cases, currettings also fail to show typical histological pattern of choriocarcinoma. The diagnoses then becomes

difficult unless pulmonary, vulval and or vaginal metastases are detected. As the course of choriocarcinoma is rapid due to early blood borne local and general metastases delay in early diagnosis is responsible for the high mortality in this disease. Therefore, prophylactic chemotherapy after every molar pregnancy is a justifiable prophylactic therapy.

Chemotherapy has considerably improved the pregnancies of choriocarcinoma. As most of those patients are severely anaemic when first seen, the general condition needs to be improved before surgery or chemothe-

rapy is given. Hysterectomy with bilateral salpingo-oophorectomy is the treatment of choice followed by at least two courses of chemotherapy. Besides hysterectomy vulval and or vaginal metastases should also be resected. In a young patient desiring further childbearing and in when there are no metastases conservative therapy by several courses of chemotherapy is justifiable. Cases have been reported in whom successful pregnancy has been achieved. Mukherjee reported two cases of pregnancy following treatment of choriocarcinoma with methotrexate.