

HYDATIDIFORM MOLE—A REVIEW OF 232 CASES

by

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Hydatidiform mole is an important pathologic condition seen in early pregnancy leading to haemorrhage during this period and, occasionally, to malignancy later. Essentially, it results from cystic degeneration of the mesothelial core of the chorionic villi (with death and resorption of the embryo) and increased activity of their trophoblastic lining. It appears to be 8 to 10 times more common in Asia than in Western countries. Its incidence is reported to be 1 in 2500 in the United States (Novak, 1958), 1 in 2000 in the United Kingdom (Ian Donald, 1959), 1 in 200 in the Philippines (Acosta Sison, 1959), 1 in 232 in Japan (Hasegawa, 1959), 1 in 530 in Hongkong (King, 1956), 1 in 447 in Bengal, India (Das, 1956). In the Hospital for Women and Children, Madras, during six years (1955-

1960), 232 cases of hydatidiform mole were seen with an incidence of 1 in 361 pregnancies.

The exact cause of this condition and the reasons for its increased prevalence in the East are not fully known. Protein malnutrition and high parity have been considered as predisposing factors (A. Sison, 1960). It has been suggested that it is 2 to 4 times more common in the higher age groups, especially after 35 or 40 years (Essen Moller, 1925; Erland, 1926) as, with increased age and parity, degenerative changes are more frequent in the endometrium. Twenty-five per cent of 74 cases of mole reported by Smalbraak (1957) were between 40 and 50 years. The distribution of our material according to parity and age is shown in Table I. Twenty-five per cent of

TABLE I
Distribution of Cases of Hydatidiform Mole according to Age and Parity

Age groups	Parity									
	I	II	III & IV	V	VI	VII	VIII	IX	X	
15 to 20 years	49	19	8	—	—	—	—	—	—	
21 - 25 years	8	8	43	5	4	4	—	—	—	
26 - 30 years	2	1	11	9	12	4	1	1	4	
31 - 35 years	1	—	3	1	2	4	4	1	4	
36 - 40 years	1	—	—	2	4	—	5	—	2	
Over 40 years	—	—	—	—	—	1	—	1	3	
Total ..	61	28	65	17	22	13	10	3	13	

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them were primiparae and 33 per cent were in parity Group V and over. As almost similar ratio (33 per cent and 30 per cent respectively) is seen amongst the total number of

deliveries in our hospital, it may be stated that there is no relationship between parity and mole in our material. The ages of these patients ranged from 14 to 51 years. Fifteen per cent of them were beyond 35 years whereas only 7 per cent of total deliveries in this hospital belonged to that age group, suggesting that the chances of molar pregnancies are greater in women over 35 years. One case of recurrent mole was noted in this series.

Pathology

Most commonly the molar degenerative change sets in about the third to sixth week of pregnancy and is complete. No evidence of embryo, liquor amnii or placenta is made out separately. Occasionally, when the degenerative change commences after the 12th week it is incomplete or partial, the foetus may survive and deliver near term and the placenta may show a patchy cystic change. We had 2 such cases. Sometimes, in cases of twins, one may undergo a complete molar change and the other may be well formed, as its placenta remains normal. There was only one example of this in our series. The vesicles may vary in size from a few mms. to 2 cms. in diameter. Their contents resemble oedema fluid and contain some amino-acids also in addition to proteins (Mackay et al, 1955). Microscopically, the chorionic villus shows hydropic degeneration of the stroma surrounded by varying degrees of trophoblastic hyperplasia. Lutein cysts are formed in the ovaries in about 50 per cent of moles in response to large amounts of chorionic gonadotrophins. The fluid in these cystic ovaries contains this

hormone and may be responsible for a positive biological test for at least a month or more when the ovaries involute slowly.

Signs and Symptoms

Except for a few (3 per cent), all patients complained of vaginal bleeding following a period of amenorrhoea. Sometimes, the bleeding was profuse or persistent till the uterus was emptied. On examination, there was varying degree of anaemia depending on the amount of blood loss. Pre-eclamptic toxæmia was seen in 38 (16 per cent) cases. In some (8), it was of severe type with generalised oedema, massive albuminuria or blood pressure of 160 mm. Hg. systolic. The highest recorded pressure was 190/140 mm. Toxaemia may be due to ischaemia caused by rapid distension of the uterus or due to high concentration of chorionic gonadotrophins in the blood with a fall in the level of oestrogens and progesterone. In 38 cases, where toxæmia was present, the height of the uterus was at or above the level of the umbilicus in 23 (60 per cent) and in 2 of them it was 32 weeks in size. Toxaemia was noticed in one-third of cases of hydatidiform mole by Page (1939) and Smalbraak (1957) and in about 15 per cent by Brews (1939) and Chesley et al (1956). Eclampsia in association with hydatidiform mole is known and 35 such cases have been reported in the literature (Mueller and Lapp, 1949).

In a typical case, uterus is enlarged out of proportion to the period of amenorrhoea and no foetal parts are made out clinically or radiographically. This disproportionate uterine enlargement was seen in 52

per cent, and in 25 per cent of our cases size of the uterus corresponded to the period of amenorrhoea (Table II). When concealed haemorrhage

negative in 15 per cent. Sequeira (1960) advocates abdominal paracentesis in cases of doubt. If clear fluid be aspirated it is diagnosed as

TABLE II
Size of Uterus relative to the Period of Amenorrhoea in Hydatidiform Mole

Size of the uterus	Brews	Hasegawa	Das	Ours
Bigger than period of amenorrhoea	72.0%	46.9%	62.9%	52%
Corresponding to period of amenorrhoea	12.0%	38.1%	31.8%	25%
Smaller	16.0%	15.0%	5.0%	20%
Not recorded	—	—	—	3%

occurs, the enlarged uterus is tense and tender and the patient will be in a state of shock.

Diagnosis

Though a mole can be suspected on obstetric examination, we depend on biological tests with pregnancy urine to support our clinical findings. If the test be positive in dilutions of 1 in 200 or more, one can be certain of the diagnosis. But a positive test in lower dilutions only or a negative one does not rule out a vesicular mole completely, as the hormonal production may be low in some or nil if it is a blighted mole. In a series of 91 of our cases, the male frog test was

normal pregnancy and if small amount of blood is drawn it is considered in favour of a mole. This method was found absolutely reliable in his series of 20 cases.

Treatment

Once a diagnosis of hydatidiform mole is made, uterus should be emptied even in the absence of any bleeding. Anaemia, if any, should be corrected at first. The treatment given in our series of 232 cases is shown in Table III. In 12 per cent, the abortion was spontaneous. Evacuation of the uterus for hydatidiform mole was performed in 82.3 per cent of cases. In such of those cases,

TABLE III
Different Methods of Treatment in Hydatidiform Mole

Method of treatment	No. of cases	Per cent
Spontaneous abortion	28	12
Digital evacuation	166	82.3
Laminaria tents and evacuation	25	
Vaginal hysterotomy	6	3.5
Abdominal hysterotomy	2	
Abdominal hysterectomy	4	
Admitted moribund, died soon after (Perforating mole) ..	1	—
TOTAL	232	

where the cervix was closed and the bleeding was slight or absent, abortion was induced by pitocin drip (starting with 10 units in 500 ml. of 5 per cent dextrose and increasing the concentration to 25 units, if needed) or with laminaria tents. Rarely, the cervix was dilated with Mathews Duncan's dilators. Once the cervix is open, the uterine contents are evacuated digitally aided by fundal pressure with the external hand. Whenever necessary, ovum forceps are used initially to empty the uterine contents before completing the evacuation digitally. Methergin, 0.2 mg., is administered intravenously to prevent atonic haemorrhage. Once the uterus is completely emptied and is contracted it is curetted immediately (or, at times, 4 to 5 days later) by means of a blunt curette and the scrapings sent for pathological examination along with few vesicles removed during the evacuation. Curettage after emptying the uterus was first advocated by Ewing (1910), so that a possibility of residual mole may not vitiate the follow-up later, if there is any vaginal bleeding or a positive biological test. Besides, the microscopic appearance of curettings may help in assessing the prognosis and may be useful for comparison with the material obtained at a subsequent curettage, should one be necessary. In our institution, since 1958, routine curettage is done in all cases of mole and we have not had any perforation of the uterus; nor do we believe that it gives rise to any increased dissemination of the tumour.

Hysterotomy was done in 8 cases (3.5 per cent). In parous women, vaginal route is preferred. Should an abdominal route be chosen, it

should always be a lower segment hysterotomy. It is indicated when general condition of the patient requires immediate emptying of the uterus and the cervix is tightly closed as in some cases of mole with concealed haemorrhage. In 2 of our cases, vaginal hysterotomy was done, as pitocin induction, even with large doses, failed. In 4 cases, all multiparae (one 36 years and others over 40 years old), abdominal hysterectomy was done with the mole in situ. In this age group, conservation has no place, as the chances of choriocarcinoma developing are high.

Once the uterus is emptied or removed, every case of hydatidiform mole requires a very careful follow-up at least for a period of 2 years, first six months of which she should be examined every month and biological tests performed at each visit. In almost all cases, the test becomes negative after a month. If on follow-up, she complains of vaginal bleeding and the male frog test be positive, a curettage and histologic examination of the scrapings is indicated. In such cases, mostly it may show bits of mole (often a residual mole and rarely chorioadenoma destruens) and occasionally a chorion-epithelioma.

Incidence of malignancy may vary from 15 per cent (Chesley et al, 1946) to 1 per cent (Novak). In this series, there were 3 cases of chorion-epithelioma and 4 of chorio-adenoma destruens or malignant mole an incidence of about 3 per cent. There were 4 deaths (1.7 per cent): (i) one due to haemorrhage and shock following evacuation; (ii) one perforating mole admitted moribund and died soon after; (iii) and two deaths due to metastatic chorion-

epithelioma. But here, I must confess, that our follow-up has not been perfect. It is likely that some of our cases might have developed complications and were not traced by us. During this period, 9 more patients of chorioadenoma destruens and 7 of choriocarcinoma were admitted in this institution for treatment following molar abortion elsewhere. If these cases are also considered, our incidence of malignancy would be 23 out of 248 cases of hydatidiform mole or 9.3 per cent. Amongst these, there were 10 deaths (8 due to choriocarcinoma), a mortality of 4.1 per cent. Acosta Sison (1960) reports a death rate of 5.1 per cent (3 due to haemorrhage and 5 to metastatic choriocarcinoma) in her series of 141 cases.

Summary

1. Hydatidiform mole appears to be about 10 times more common in Asia than in Western countries.

During 6 years (1955-1960), 232 cases of hydatidiform mole were treated in the Women and Children Hospital, Madras. Its incidence was 1 in 361 pregnancies.

2. In this series no relationship between parity and mole was obvious though the chances of molar pregnancy were found to be slightly higher in women over 35 years of age.

3. The uterine enlargement was out of proportion to the period of amenorrhoea only in 52 per cent of cases. Pre-eclamptic toxæmia was noted in 16 per cent and in most of them rapid distension of the uterus to 24 weeks size or over was found.

4. The diagnosis and treatment of hydatidiform mole is briefly discussed.

5. Spontaneous molar abortion occurred in 12 per cent and 82 per cent were digitally evacuated. Hysterotomy was performed in 3.4 per cent. In all these cases, uterus was curetted after it was emptied. Hysterectomy was done with the mole in situ in 4 cases (1.7 per cent).

6. There were 4 deaths (1.7 per cent) in this series. The incidence of malignancy was 3 per cent.

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