
INCIDENCE OF GESTATIONAL TROPHOBLASTIC DISEASE IN RANGPUR, BANGLADESH

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ABSTRACT

OBJECTIVE : To find out the incidence of hydatidiform mole in Rangpur, Northwest region of Bangladesh.

METHODS : We performed obstetric ultrasonography amongst 519 pregnant women in Rangpur during July 2001 to April 2002. We used 3.5 Mega-Hertz frequency linear/curvilinear transducers of: Siemens sonoline SL 2, Fukuda 3500, Pie Medical 480/485 Scanners. Histopathology and hormone assays were done in selected cases.

RESULTS : We found 11 cases of vesicular mole among this series which is quite high (1 in 47 pregnancies), as in Caucasians it is very low e. g. 1 in 3000, in U.S.A. it is 1 in 1200 to 2000, in France 1 in 500, in some Indonesian hospital more than 1 in 100 pregnancies.

CONCLUSIONS : Sonography is a cheap and safe initial screening test for gestational trophoblastic diseases.

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Key words : Gestational trophoblastic disease (GTD), Hydatidiform mole, choriocarcinoma.

INTRODUCTION

The present study attempts to determine the incidence of gestational trophoblastic disease in our region, using all available techniques and compared with other regions.

METHODS

We performed obstetric ultrasonography amongst 519 pregnant women in Rangpur during July 2001 to April 2002. We used 3.5 Mega-Hertz frequency linear/curvilinear transducers of Siemens sonoline SL 2, Fukuda 3500, Pie

Medical 480/485 Scanners. Histopathology, radionuclide brain scans and hormone assays were done in selected cases. Diagnosis was made by typical echoes of vesicles, - snowstorm or honeycomb appearance (Fig 1).

RESULTS

Total 519 subjects were studied of which 11 (n=11, 2.1%) were found to be hydatidiform mole (Table-1). All these cases were correlated with beta HCG evaluations and histopathology

confirmed hydatidiform mole. Typical ultrasound features of hydatidiform mole were seen in 9 (n=9, 81.9%) cases. One case had sonographic

appearance of incomplete abortion (n=1, 9.1%). Another case had invasion in myometrium (n=1, 9.1%).

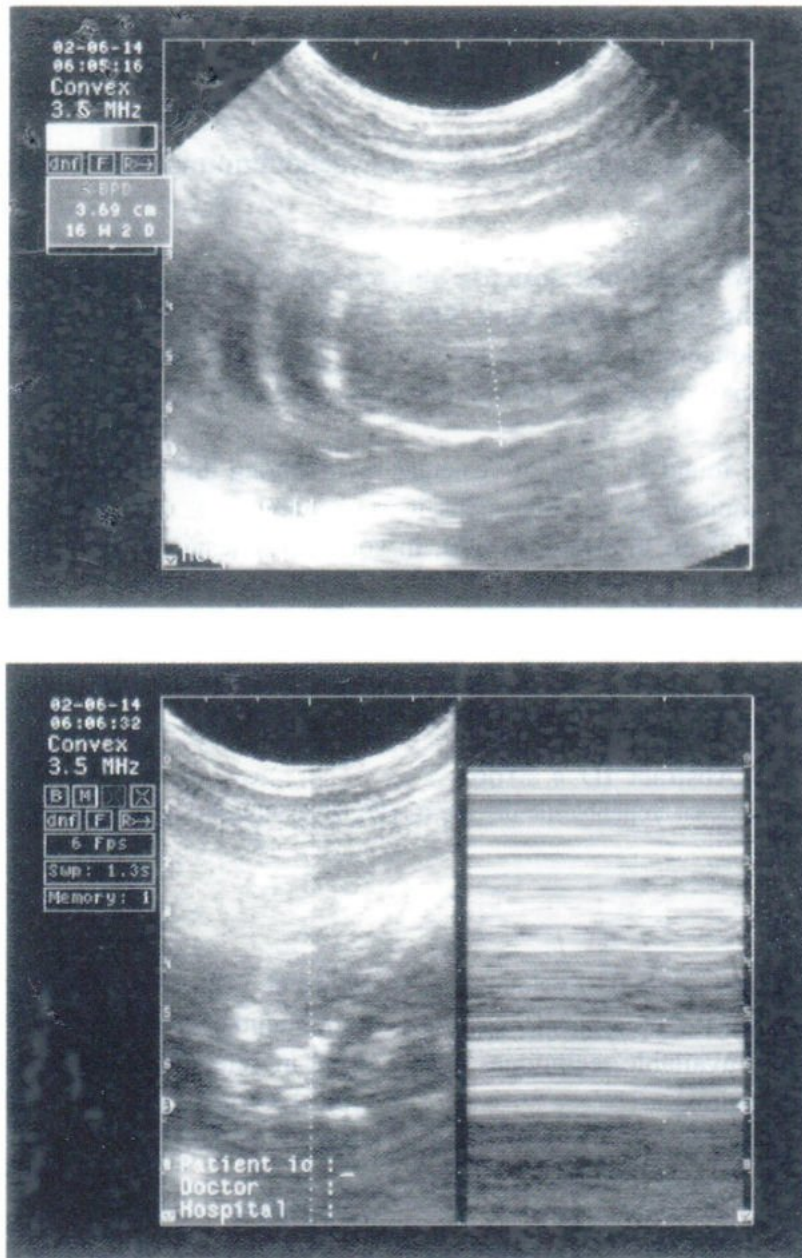


Fig. 1 Partial mole, 16 weeks.

DISCUSSION

Gestational trophoblastic disease comprises of a spectrum of disorders from the benign hydatidiform mole (complete and partial) through the malignant invasive mole, choriocarcinoma, and the rare placental site/epithelioid trophoblastic tumour.¹ Characteristically, a hydatidiform mole appears as a large, moderately echogenic, soft tissue mass filling the uterine cavity. Numerous small cystic fluid-containing spaces are scattered throughout. When the tumour volume is small, the myometrium may be perceived as less echogenic soft tissue surrounding the more echogenic mass filling the uterine cavity. Although these features have come to be recognized as typical of a hydatidiform mole, this appearance is only specific for a second trimester mole. First trimester moles, in some cases, may have an appearance simulating a blighted ovum or a threatened abortion; others may show a small echogenic mass filling the uterine cavity without the characteristic vesicular appearance. In these cases, only a high index of suspicion to correlation with the level of HCG will allow the sonographer to suggest the correct diagnosis. Incidence of hydatidiform mole varies geographically (Table-2), but those women who are at the end of their reproductive years have an increased incidence of trophoblastic disease despite of race or geography.² Bracken states that, reports of a very high incidence of GTD in Asia, Africa & South Central America may have been exaggerated due primarily to selection bias in the patients studied at University Hospitals.³ In Hawaii, complete hydatidiform moles (CM) occur in about 1/100 pregnancies and partial hydatidiform moles (PM) in 3/1000 pregnancies.⁴ They can be distinguished histologically and genetically; CMs are diploid and nearly always androgenetic in origin, whereas partial hydatidiform moles (PM) are triploid consisting of one maternal and two paternal sets of chromosomes.⁵ Tumours of trophoblastic origin (choriocarcinoma or hydati-

form mole or testicular embryonal carcinoma) may secrete huge quantities of HCG which has mild TSH-like activity.⁶ The associated hyperthyroidism is usually mild (2%), with small goitres. Treatment consists of betablocker and removal of choriocarcinoma or mole (6%). The response of choriocarcinoma to methotrexate or actinomycin therapy may be dramatic. Complete remission for over 10 years have been observed.⁷ Partial hydatidiform moles (PM) can transform into choriocarcinoma. Seckl and colleagues reported 3000 patients with PM, 15 of which required chemotherapy (including prophylactic intrathecal methotrexate).⁸⁻⁹ In Mymensingh (Bangladesh), most of the molar pregnancies (60%) presented with 15-20 weeks of amenorrhea,¹² but in our series 7/11 or 63% patients presented in 1st trimester. (Table-1) Sonography is a cheap and safe initial screening test for gestational trophoblastic diseases.^{13,14} The majority of first trimester complete moles demonstrate a typical ultrasound appearance such that the diagnosis can be made with sonography in most cases.¹⁵ In Japan, the incidence of hydatidiform mole (HM) has been gradually decreasing, in 1974 it was 4.9 per one million population, and that of choriocarcinoma per ten millions of population was 1.6, but in 1993, the incidence of HM was 1.9 and that of choriocarcinoma was 0.3.¹⁶ In Korea, the hospital-based incidence of HM per 1000 deliveries from 40.2 during 1971-75 to 2.3 during 1991-95.¹⁷ But it has increased in Vietnam in the past decade.¹⁸ Paradinas states that the introduction and widespread acceptance of the term partial mole (PM) in 1977, coincided with improvements in ultrasound which brought forward 6 weeks the average time of evacuation of complete moles (CM), when hydrops is not yet complete but partial and when vessels are present in most CMs, leading to erroneous diagnosis of PM.¹⁹ The risk of post-molar gestational trophoblastic tumor (GTT) is approxi-

mately 20% in young women,²⁰ the risk is increased in women over 35 years^{21,22} and is reported as high as 56% in women over 50 years.²³ Early ultrasound diagnosis of a non-embryonic or a blighted ovum may not rule out the presence of abnormal trophoblast associated with hydatidiform mole.²⁴ Most of the inhabitants of Rangpur are iodine-deficient and chew tobacco as it is grown here abundantly and it is grown here abundantly and it may play a role in high incidence of molar pregnancy, as a study in Denmark showed that smoking tobacco promotes thyroid enlargement and this is exacerbated by iodine deficiency.²⁵

CONCLUSIONS

Sonography is a cheap and safe initial screening test for gestational trophoblastic disease. The high incidence of molar pregnancy in Rangpur may be related to environmental iodine deficiency, tobacco production and due to the fact that many pregnant women do not get ultrasound facility in the right time.*

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TABLE 1 Cases of hydatidiform mole.

SL NO.	Age (Years)	Amenorrhea (weeks)	Gravida	Major complaint	Uterus in mm
1	28	9	Primi	Vaginal bleeding	76x86x55
2	18	8	Primi	Severe vomiting	69x84x49
3	44	14	3rd	Weakness	103x61x53
4	45	11	3rd	Palpitations	92x66x51
5	42	10	4th	Vaginal bleeding	85x108x62
6	27	15	Primi	Anorexia	118x77x49
7	25	5	Primi	Severe vomiting	103x55x46
8	27	15	2nd	Vaginal bleeding	116x74x61
9	29	6	3rd	Vaginal bleeding	74x84x49
10	35	6	4th	Vaginal bleeding	113x58x71
11	22	14	2nd	Vaginal bleeding	85x107x59

TABLE 2 Geographic distribution of Hydatidiform mole.^{8,9}

Country.	Incidence of H. mole.
U.S.A.	1 in 1200 to 2000 pregnancies.
France	1 in 500 "
Far East (Indonesia) (10)	>1 in 100 "
Sao Paulo (Brazil) (11)	1 in 215 "
Mymensingh (12)	1 in 270 "
Rangpur (This series)	1 in 47 "

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