



Obstetric Outcome Following Vesicular Mole Evacuation in a Tertiary Care Centre

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Abstract

Background: *Gestational Trophoblastic Diseases (GTD) are a group of diseases in which the basic disorder lies in the abnormal development and growth of trophoblast. The success story of the GTD is the curability by chemotherapy, mainly of tumours arising in the trophoblast, the outlook of which used to be grave previously. The invasive nature of the trophoblast is self limited in normal gestation, thus differing in its essential nature from carcinoma. The mechanism of the aggressive growth pattern of the trophoblast and its self limitation is as poorly understood as is that of its malignant transformation.*

Objectives of the study

1. To study the incidence of abortion and repeat vesicular mole following vesicular mole evacuation.
2. To study the fertility rate after vesicular mole evacuation and also following abortions after a vesicular mole.
3. To study whether increased incidence of abortion and repeat vesicular mole after chemotherapy.
4. To study whether increased incidence of congenital anomalies following vesicular mole evacuation.
5. To study whether there is any decrease in term deliveries in women who were given chemotherapy.

Study Setting and Design: *The design adopted is descriptive research design. 118 pregnant women with history of previous vesicular mole, who attended the Trophoblastic clinic of Sree Avittam Thirunal Hospital, Thiruvananthapuram are allocated. Medical records were kept for each patients. These 118 patients had 146 pregnancies during the period of study and 18 patients are still continuing with pregnancy and all of them have completed their fifth month of pregnancy.*

Results: *Data collected was analysed with descriptive statistics in percentage.*

Conclusion: *The present study shows that the proportion of abortion in patients who conceived following previous history of vesicular mole is 10.3% which comes in the usual normal range for normal population. Only 2.7% of patients with abortion after vesicular mole had subsequent normal pregnancy. Proportion of abortions (18.2%) and repeat vesicular mole (13.6%) is increased in patients who were not allowed pregnancy following a vesicular mole. Proportion of abortion (20%) and repeat vesicular mole (20%) is more after chemotherapy. Proportion of term pregnancy is slightly less (60%) in patients who were given chemotherapy than in patients who were not given chemotherapy. No congenital anomalies and still births were reported in this study.*

Keywords: *Vesicular mole, Gestational Trophoblastic, Diseases, Obstetric outcome.*

Introduction

Vesicular mole or hydatidiform mole are categorised as complete or partial mole on the basis of gross morphology, histology and karyotypes. Trophoblastic diseases encompasses complete and partial vesicular moles, invasive mole, choriocarcinoma and placental site trophoblastic tumour. The vast proportion of residual trophoblastic disease is thought to represent the invasive mole and choriocarcinoma as determined by a plateauing or delayed regression of human chorionic gonadotropin (hCG) levels which is produced by the syncytiotrophoblast. This has two subunits, alpha and beta of which the beta subunit is biologically and immunologically specific^{1,2}. Among all the biochemical markers for tumour diagnosis, the beta subunit of hCG in the management of gestational trophoblastic disease is the best example³.

Materials and Methods

This is a descriptive study. 118 patients who had undergone vesicular mole evacuation and who attended the Trophoblastic Clinic of Sree Avittam Thirunal Hospital, Thiruvananthapuram, and had follow up with beta hCG, who became pregnant during the study period were included in the study. There were 146 pregnancies in these patients. During this period there were 14265 deliveries at SAT hospital, Thiruvananthapuram. Total number of abortions were 533.

Results

Proportion of vesicular mole cases is increased (1:50) and percentage of abortion is 10.3% ,2.7% of patients with abortion after vesicular mole evacuation had subsequent normal pregnancy, which shows a reduction in fertility following abortion after molar pregnancy. Incidence of repeat vesicular mole increases after each molar pregnancy. There is no delay in conception following a vesicular mole. Percentage of abortion (20%) and repeat vesicular mole (20%) is more after chemotherapy. The percentage of term

babies (69.5%) after vesicular mole is not decreased compared to other studies. No congenital anomalies were reported. Percentage of term pregnancy is slightly less (60%) in patients who were given chemotherapy than in patients who were not given chemotherapy.

Table 1 Distribution showing the obstetric outcome in 146 pregnancies

| Pregnancies | Number | Parentage |
|----------------------|--------|-----------|
| Term Babies | 101 | 69.2 |
| Abortions | 15 | 10.3 |
| Vesicular Mole | 6 | 4.1 |
| MTP | 1 | 0.7 |
| Preterm Deliveries | 5 | 3.4 |
| Continuing pregnancy | 18 | 12.3 |

Table 1 shows that

In about 69% pregnancies, term babies were delivered and 4% had recurrent molar pregnancy.

Table 2 Distribution based on the outcome in 22 patients

| Pregnancies | Number | Percentage |
|-----------------------|--------|------------|
| LSCS | 3 | 13.6 |
| FTND | 10 | 45.4 |
| Abortions | 4 | 18.2 |
| Repeat Vesicular mole | 3 | 13.6 |
| Pre term deliveries | 1 | 4.6 |
| Continuing Pregnancy | 1 | 4.6 |

Table 2 shows the outcome of 22 patients who became pregnant before their termination of follow up, out of the 118 patients. This table also shows that, the proportion of abortion is more in patients who were not allowed pregnancy compared to those who were allowed pregnancy.

Table 3 Distribution based on the time taken to become pregnant by the 96 patients who were allowed pregnancy

| Time Taken to become pregnant | Number | Percentage |
|-------------------------------|--------|------------|
| <3 months | 55 | 57.3 |
| 3 – 6 months | 30 | 31.3 |
| 6 months to 1 year | 8 | 8.3 |
| 1 year | 3 | 3.1 |

This shows that there is not much delay in conception after a molar pregnancy.

Table 4 Distribution based on reproductive performance following chemotherapy for vesicular mole

| Pregnancies | Number | Percentage |
|-----------------------|--------|------------|
| FTND | 1 | 20 |
| LSCS | 2 | 40 |
| Abortion | 1 | 20 |
| Repeat Vesicular mole | 1 | 20 |

In this series of 118, we have got only 5 patients who were given chemotherapy .Out of these 5,3 patients had normal pregnancy outcome.

Table 5 Distribution showing the obstetric outcome in cases (146) who were not given chemotherapy

| Pregnancies | Number | Percentage |
|-------------------------|--------|------------|
| Abortions | 14 | 9.9 |
| Vesicular mole | 5 | 3.5 |
| MTP | 1 | 0.7 |
| Preterm | 5 | 3.5 |
| Continuing Pregnancy | 18 | 12.8 |
| Normal full term babies | 98 | 69.5 |

Of the total 141 pregnancies who were not given chemotherapy, about 69.5% had normal full term babies.5 cases were given chemotherapy who r not included here.

Table 6 Distribution of pregnancy outcome in 18 patients who were not allowed pregnancy and not given chemotherapy

| Pregnancies | Number | Percentage |
|----------------------|--------|------------|
| FTND | 8 | 44.4 |
| LSCS | 3 | 16.7 |
| Abortions | 2 | 11.1 |
| MTP | 1 | 5.6 |
| Vesicular mole | 3 | 16.7 |
| Continuing pregnancy | 1 | 5.6 |

This table shows that incidence of abortion and repeat vesicular mole is slightly more in patients who were not allowed pregnancy after a vesicular mole.

Discussion

Incidence of Gestational Trophoblastic disease is much higher in Asian countries than in western world^{4,5}. The higher prevalence may be due to the higher fertility, poor socioeconomic status, malnutrition or some other environmental factors. The decreasing incidence of choriocarcinoma may

be due to the beta hCG follow up and the timely intervention.

There were 118 pregnant patients with history of previous vesicular mole during the period of study. Total number of Trophoblastic disease in relation to deliveries during this period is 1:80.During this period only one patient was diagnosed to have choriocarcinoma. Incidence of abortion following a previous vesicular mole is 10.3% in this series. This comes in the normal range of 10-15% in overall population. This is in accordance with the study by various authors^(6,7).

Basic defect in ovum is one of the cause for vesicular mole⁸.The basic defect in the ovum may be the cause for abortion .But in this series of 118 patients, only 2 patients had 2 consecutive abortions. Also 2 patients had 4 subsequent pregnancies all of which ended in normal full term pregnancies. This again shows that fertility is not affected in patients with history of vesicular mole⁹.

Incidence of repeated vesicular mole in this series is 4.1%. Most of the authors are of the opinion that when a patient had a molar pregnancy, she is at increased risk for the development of Gestational Trophoblastic Neoplasia in later conceptions¹⁰.

In this study, the proportion of repeat vesicular mole following chemotherapy is about 20%.This patient was also not allowed pregnancy. This increase may be due to the defective ovum produced by chemotherapy.

Patients with history of previous vesicular mole do not show any increase in time interval for next conception. Most of the patients conceived (57.3%) within 3 months after the termination of follow up. Only 3.2% patients took more than one year. This study also shows that there is no problem with ovulation and conception in these patients¹¹.

In the present study, of the 98 term deliveries, 20 were Caesarean sections (13.6%). Primary Caesarean section in our hospital is about 25%. This means that there is not much increase in

Caesarean sections due to previous history of vesicular mole.¹²

All the patients who delivered were followed up with beta HCG and clinical examination. None of them showed elevated beta HCG or any abnormal clinical signs or symptoms.

In our series, only 5 patients had chemotherapy with methotrexate. Out of that, 3 had normal full term babies (60%) and the babies did not have any major or minor congenital anomalies. Studies show that fertility rates and congenital anomalies were not increased after chemotherapy.¹³

Although there were 5 preterm babies, all of them survived without any problems. History of vesicular mole did not show any correlation with preterm births.

Conclusion

The present study shows that the proportion of abortion in patients who conceived following previous history of vesicular mole is 10.3% which comes in the usual normal range for normal population. Only 2.7% of patients with abortion after vesicular mole had subsequent normal pregnancy. Proportion of abortions (18.2%) and repeat vesicular mole (13.6%) is increased in patients who were not allowed pregnancy following a vesicular mole. Proportion of abortion (20%) and repeat vesicular mole (20%) is more after chemotherapy. Proportion of term pregnancy is slightly less (60%) in patients who were given chemotherapy than in patients who were not given chemotherapy. No congenital anomalies and still births were reported in this study. Proportion of normal term babies in pregnancy allowed patients (69.5%) after vesicular mole is comparable to other studies.

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