INTRODUCTION

Gestational trophoblastic disease is the only neoplasm that is self-curable and patients can preserve fertility with different medical and surgical treatment modalities. With the introduction of effective chemotherapy, patients with gestational trophoblastic neoplasia (GTN) have been successfully treated with chemotherapy while preserving reproductive function (Newlands, 1996; Matsui et al., 1998). This tumor occurs most frequently among women in their twenties and thirties, who often desire future pregnancies after the completion of chemotherapy. However, patients with GTN may express fears related to future pregnancies, especially the possibility of GTN reoccurrence, abnormal pregnancy outcome and fetal anomalies resulting from anti-cancer chemotherapy. Many previous studies (Goldstein et al., 1984; Rustin et al., 1984; Ngan et al., 1988; Berkowitz et al., 1994; Kim et al., 1998; Woolas et al., 1998) have confirmed that patients with persistent GTN may anticipate a normal reproductive outcome following chemotherapy.

MATERIALS AND METHODS

The present study was done between January 1998 to December 2008 a total of 691 cases of Gestational trophoblastic disease attended the Trophoblastic clinic of the Institute of Maternal and Child Health, Government Medical College, Calicut. Of these 199 patients went in for GTN during the routine regular follow-up. Depending on the risk scoring and staging they were treated with single agent chemotherapy (Methotrexate, Actinomycin D) and combination chemotherapy (Methotrexate, Actinomycin D, Etoposide, Cisplatinum). Remission was diagnosed when three consecutive weekly HCG levels were within the normal range. An additional cycle of chemotherapy was given for low risk and three cycles for high risk GTN. After remission HCG levels were determined monthly for 6 months every other month for 6 months, and then every 3 or 4 months for next 12 months. Patients were advised not to conceive within a period of 1 year of completion of chemotherapy.

RESULTS

Age wise distribution, majority were in the 20-24 age group, 44.7% and only 7% were above 35 years. Majority were nullipara, 54.3% and 33.2% were primiparas. Majority, 95% underwent single agent chemotherapy and 5% underwent multiple agent chemotherapy. 94% of the patients were regularly followed up. Regarding conception rates 33% conceived within 1 year and 61% after 1 year, 4.3% had secondary infertility, 1.1% were practicing contraception. Of the 94.1% who conceived, 83.5% reached term, 12.5% had abortion, 2.8% had preterm delivery and unfortunately 1.1% had recurrent mole.
Among the 83.5% who reached term, 70% achieved normal vaginal delivery and 30% had C-section. Among this 30%, 41.3% were for previous C-section, 34.8% were for failed induction, 17.4% for foetal distress and 4.3% for precious pregnancy.

**Distribution of patients based on pregnancy interval after chemotherapy**

- <= 1 year: 33%
- > 1 year: 67%

**Distribution of patients based on pregnancy outcome**

- Term: 83.5%
- Prepregnancy outcome: 12.5%
- Recurrent mole: 1.1%

**DISCUSSION**

Gestational trophoblastic neoplasia occur in the reproductive age and hence most of them are desirous of a future pregnancy following treatment. The discovery of potent chemotherapeutic agents has made possible fertility preservation even in the event of widespread metastasis. Nevertheless, patients fear related to future pregnancies especially regarding the possibility of recurrence or probability of foetal anomalies are very strong, and hence the necessity of studies.

Our studies showed that the rates of term, preterm and abortion are all similar to general population. Data from other centers also show that subsequent pregnancy experience in patients with GTN is similar to general population (Mousavi et al., 2005; Kim et al., 1998; Berkowitz et al., 1994)

Anti-malignant drugs preferentially destroy rapidly dividing cells. Ovarian follicles being highly vulnerable, the possibility of a declining ovarian reserve and hence infertility do exist. Actinomycin D, Vincristine, Etoposide are said to have gonadotoxic effects (Rustin et al., 1984). Woolas et al., 1998 did not observe a difference in conception rates or pregnancy outcome in patients treated with single agent or multiple agent chemotherapy. Another study suggests that recessive mutations may not be detected in the first generation (Van Theil et al., 1970). In our study we did not yet come across a case of premature ovarian failure. The secondary infertility rates in our study was 4.3% in another reported study it was 12.7% (Mousavi et al., 2005).

Another usual concern was the recurrence of molar pregnancy. In studies by Berkowitz et al., the rates were 1% and by Mousavi et al., it was 3%. In our study it was 1.1%. In our study we did not come across any remarkable obstetric complication, though some studies report an increased incidence of placenta previa (Ross 1976). The birth weights, neonatal outcome, sex, Apgar were all similar to normal pregnancy outcomes (song et al.,)

**CONCLUSION**

Our study indicates that treatment of GTN with chemotherapy in compatible with preservation of fertility and also holds a promising pregnancy outcome comparable to general population. Also anticancer drugs used to treat GTN may not have a harmful effect on the subsequent pregnancy. However recurrent molar gestation should be reliably excluded each time they conceive

**REFERENCES**


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