**Case Report**

**Trophoblastic Hyperthyroidism**

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**Abstract**

Hyperthyroidism can occur secondary to gestational trophoblastic disease. The clinical and biochemical data of four women who had hyperthyroidism secondary to gestational trophoblastic disease was analyzed. The parity ranged from primi to gravida four and the period of amenorrhoea from six weeks to sixteen weeks. Three women had vomiting, two had bleeding per vaginum and two had tachycardia and minimal thyromegaly. The βhCG was more than 5,00,000 mIU/ml in all the cases. Three women required treatment for the hypermetabolic status and one woman had biochemical hyperthyroidism. Two of them had molar pregnancy, one had partial mole and one had persistent trophoblastic disease.

**INTRODUCTION**

Hyperthyroidism is known to occur secondary to trophoblastic disease. It has been reported as a complication of complete mole and persistent trophoblastic disease, both metastatic and nonmetastatic. The clinical scenario may vary from absence of symptoms to thyroid storm. The asymptomatic status may be attributed to the brief duration of altered thyroid function.1,2

**CASE REPORT**

Four cases of hyperthyroidism secondary to trophoblastic disease, two with complete mole, one with partial mole and one with persistent gestational trophoblastic disease are reported. Table 1 illustrates the details of the first three cases.

The fourth case, Mrs. N a 23 year old woman reported to our outpatient department with a history of irregular bleeding per vaginum for 10 months prior to which she had a spontaneous abortion. She had undergone dilatation and curettage thrice before coming to our institution and none of the histopathology reports were available. She gave a h/o loss of weight and vomiting. Clinical examination revealed pallor, a pulse rate of 90/mt and BP of 110/70 mmHg. The respiratory system was normal. The uterus was found to correspond to 18 weeks gestation. Laboratory investigations, which included complete blood count, RFT and LFT, were normal. Pelvic USG revealed echodense areas in the endometrial cavity and myometrium. Abdominal USG did not show any evidence of metastasis. Chest x-ray was normal.

Details of βhCG and TFT (thyroid function test) are illustrated in Table 5. A diagnosis of persistent gestational trophoblastic disease with hyperthyroidism was made. The WHO score was nine and accordingly she was started on the multidrug regimen EMA-CO. Neomercazole 10 mg tid was started along with the chemotherapy. During the course of chemotherapy after the 6th cycle the TFT showed values bordering on hypothyroidism and the dose of neomercazole was reduced to 5 mg tid. She was noncompliant after the 8th cycle.

**DISCUSSION**

Trophoblastic hyperthyroidism occurs as a result of thyroid stimulation by hCG and its variant which is partially desialated in the c-terminal region of the β subunit. Partial desialation of the β subunit of hCG is associated with increased in vitro thyrotrophic activity.3

The hCG always exceed 300 Iu/ml in patients with hyperthyroidism caused by trophoblastic disease. Hence when the hCG value exceeds 300 Iu/ml thyroid function should be assessed.4 The βhCG was more than 500 Iu/ml in all our cases. The T3:T4 ratio in trophoblastic hyperthyroidism has been reported to be low unlike in Grave's disease where it is found to greater than twenty.5

The clinical features observed in the trophoblastic hyperthyroidism include fatigue, weight loss, muscle weakness, excessive sweating, nervousness, heat intolerance, tachycardia and minimal enlargement of the thyroid gland. Ophthalmopathy has not been observed in this condition. Two of our patients had tachycardia and enlargement of the thyroid gland and the fourth patient had loss of weight.

Many of the clinical features caused by this condition may be attributed to trophoblastic disease as such and the hypermetabolic state may be overlooked. Hence awareness of this condition is important for diagnosis and treatment.

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The hypermetabolic status has to be controlled prior to subjecting the patient to evacuation. Treatment has to be individualised. Some cases may require only beta-blockers whereas others may require in addition antithyroid drugs. Some may not require any treatment for the asymptomatic hyperthyroidism, which is detected only by biochemical parameters. The hyperthyroid status secondary to molar disease rapidly resolves after evacuation while that secondary to choriocarcinoma takes a longer time to resolve.

The New England Trophoblastic Disease Centre observed an incidence of 7% of hyperthyroidism due to trophoblastic disease between 1965 to 1975. However they did not observe even one case during their subsequent review of the period between 1988 to 1993. This is because of early detection and treatment. Unlike in the West, in India we may still encounter such cases perhaps until early ultrasound becomes a part of routine antenatal check up.
REFERENCES


Book Review

Care of The Medical Outpatient

Prof. G Lakshmipathi

The book deals specifically with management of adult patients presenting with medical problems, and strictly at the Outpatient level. It is well known that the majority of cases presenting at a practitioner’s clinic need only management as an outpatient calling for a rapid and definitive diagnosis, drug therapy as applicable (keeping in mind their adverse reactions, interactions, and their usage in the particular patient), general advice relating to the particular sickness, a schedule for review, and referral to a specialist when indicated. This book addresses all these aspects in detail in most practicable terms. For a quick grasp of a complex situation, the management of the commoner diseases is presented in form of algorithms. Uncommon and obscure diseases and those managed and supervised solely by specialists, and serious conditions needing only inpatient care are not discussed, as this is not the purpose of the book.

The book also has some useful and unique chapters on the art of modern medical practice as well as a host of useful tables and columns of great utility in the daily practice of a busy practitioner. I have included a large numbers of medical quotations, relevant to each subject, hopefully to invite the user to browse deeper into the chapter.

Basically it is a ready reckoner for a busy doctor, who would like to give the most recent and approved modality of therapy for his/her patients in quick time without having to rummage through a lot of textual prose.

To the best of our knowledge, there is not another book of this kind published in India for the Indian practitioner.

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