

## PREGNANCY WITH EXOPHTHALMIC GOITRE

(Report of a Case)

by

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Pregnancy is rare in cases of exophthalmic goitre because it tends to cause atrophy of genital organs and sterility. The association of pregnancy with exophthalmic goitre may lead to serious consequences to the mother and the baby.

Croom (1906) met with 11 cases in 1500 deliveries. Mussey (1939) reported that only 0.5% of thyrotoxicosis patients attending the Mayo Clinic were pregnant. Hawe & Francis (1962) in their series of 931,033 antenatal cases found thyrotoxicosis, in 59 cases only, giving an incidence of .04%. The credit goes to Parry (1825) for reporting the first case of miscarriage associated with thyrotoxicosis.

Rarity of the condition warrants report of this case of pregnancy complicated by thyrotoxicosis, in which there was hypothyroidism in the new born.

### Case Report

Mrs. D., primigravida, 28 years old, was seen for the first time in the antenatal clinic in July 1966 when she was 20-24 weeks' pregnant. She was a diagnosed case of thyrotoxicosis and was already on antithyroid drug (Neomercazole), though intermittently, for the previous one year. She complained of severe palpitations and breathlessness on exertion, excessive sweating and vomiting off and on since two weeks.

**On Examination:** She was found to be rather anxious, highly strung, thin person. Pallor and anemia were present;

there was oedema of the feet. Her blood pressure was 168/94 mm of Hg and pulse 126/mt regular, good in volume. She had marked exophthalmos, with positive Von-Graefe's sign. There was slight enlargement of the thyroid gland with marked pulsations and a systolic bruit was heard on auscultation over the gland. She had marked tremors of the outstretched hands. There was no evidence of cardiac enlargement and systemic examination revealed no other abnormality. Abdominal examination revealed uterus to be about 24 weeks in size. Foetal heart sounds were audible. The following investigations were carried out. Hb 11 gms%; W.B.C. 10,000/cmm, Urine—Nil abnormal. Serum P.B.I.—9.8 micrograms. Serum cholesterol—within normal limits. X'Ray chest—No evidence of cardiac enlargement. E.C.G.—Normal.

She was hospitalized and in consultation with the medical specialist she was started on Neomercazole 30 mg daily along with luminal and strict bed rest. She showed a rapid and effective control of the condition on this therapy and she was discharged on a maintenance dose of Neomercazole 15 mg daily (5 mg T.D.S.) after 6 weeks. She was attending antenatal clinic regularly and simultaneously was being reviewed by the physician, she was re-admitted at 36 weeks for tachycardia 130/mt, blood pressure 170/96 mm of Hg. The dose of neomercazole was again increased to 30 mg daily. Her urine showed trace of albumin and possibility of the pre-eclamptic toxæmia was considered and she was treated symptomatically. This dose of neomercazole was continued to term, when she went into spontaneous labour with early rupture of membranes. There was evidence of foetal distress in early labour and she was

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delivered by lower segment caesarean section on 25-11-66. The male baby had marked asphyxia and was revived with great difficulty. Her post operative period was uneventful and she was given minimum maintenance dose of neomercazole, 15 mg daily.

The Baby weighed 6½ lb. and had thick coarse features with protruding tongue. The skin was dry, thick and rough showing deep fissures over the whole body. The cry was hoarse and feeble, no enlargement of thyroid gland. The baby was very lethargic, slow in starting feeds and had marked bradycardia. When this condition of the baby persisted for couple of days after birth the suppression of the thyroid gland function was considered and baby was started on Levo Thyroxin .01 mg twice daily. The baby showed gradual improvement and the skin lesion cleared and the dose of Levo thyroxin was reduced to .01 mg daily and gradually tailed off after 3 months. The further follow up of the baby showed normal mile stones and no evidence of hypothyroidism. The patient became pregnant for the second time after 10 months and having gained the experience of anti-thyroid therapy during her first pregnancy, the drug was discontinued during the 3rd trimester as the patient was fully controlled in between the pregnancies as well as during pregnancy. Elective caesarean with ligation of tubes was done at term and a healthy, female baby weighing 7 lb. was delivered without any manifestation of abnormal thyroid function.

#### Discussion

In most patients with hyperthyroidism the diagnosis is obvious, particularly when the presence of eye signs of a goitre indicates the likelihood of thyroid disease. The diagnosis is confirmed by at least one or preferably two tests of thyroid function since the course of the disease is prolonged and the treatment not without risk.

Iodides and antithyroid drugs pass through the placental barrier (Freisleben Kjerulf 1947). These drugs depress the foetal thyroid function and result in an

increased production of T.S.H. with hyperplasia of the foetal thyroid gland. On the other hand, hypothyroidism and cretin may result from treatment sufficiently intense to induce maternal hypothyroidism. Reviewing the literature Piper & Rosen (1954) found that among 83 patients treated with antithyroid drugs, 15 (18%) of the infants developed goitre. Hawe & Francis (1962) reviewing 37 cases treated medically, found 3 cases resistant to antithyroid drugs and when the drug was continued upto term one of these patients gave birth to a cretin and the other two were normal.

The choice of treatment usually rests between the use of antithyroid drugs and subtotal thyroidectomy. According to Hawe & Francis (1962) antithyroid drugs during pregnancy are difficult to regulate and there is great risk because clinical effects of thyrotoxicosis and pregnancy are in so many respects similar that there is likelihood of error in adjusting the dose of antithyroid drug. Over treatment may endanger the foetus and inadequate treatment may lead to exacerbation of thyrotoxicosis. In the interest of the foetus it is advisable to reduce the dose of antithyroid drugs during the later months of pregnancy.

D'Abreu & Wood (1950) described the case of one infant born with a large goitre causing tracheal pressure. Becker & Sudath (1959) reported one cretin in their series of 22 pregnancies in thyrotoxic women.

Keynes (1952) collected records of 18 patients treated with antithyroid drugs. In 12 cases the treatment was of short duration and all the babies were normal but in six the drug was given for a longer period and four of these cases had goitre and two were cretins.

It is very well shown in this case that when during the first pregnancy the drug

was continued to term the baby showed signs of hypothyroidism though not cretin, and subsequently during her second pregnancy the thyrotoxic condition was fully controlled and she was maintained on minimal dose of antithyroid drug which was discontinued during the third trimester. The baby did not show any manifestation of abnormal thyroid function.

The further disadvantage is that these drugs are excreted in the mother's milk (William *et al* 1944). Breast feeding must therefore be avoided.

#### Summary

The course of two consecutive pregnancies in a woman on antithyroid drugs has been described.

During the first pregnancy a relatively high dose of neomercazole was continued till full term resulted in the birth of a hypothyroid infant who responded well to small doses of levo-thyroxin. During the second pregnancy the antithyroid drugs were used more judiciously and stopped during the third trimester and a healthy baby was born.

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