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Editorial

Hypothyroidism & pregnancy

Women of child bearing age are the common sufferer of thyroid disorders, although males are not exempted. As such thyroid disease may complicate the course of pregnancy. Irregular menstrual cycle, subfertility of repeated miscarriage are also common manifestation of thyroid pathology. It is estimated 2.5% of all pregnant women have some degree of hypothyroidism. Demographic & population variation is also there. Thyroid disorder during pregnancy may affect both mother & baby.

Treatment of Hypothyroidism in pregnancy is relatively straight forward in most cases. A synthetic form of replacement is given for missing hormone and to maintain a steady level throughout the pregnancy. Routine monitoring of TSH is essential.

Consequences of hypothyroidism during pregnancy:

There is a link between mothers with hypothyroidism during pregnancy and developmental delay in their children after birth. Babies born to woman with untreated hypothyrodism may not achieve their full intellectual potential. This was particularly seen in mothers who came from iodine deficient areas of the country (iodine is necessary to produce salt in our foods) and was also observed in mothers with autoimmune thyroid disease, such as Hashimoto's thyroiditis. On the other hand, the ongoing pregnancy can be complicated by abortion, premature labour as even still birth.

There is a relationship between thyroid levels in the mother and brain development of her child. A large study reported in 1999 found that undetected or inadequately treated hypothyroidism in mothers was associated with IQ changes & impaired psychomotor development in the infants of these women. The average IQ scores were about 4 points lower in the children of hypothyroid mothers than in children of normal mothers. Larger IQ deficits were seen in the children of mothers who had more severe hypothyroidism. These children had an average IQ 7 points lower than normal. In addition, almost 20% of these children had IQ scores of less than 85 compared to 5% of the children of normal mothers.

The key in dealing thyroid condition during pregnancy is close monitoring of S.TSH and T_3, T_4 levels and compliance with treatment regimen. Many guidelines say that a pregnant with hypothyroidisim should have her thyroid function checked during each trimester.

First trimester of pregnancy is very important. The baby is entirely dependent upon mothers thyroid hormone.

To avoid the consequences of hypothyroidism in pregnancy:

- All women who are planning a pregnancy should be considered for screening of thyroid disease.
- All pregnant women with a goitre (enlarged thyroid), high blood levels of thyroid antibodies, a family history of thyroid disease, or symptoms of hypothyroidism should be tested for hypothyroidism.
- In women who are borderline, or subclinical, hypothyroid (for example, not in the laboratory range for true hypothyroidism, but within the low normal

range) and who also have positive antibodies (which may indicate an ongoing autoimmune thyroid destruction), therapy with low dose thyroid hormone at the onset of pregnancy may be beneficial.

- There is evidence that the antibodies that may contribute to hypothyroidism can play a role in pregnancy. Data suggest that selenium supplementation may be of benefit in women with high antibody levels at the time of preconception.
- Women who are on thyroid hormone replacement before pregnancy should also be tested to make certain that their levels are appropriate. During pregnancy, the medication dose may need to increase by up to 50% as early as in the first trimester.
- Dosing is dynamic during pregnancy and should be closely monitored by regular blood testing. As the pregnancy progresses, many women require higher doses of hormone replacement.
- The dosage of thyroid hormone replacement during and after pregnancy should be carefully monitored using the blood thyroid stimulating hormone (TSH) value. The laboratory ranges for normal TSH are quite wide. Most clinicians like to keep women who are pregnant and on replacement in the "hyper" end of the normal range. This usually equates to a TSH of <2.0. Many clinicians prefer TSH in the <1.0 range.
- In women with hypothyroidism before conception, must go back to their pre-pregnancy dose of thyroid hormone within a few weeks to months after delivery.
- Thyroid hormone is one of the few drugs in Pharmaceutical category "A" (Low Risk) for pregnant women.
- When a fetus is born, routine new born screening includes as test of thyroid hormone levels.

These are only guidelines. But management for each situation is under physician's judgment. But benefit goes not only to the mother but also to their children, but satisfaction lies with the obstetricians. A collaboration between a women's endocrinologist and obstetrician will maximize the chances for a successful pregnancy and delivery and make the mother's postpartum adjustment as easy as possible.

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