New review looks at the effect of thyroid disorders on reproductive health

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Thyroid disease can have significant effects on a woman's reproductive health and screening for women presenting with fertility problems and recurrent early pregnancy loss should be considered, suggests a new review published today (23 January) in *The Obstetrician & Gynaecologist* (*TOG*).

The review examines the effect of thyroid disorders on reproductive health and reviews the current evidence on how to optimise thyroid function to improve reproductive outcomes.

Thyroid hormones control the metabolism via the production of two hormones triiodothyronine and thyroxine. These hormones also have key roles in growth and development, particularly brain development. Changes in thyroid function can impact greatly on reproductive function before, during and after conception.

Thyroid disease is divided into hyperthyroidism (overactive thyroid) and hypothyroidism (underactive thyroid), and the causes of the diseases are numerous.

The review highlights that hyperthyroidism is found in approximately 2.3% of women presenting with fertility problems, compared with 1.5% of women in the general population. The condition is linked with menstrual irregularity. Hypothyroidism affects around 0.5% of women of reproductive age. Hypothyroidism in childhood and adolescence is associated with a delay in reaching sexual maturity, and in adulthood is

associated with menstrual problems and in some cases a lack of ovulation, state the authors.

The authors note that thyroid disease has long been associated with fertility problems, however, national guidance does not currently recommend routine measurement of thyroid function in asymptomatic women presenting with problems conceiving.

Additionally, the authors of the review note that miscarriage is common, affecting approximately one in five pregnancies and recurrent miscarriage, defined as three consecutive miscarriages, affects 1% of couples. Given that thyroid hormone plays an important part in embryonic development, thyroid disease has long been associated with an increased risk of miscarriage.

Thyroid disease, in particular hyperthyroidism, can also have a significant effect on pregnancy, the authors of the review state. Adverse outcomes can include preterm delivery, pre-eclampsia, growth restriction, heart failure and stillbirth.

The authors conclude that screening for thyroid disease should be considered in women presenting with fertility problems and recurrent pregnancy loss. Additionally, the authors highlight that there is evidence to suggest that routine screening of the general population for thyroid dysfunction at the start of pregnancy may be beneficial.

Furthermore, women diagnosed with thyroid disease should continue on anti-thyroid medication throughout pregnancy and receive close monitoring, emphasise the authors.

Amanda Jefferys, from the Bristol Centre for Reproductive Medicine, Southmead Hospital, Bristol, and co-author of the study said:

"Abnormalities in thyroid function can have an adverse effect on reproductive health and result in reduced rates of conception, increased miscarriage risk and adverse pregnancy and neonatal outcomes.

"However, with appropriate screening and prompt management, these risks can be significantly reduced."

Jason Waugh, TOG Editor-in-chief, added:

"Thyroid disease is common in the reproductive medicine setting, in fact, it is the most common endocrine condition affecting women of reproductive age.

"This paper highlights how thyroid disorders can affect fertility and pregnancy and makes a case for universal screening."

Provided by Wiley

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