

## **Analysing the epidemiology of molar pregnancies in England**

**Lewis, J.J.**<sup>1</sup>; Pawade, J.<sup>2</sup>

<sup>1</sup>University of Bristol, Southport, United Kingdom; <sup>2</sup>Southmead Hospital, Bristol, United Kingdom

Molar pregnancies are a benign form of gestational trophoblastic disease that are relatively rare. However, variances in the incidence of molar pregnancies are observed worldwide with numerous factors proposed to influence this, including: ethnicity, maternal age and changing diagnostic methods.

This study aimed to calculate the incidence of molar pregnancies in England, along with an analysis of biological and social factors that may influence the risk of molar pregnancies. We also aimed to examine the methods used for their diagnosis, particularly the contribution of cytogenetics.

A retrospective study was performed analysing data for all cases of molar pregnancy in the relevant trusts from 1st January 2012 to 31st July 2017.

An overall incidence of 1.62 molar pregnancies per 1000 live births was observed, with an increasing incidence in the White population. Asian ethnicity, extremes of maternal age and primi-gravida status were associated with increased incidence of complete hydatidiform moles, whereas a history of miscarriages was positively associated with partial hydatidiform moles.

Histological examination was the predominant method of diagnosis for both types of molar pregnancy, although cytogenetic analysis was also used commonly in the diagnosis of partial hydatidiform moles. Both histological and cytogenetic analysis demonstrated diagnostic limitations with regards to partial hydatidiform moles.

Considering our findings, we have proposed recommendations for the accurate and comprehensive diagnosis of future molar pregnancies, specifically a combined genetic and histological approach for the diagnosis of partial hydatidiform moles. Additionally, we have identified areas where further research is needed, particularly the association between nutrition and molar pregnancies and an advanced understanding of the genetic aberrations underlying the disease.