Maternal Obesity Raises Risk of Fatty Liver Disease in Children

Advanced stages of NAFLD were more commonly seen in people whose mothers had obesity or overweight during pregnancy.

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Maternal obesity and overweight were linked to a higher risk of non-alcoholic fatty liver disease (NAFLD) in their children. Children and young adults with advanced fibrosis or cirrhosis were also more likely to have had mothers with obesity or overweight during pregnancy, according to study results published in the Journal of Hepatology.

Arising from the accumulation of fat in the liver, NAFLD and its more severe form, non-alcoholic steatohepatitis (NASH), are responsible for a growing proportion of advanced liver disease worldwide. As a result of inflammation, NAFLD can lead to the buildup of scar tissue (fibrosis), cirrhosis (advanced scarring) and even liver cancer. With no effective approved medical therapies, disease management is dependent on lifestyle changes, such as weight loss and exercise.

While maternal obesity has been found to lead to heart disease and diabetes in children, the link to NAFLD is unknown. Hannes Hagström, MD, PhD, of Karolinska University Hospital in Sweden, and colleagues used data from the nationwide ESPRESSO cohort to identify people up to 25 years of age with a biopsy-verified NAFLD diagnosis between 1992 and 2016. These 165 people were matched by age, sex and calendar year to at most five control subjects without NAFLD. The researchers also linked data on maternal body mass index (BMI) in early pregnancy as well as confounding factors from the nationwide Swedish Medical Birth Register.

The researchers found that maternal BMI was linked to fatty liver disease in their children. That is, women with overweight or obesity during pregnancy were more likely to bear children who would go on to develop NAFLD. What's more, children and young adults had a greater risk of developing fibrosis or cirrhosis if their mother had overweight or obesity. Some 19% of those with NAFLD had mothers with obesity during pregnancy compared with 8% of those without NAFLD. Further, maternal obesity seemed to be an independent risk factor, since adjusting for socioeconomic and metabolic factors did not alter the association.

"In this national, population-based case-control study, we demonstrate an increased risk of biopsy-proven NAFLD in offspring born to mothers with a high early-pregnancy BMI," wrote the researchers. "Mothers with an elevated BMI should receive active counseling on how to reduce the

risk of NAFLD in their offspring.”

Click here to read the study in the Journal of Hepatology.

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