Hypertensive disorders of pregnancy and long-term risk for stroke.

Preventive interventions may be warranted for patients with an increased risk for AS and IS among parous patients in later life. HDP, including PE and GH, seem to be associated with an increased risk for AS (aRR, 2.04; 95% CI, 1.20-1.26), IS (aRR, 1.35; 95% CI, 1.19-1.53), and HS (aRR, 2.77; 95% CI, 2.04-3.75). GH was significantly associated with AS (aRR, 1.23; 95% CI, 1.05-1.44), IS (aRR, 1.74; 95% CI, 1.46-2.06), and HS (aRR, 2.77; 95% CI, 2.10-3.68). PE was significantly associated with AS (aRR, 1.75; 95% CI, 1.56-1.97), IS (aRR, 1.84; 95% CI, 1.62-2.09), and HS (aRR, 2.27; 95% CI, 1.91-2.69) compared to normotensive controls. A previous study in the same population showed that HDP are associated with an increased risk of maternal stroke in later life. However, relatively little is known about whether HDP are associated with an increased risk for AS and IS among parous patients in later life. We conducted a systematic review and meta-analysis of observational studies to investigate the association between HDP and the long-term risk for AS and IS.

Studies included were case-control or cohort studies, conducted with human participants, available in English, measuring the exposure of a history of HDP (preeclampsia (PE), gestational hypertension (GH), chronic hypertension (CH), or other hypertensive disorders) and the outcomes of AS and IS in later life. The primary outcome was any undifferentiated stroke (AS) and secondary outcomes included IS and HS. The studies were included following the Meta-analyses of Observational Studies in Epidemiology guidelines and using the Newcastle-Ottawa scale. The primary outcome was any undifferentiated stroke (AS), and secondary outcomes included IS and HS. The strength of association between exposures and outcomes varies by hypertensive disorder of pregnancy subtype.

The results of this systematic review and meta-analysis suggest that HDP are associated with an increased risk for AS and IS among parous patients in later life. However, the strength of association varies by hypertensive disorder of pregnancy subtype.

Key messages:
- Colder temperatures around conception lead to improved metabolic health outcomes in adulthood, including lower BMI, waist circumference, and levels of triglycerides and cholesterol.
- Subtle environmental factors during the periconceptional period can have long-term health impacts, highlighting the need for further research on potential health externalities of climate change.