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Hot from the hypertensive press

Short analysis of clinical studies that may change our practices in the field of hypertension
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Does pregnancy-related hypertension have a future impact on cognition?

Hypertensive Disorders of Pregnancy (HDP) are a well-known complication during pregnancy. They include various forms of hypertension, such as new onset hypertension diagnosed during pregnancy (gestational hypertension), preeclampsia, or chronic hypertension with superimposed preeclampsia. HDP affect approximately 8% of pregnant women globally. HDP do not only have a direct impact on the affected women during the course of the pregnancy, but may also be associated with long term effects, such as renal or cardiovascular as well as neurological implications. In this context, a recent study from the Netherlands investigated the potential impact of HDP on long term cognitive function and the findings were published in „*Neurology*“ (1), accompanied by an editorial addressing this important topic for healthcare providers (2). The authors investigated the association between HDP and future cognitive impairment in a prospective cohort study with overall 481 normotensive women and 115 with HDP. Of the latter, approximately 70% had gestational hypertension and 30% preeclampsia. Cognitive assessment was performed at a mean age of 46 years, approximately fifteen years after pregnancy.

The authors could show that HDP were independently associated with later cognitive impairment. These cognitive impairments included various domains of memory function and the findings were mainly driven by women with gestational hypertension. The latter is interesting when considering the differences to preeclampsia (e.g. absence of proteinuria or end organ damage), suggesting that gestational hypertension may be less harmful, which the study showed was not the case. These findings are also in line with a study showing that women with gestational hypertension are at greater risk also for future ischemic heart disease (3).

The findings of the current study (1) underscore the relevant interdisciplinary (obstetricians, neurologists, cardiologist, internal medicine specialist) long-term impact of HDP. Diagnosis of HDP should thus occur early during pregnancy and patients should be educated regarding future vascular risk and the potential cognitive impact. Whether early antihypertensive treatment protects against cognitive impairment remains to be demonstrated, but seems logical. Finally, an interdisciplinary team should follow these patients closely in the long term.

(1) Adank MC, Hussainali RF, Oosterveer LC, Ikram MA, Steegers EA, Miller EC, Schalekamp-Timmermans S. Hypertensive disorders of pregnancy and cognitive impairment: A prospective cohort study. *Neurology* 2021 Feb 2;96(5):e709-e718.

(2) Leffert L, Prodan CI, Peters N. Gestational Hypertension: The Pregnancy Stress Test for Cognitive Impairment. *Neurology* 2021 Feb 2;96(5):193-194.

(3) Tooher JT C, Makris A, Ogle R, Korda A, Hennessy A. All hypertensive disorders of pregnancy increase the risk of future cardiovascular disease. *Hypertension* 2017;70: 798–803.

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