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Migraine with aura and screening for biological thrombophilia.

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Dear Editor,

We read with interest the article of Champaloux et al "Use of combined hormonal contraceptives among women with migraines and risk of ischemic stroke". We believe that the study limitations do not sufficiently highlight the lack of adjustment for thrombophilia in the analysis as a limitation [1].

Migraine with aura is associated with a higher risk for ischemic stroke. Possible mechanisms predisposing migraine patients to ischemic stroke may be vascular, neuronal, or related to coagulation abnormalities [1-2]. Several studies have investigated the prevalence of activated biological thrombophilia in patients with migraine but results remain controversial [2].

The use of combined hormonal contraceptives at any age in patients with migraine with aura is still restricted by current guidelines (WHO, 2015, ACOG, 2006, MMVR, 2016, FSRH, 2016) [3]: "a condition which represents an unacceptable risk if the contraceptive method is used". This restriction is based on data originated over half a century ago in the era of high dose contraceptives. There are no randomized large trials to evaluate low dose combined hormonal contraceptives containing 20-25 mg ethinyl estradiol, ultra low-dose formulations (10-15 mg ethinyl estradiol), estradiol valerate or estradiol in patients with migraine with aura and ischemic stroke. We believe that in patients with migraine with aura it is important to evaluate other risk factors such as smoking, age, obesity, hypertension and aura frequency that were not fully assessed by Champaloux et al in their study. A large study investigating the association between migraine and inherited biological thrombophilia, in women with venous thrombosis risk, demonstrated that Factor V Leiden and Factor II G20210A mutations were more associated among patients suffering from migraine with aura compared to migrainous women without aura and non-migrainous women [4]. We believe that women with migraine with aura should be screened for biological thrombophilia. We recommend testing for resistance to activated protein C, and if positive then for factor V Leiden and Factor II G20210A, as well as biochemical testing (protein C, protein S, antithrombin III, lupus anticoagulants, and cardiolipin antibodies). Combined hormonal contraceptives should not be contra-indicated in women with migraine with aura who do not have biological thrombophilia or other risk factors for ischemic stroke and in whom the benefits outweigh the risks.

## References

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