



UNIVERSITÀ
DEGLI STUDI
DI UDINE

Università degli studi di Udine

Migraine with aura and screening for biological thrombophilia

Original

Availability:

This version is available <http://hdl.handle.net/11390/1122539> since 2021-03-15T19:31:05Z

Publisher:

Published

DOI:10.1016/j.ajog.2017.11.585

Terms of use:

The institutional repository of the University of Udine (<http://air.uniud.it>) is provided by ARIC services. The aim is to enable open access to all the world.

Publisher copyright

(Article begins on next page)

Accepted Manuscript

Migraine with aura and screening for biological thrombophilia

L. Driul, A.P. Londero

PII: S0002-9378(17)32368-2

DOI: [10.1016/j.ajog.2017.11.585](https://doi.org/10.1016/j.ajog.2017.11.585)

Reference: YMOB 11954

To appear in: *American Journal of Obstetrics and Gynecology*

Received Date: 25 August 2017

Accepted Date: 17 November 2017

Please cite this article as: Driul L, Londero AP, Migraine with aura and screening for biological thrombophilia, *American Journal of Obstetrics and Gynecology* (2017), doi: 10.1016/j.ajog.2017.11.585.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



1 Migraine with aura and screening for biological thrombophilia.

2 Driul L., Londero A.P.

3 *Clinic of Obstetrics and Gynecology, Hospital of Udine, University of Udine.*

4

5 **Corresponding Author:** Driul Lorenza

6 Clinic of Obstetrics and Gynecology,

7 Piazzale S. Maria della Misericordia, 33100 Udine, Italy

8 lorenza.driul@uniud.it

9

10 **Keywords:** Migraine with aura, biological thrombophilia, screening

11 **Word count:**462

12

13 The authors report no conflict of interest.

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29 Dear Editor,

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

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

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

55

56 **References**

57 [1] Champaloux SW, Tepper NK, Monsour M, Curtis KM, Whiteman MK, et al. Use of combined hormonal
58 contraceptives among women with migraines and risk of ischemic stroke. *Am J Obstet Gynecol*
59 2017;216(5):489.e1-489.e7

- 60 [2] 1. Intiso D, Crociani P, Fogli D, Grandone E, Capucci G, Di Rienzo F, et al. Occurrence of factor V Leiden
61 mutation (Arg506Gln) and anticardiolipin antibodies in migraine patients. *Neurol Sci* 2002;22:455–8
- 62 [3] Medical Eligibility Criteria for Contraceptive Use. 5th edition. Geneva: World Health Organization; 2015
- 63 [4] Maitrot-Mantelet L, Horellou MH, Massiou H, Conard J, Gompel A, Plu-Bureau G Should women suffering
64 from migraine with aura be screened for biological thrombophilia?: results from a cross-sectional French
65 study. *Thromb Res.* 2014 May;133(5):714-8.

66

67

68

69

70

71

72

73

ACCEPTED MANUSCRIPT