Headache Medicine

ID: 402

Influence of hormonal stabilization on catamenial migraine associated with menstrual flow disorder: a case report

Ana Carolina Figueiredo Siqueira[1], Gabriel Figueiredo de Almeida[1], Júlia Maria da Silva Cahino Pereira[1], Julia Passos Aguiar[1], João Pedro Figueiredo de Almeida[1], Taís Xavier de Oliveira Souza[1], Luílla Araújo Magnavita Jacobina[1], Maria Clara Figueiredo Cabral[1], Maria Eduarda Parente Campos[1], Thayanne Reis Barbosa de Santana[1], Ana Victoria Oliveira Sousa[1], Mauricio Porto de Oliveira Pimenta Filho[2]

[1]Tiradentes University, Aracaju, Sergipe, Brazil
[2]Bahian Cardiology Foundation, Salvador, Bahia, Brazil

Ana Carolina Figueiredo Siqueira
ana.fsiqueira@souunit.com.br

Introduction
Catamenial migraine is related to the drop in estradiol during the menstrual cycle. Unlike the pure form (without aura), migraine with aura contraindicates estrogen-containing contraceptives due to the risk of ischemic stroke, challenging management when menstrual flow disorders coexist. The etonogestrel subcutaneous implant promotes hormonal stability and emerges as a safe alternative, albeit with limited evidence. This report describes the case of a patient with catamenial migraine with aura and flow disorder treated with the implant.

Case presentation
A 21-year-old female university student was diagnosed with migraine with aura (ICHD-3; 1.2.1). Symptoms began at age 12, associated with menarche, and progressed to predominantly premenstrual and disabling attacks. She presented with visual aura featuring scintillating scotomas and blurred vision, upper limb paresthesias, and severe pulsatile retro-orbital headache (VAS=10), accompanied by nausea, vomiting, photophobia, and phonophobia. Prior to the implant insertion, she averaged three attacks per month, despite prophylaxis with Topiramate 100 mg/day and Amitriptyline 25 mg/day. She also presented with menstrual flow disorder, characterized by irregular cycles, excessive flow, severe dysmenorrhea, and a consistent worsening of migraine attacks during the menstrual period. Computed tomography of the skull showed no structural alterations. Given the association between catamenial migraine with aura and menstrual disorder, the insertion of an etonogestrel 68 mg subcutaneous implant was chosen. After approximately six months, there was a reduction in attack frequency to about one episode every three months, a decrease in pain intensity to VAS=4, a reduction in aura episodes, a lower need for abortive medications, and an improvement in the menstrual pattern. It was possible to reduce Topiramate to 50 mg/day and discontinue Amitriptyline while maintaining adequate control of the attacks.

Discussion
The case illustrates the relationship between the menstrual cycle and migraine, and the rationale for hormonal stabilization. The estrogen withdrawal hypothesis sustains that the perimenstrual drop in estradiol acts as a trigger; menstrual attacks tend to be more severe, prolonged, and refractory to treatment. The etonogestrel implant eliminated the estrogen drop and controlled the flow, safely alleviating both the migraine with aura and the menstrual disorder. The favorable outcome, with pain reduction and medication tapering, suggests the efficacy of the method.

Conclusion
Catamenial migraine with aura associated with menstrual flow disorders represents a therapeutic challenge due to the limitations of estrogen use in this population. In this report, the etonogestrel subcutaneous implant was associated with significant improvement in attacks and functional status, suggesting a potential benefit of hormonal stabilization with progestogen-only methods in selected cases.

Keywords:
Migraine with aura
Menstrual flow disorder
Progestogen
Etonogestrel
Subcutaneous implant

© Copyright 2025