Commentary: De Novo Self-Mutilation and Depressive Symptoms in a 17-year-old Adolescent Girl Receiving Depot-Medroxyprogesterone Acetate

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Depot-medroxyprogesterone acetate (DMPA) is a hormonal contraceptive to be administered every three months via a 150-mg intramuscular injection. An advantage is that its effectiveness does not depend on the individual's compliance in those cases where the risks of early discontinuation and unwanted pregnancy are high. However, DMPA has adverse events, e.g. reduced bone mineral density, nervousness, decreased libido, depression, and insomnia. The first report of depression (Polaneczky, Guarnaccia, Alon, & Wiley, 1996) is in line with the case report presented by St-André et al. (St-André, Stikarovska, & Gascon, in press) in this journal. However, the clinical picture may be more complex than this, as DMPA users aged 16 to 33 years had less mood swings and depressive symptoms after the 24-month follow-up than those not using any form of hormonal contraception (Berenson, Odom, Breitkopf, & Rahman, 2008).

Adverse events, together with the requirement of repeated injections that need to be administered by a clinician or a nurse, explain in part the great variability in the frequency of use of DMPA as a contraceptive method in different countries (Cromer, Berg-Kelly, Van Groningen, Seimer, & Ruusuvaara, 1998). In some countries, like in Finland, its use is rare and practically constitutes one of the last contraceptive options for non-compliant individuals. Therefore, in some countries adolescents to whom DMPA is prescribed may be seen as belonging to an "at-risk population," having a low socio-economic status and poor social competence (Hillman, Negriff, & Dorn, 2010). Adolescents who have used DMPA are more likely to have a history of sexually transmitted infections, a younger age at the first intercourse, and a history of teenage pregnancy (Whitaker, Dude, Neustadt, & Gilliam, 2010), and a higher number of sexual partners (Cavazos-Rehg et al., 2010). Adolescents using DPMA are considered by their parents as having less social activities or competences and more rule-breaking behaviors than those using other kind of contraceptives (Hillman et al., 2010).

St-André et al. (in press) formulated a diagnosis of "mood disorder due to DMPA with depressive features". Indeed, the symptoms are suggestive of a depressive episode; however, some specific features (nightmares, inner visions, and obsessions) resemble those also seen in post-traumatic stress and dissociative disorders. Even though the patient and her family reported no current individual or family stressors, it needs to be kept in mind that a stressful life event is a subjective one and may act as a subconscious one, triggering impairment in functioning. Even though no confounding factor was identified, a broad range of factors can contribute to depressive symptoms and to deliberate self-harm in adolescence. Self-destructive behaviors are common (2% to 14%) among adolescents, especially in girls. Deliberate self-harm is related to traumatic or stressful life events. Adolescents with deliberate self-harm tend to have difficulties in verbal and relational skills, and in coping with the adolescent transition and related body changes. In this context, self-harm becomes a way to transform psychic pain into a more-easy-to-control physical pain (Hirvonen, Kontunen, Amnell, & Laukkanen, 2004).

It cannot be excluded that the symptoms and the self-harming behavior in this case (St-André et al., in press) are a sign of a primary mental disorder, or a reaction to a stressful life event. But, it may also be a direct consequence of the DMPA injection, and a reflection of vulnerability to adverse events of any form of hormonal contraception. Indeed, we have recently shown that the effects of hormonal contraception (either by means of oral contraceptive pills or the levonorgestrel-releasing intrauterine device) on mental health are mild and mainly favorable (Toffol, Heikinheimo, Koponen, Luoto, & Partonen, 2011). Nevertheless, in a subset of women a negative affect and mood change may emerge

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during hormonal contraception (Oinonen & Mazmanian, 2002). From this point of view, it would have been of interest to be able to provide follow-up care to this patient, since she will be at risk of having mood symptoms with subsequent reproductive events, as the authors themselves have emphasized.

This case report (St-André et al., in press) highlights the importance of cooperation between mental health professionals, gynecologists and family physicians, in order to better understand the relationship between mental health and reproductive health.

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