Commentary on 'The effect of depot medroxyprogesterone acetate on postnatal depression: a randomised clinical trial'

Jonathan Schaffir

Associate Professor, Department of Obstetrics and Gynecology, The Ohio State University, Columbus, OH, USA

Correspondence to
Dr Jonathan Schaffir, Department of Obstetrics and Gynecology, The Ohio State University, Wexner Medical Center, 493C McCampbell Hall, 1581 Dodd Drive, Columbus, OH 43210, USA; jonathan.schaffir@osumc.edu

Accepted 5 May 2016
Published Online First 25 May 2016

Linked

▶ http://dx.doi.org/10.1136/jfprhc-2015-101334

CrossMark

To cite: Schaffir J. *J Fam Plann Reprod Health Care* 2016;**42**:177–178.

Providing effective contraception is a key component of postpartum care. Making sure that a woman does not get pregnant again before she is ready is important for both maternal and infant health. Preventing a short interpregnancy interval ensures adequate time to bond and care for the infant, allows adequate time for maternal recovery, and prevents complications with future pregnancy, such as preterm birth and low birth weight.[1]

Depot medroxyprogesterone acetate (DMPA) has several characteristics that make it ideal for this purpose. It is highly effective, reasonably inexpensive, does not require special training for administration, and does not rely on patient compliance for its efficacy. Furthermore, it is easily administered in a postpartum setting, and it is compatible with breastfeeding.[2]

The convenience and effectiveness of DMPA must be balanced with its safety and side effects. In their *J Fam Plann Reprod Health Care* paper, Singata-Madliki *et al*.[3] provide evidence that immediate administration of DMPA to postpartum mothers may put them at greater risk of depressive symptoms than using other long-acting forms of birth control. In comparing women who receive DMPA immediately postpartum with those who receive an intrauterine device, they show that the women on DMPA have significantly higher scores on the Beck Depression Inventory at 3 months, and significantly more of them achieve scores that would suggest a depression diagnosis. If indeed there is a higher risk of postpartum depression, this may itself have adverse effects on both maternal cognition and emotionality and infant cognition and behaviour.[4]

The suggestion that long-acting progestogens may have some adverse effect on mood has biological plausibility. Receptors for gonadal steroids have been identified in key areas of the brain that are involved with mood, and animal studies have demonstrated behavioural effects when exogenous progestogens are administered.[5]

Given these findings, the clinician providing postpartum care may well wonder whether the risks outweigh the benefits of this highly effective contraceptive method. The evidence provided in this paper is not sufficient to abandon postpartum DMPA quite yet. Although the difference in depression screening scores was significant, there was no clinical diagnosis of depression made. Furthermore, the absolute difference in scores, while statistically significant, was small, suggesting that the effect is probably not clinically relevant for the large majority of users.

Nevertheless, these results do provoke an element of caution. A subset of postpartum women may be particularly susceptible to the mood effects of exogenous hormones. Further research is needed to determine if these women may be identified by risk factors such as a previous history of depression, or a history of psychological side effects on previous exposure to hormonal contraception. Until this knowledge is available, it would be prudent for health care providers to be aware of, and screen for, potential mood changes in their patients who use DMPA postpartum.

Competing interests None declared.

Provenance and peer review Commissioned; internally peer reviewed.

REFERENCES

1 Shachar BZ, Lyell DJ. Interpregnancy interval and obstetrical complications. *Obstet Gynecol Surv* 2012;67:584–594.
2 Jurow R, Shoupe D. Long-acting progestin injectables. In: Shoupe D, Kjos SL (eds), *The*

Handbook of Contraception: A Guide for Practical Management. Totowa, NJ: Humana Press, 2006:101.
3 Singata-Madliki M, Hofmeyr GJ, Lawrie TA. The effect of depot medroxyprogesterone acetate on postnatal depression: a randomised controlled trial. *J Fam Plann Reprod Health Care* 2016;42:171–176.
4 O'Hara MW, McCabe JE. Postpartum depression: current status and future directions. *Annu Rev Clin Psychol* 2013;9:379–407.
5 Genazzani AR, Stomati M, Morittu A, *et al*. Progesterone, progestogens and the central nervous system. *Hum Reprod* 2000;15(Suppl. 1):14–27.