

Progesterone role in the development of intracranial meningioma: A new frontier

Junaid Hasan¹, Mariam Ali², Ahsan Shabbir³

Dear Editor, I am writing to express my concern regarding the recent research findings highlighting the potential correlation between meningioma and prolonged use of progesterone-containing contraceptives.¹ Contraception plays a vital role in family planning by effectively reducing the incidence of unintended pregnancies. Hormonal birth control methods have become increasingly popular in modern times, offering not only contraceptive benefits but also non-contraceptive advantages such as managing menstrual disorders and lowering the risks of endometrial and ovarian carcinoma.

However, a recent study has shown that women who have used medroxyprogesterone acetate (a progesterone only contraceptive) for a minimum of one year have an increased risk of developing intracranial meningioma.¹ Meningiomas are locally benign tumours that may potentially express sex hormone receptors on their surface. This is evident clinically from observations of tumour enlargement during pregnancy, a state of increased hormone levels, with subsequent regression in the postpartum period.² The likelihood of meningioma occurrence is twice as high in women using exogenous progesterone contraceptives.³

According to research, depot medroxyprogesterone acetate (DMPA, also known as Depo-Provera), has shown the highest correlation with meningioma development compared to other progesterone contraceptives.¹ These findings raise concern in Pakistan, where Medroxyprogesterone acetate ranks as the third most commonly used modern contraceptive method among married women.⁴ Furthermore, intracranial meningiomas in Pakistan account for 15.6% of all CNS tumours, with

¹Social Security Teaching Hospital, Lahore, Pakistan; ²Al Khalid Hospital, Rahim Yar Khan, Pakistan; ³Final Year MBBS Student, United Medical and Dental College, Karachi, Pakistan.

Correspondence: Junaid Hasan. e-mail: junaidhasan013@gmail.com
ORCID ID: 0009-0000-0743-6622

Submission completed: 21-06-2024 **1st Revision received:** 12-08-2024

Acceptance: 19-10-2024 **Last Revision received:** 18-10-2024

approximately 55% predominantly affecting the female population.⁵

In conclusion, progesterone is widely used as a safe contraceptive and it helps women to take control of their reproductive health. However, recent research foresee the possibility of enduring adverse effects from its long term use, evident in recent research, such as intracranial meningioma.¹ Hence, we must be very careful and vigilant while prescribing progesterone contraceptives, especially those that are found to be associated with meningioma's. Thus by promoting open dialogue we can spread awareness regarding safer contraceptives practice and promote options that pose lesser risks to women health globally.

Acknowledgement: The authors would like to acknowledge and extend their gratitude to the institution.

Disclaimer: None.

Conflict of interest: None.

Funding disclosure: None.

DOI: <https://doi.org/10.47391/JPMA.21128>

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Author Contribution:

JH: Conceived the idea, drafting, editing and final approval.

MA: Collecting relevant data, critically reviewing, drafting, editing and final approval.

AS: Design, data interpretation, drafting, editing and final approval.