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Mini-commentary on 2016-SR-18387R1: Epidemiology of uterine fibroids: a systematic review

Uterine fibroids: from observational epidemiology to clinical management

Paolo VERCELLINI, M.D.

Maria Pina FRATTARUOLO, M.D.

Corresponding author mail id:- paolo.vercellini@unimi.it

From Fondazione Ca' Granda Ospedale Maggiore Policlinico and Department of Clinical Sciences and Community Health, Università degli Studi di Milano, Milan, Italy.

The burden of uterine fibroids on women's health and national health systems' resources is worrying. Data are needed to further clarify the pathogenesis of these tumours and develop novel safe and cost-effective treatments taking into account the factors that may influence their development and growth. In this regard, the findings of Stewart and co-workers (DOI:10.1111/1471-0528.14640) are important for women with uterine fibroids and healthcare providers.

According to this systematic review of epidemiological studies, fibroid prevalence varied widely, with no consistent association across studies between observed estimates and country, methodology, and population. Fibroid incidence was higher in black than in white women independently of other risk factors, suggesting a racial predisposition. A genetic influence was confirmed also by the association with a positive family history. The association with age and menopausal status maybe interpreted in terms of varying degrees of oestrogen exposure, which could explain also the association with food additives and soybean consumption. Along this line, the "anti-oestrogenic" effect of smoking was observed only in women with low BMI. Association were observed also with reproductive factors (parity and time since last birth) and oral/injectable contraceptives.

Predictably, selection, recall, and detection biases could not be excluded in the 60 cohort and case-control studies considered. Substantial qualitative heterogeneity prevented data pooling, limiting the translational value of this overview. Moreover, discriminating between symptomatic and asymptomatic lesions was unfeasible. This would have been relevant, as the authors report that fibroids occur in more than two thirds of women by the onset of menopause, but that only part of these tumours cause symptoms. The authors also state that the frequency of fibroids is likely to be underestimated because in many women they are asymptomatic and therefore remains undiagnosed. This would be important if all asymptomatic fibroids become symptomatic at some point in life, which is currently unproven.

Epidemiological data clarifying whether intramural/subserous fibroids were associated with infertility or unfavourable pregnancy outcomes would have been useful, as randomised, controlled trials on the effect of removal of fibroids that do not distort the uterine cavity are lacking. However, this would have needed categorisation of the number and dimension of tumours in addition to their location.

Overall, Stewart and co-workers' results support the hypothesis that ethnic/genetic predisposition and ovarian hormones exposure are the main determinants of fibroid development. The former factor cannot be modified, whereas hormonal manipulation can be used to limit fibroid growth and alleviate menorrhagia and bulk symptoms. This explains the increasing interest in selective progesterone receptor modulators (SPRM) therapy as an alternative to invasive treatments. However, in published industry-sponsored clinical studies on long-term use of expensive SPRM, a comparison arm reflecting standard practice (myomectomy/hysterectomy) was not included. The combination of epidemiological and therapeutic uncertainties might here favour overdiagnosis, overtreatment, and low-value care. Publicly funded comparative effectiveness research measuring outcomes that matter to patients is now needed to assist women with fibroids and their physicians in making informed decisions in different clinical conditions. This could improve fibroid management enhancing health care quality, limiting health service overuse, and controlling costs.

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