

## Varicose veins and haemorrhoids: findings in the Oxford-FPA study

At recruitment to the Oxford-Family Planning Association (Oxford-FPA) study, oral contraceptive (OC) users were less likely to give a history of hospital treatment for varicose veins (VVs) than users of other contraceptive methods. Adjusted for age and parity, 1.6% of OC users gave such a history compared with 2.3% of diaphragm users and 3.9% of intrauterine device (IUD) users. We have examined the occurrence of VVs during follow-up in relation to various factors, including OC use. For comparison, we also analysed the data on haemorrhoids, a condition responsible for hospital referral with similar frequency at recruitment (about 0.4%) among the three contraceptive groups.

The Oxford-FPA study includes 17 032 women who, when recruited between 1968 and 1974, were married and aged 25–39 years; 56% were using OCs, 25% a diaphragm and 19% an IUD.<sup>1</sup> During personal follow-up, which continued until 1994 for most women,<sup>2</sup> among other items, data were recorded on contraceptive method changes and hospital referrals. In the present analysis, event rates were based on woman-years of follow-up.<sup>1</sup> Rate ratios (RRs) and 95% confidence intervals (CIs) were estimated as described by Breslow and Day.<sup>3</sup>

In the VV analysis, we excluded women with an admission history of this condition. We also excluded those with a 'thrombophlebitis' admission history (0.9% OC users, 4.3% diaphragm users, 8.0% IUD users). It should be noted that our enquiry about a 'thrombophlebitis' history was not limited to hospital referrals; even so we found higher rates than anticipated and the relationship with contraceptive method was very strong. In the haemorrhoid analysis we excluded only those with an admission history of this condition.

A total of 628 women were referred to hospital for VVs. Referral was unrelated to social class, smoking, body mass index (BMI) and body weight. RRs increased with age (55+ compared with 25–29 years, RR 2.0, 95% CI 1.2–3.3), with parity (parity 3+ compared with parity 0, age-adjusted RR 3.2, 95% CI 2.1–5.3) and with height (67+ compared with up to 60 inches, age-adjusted RR 2.8, 95% CI 1.8–4.6). Table 1 shows that RRs were also negatively associated with OC use. This was confined to ever-use of OCs compared with never-use; there was no suggestion of any relationship with duration of OC use.

Hospital referral for haemorrhoids involved 267 women. Referral was

**Table 1** Varicose veins and haemorrhoids in relation to total duration of oral contraceptive use\*

Total duration of OC use (months)	Varicose veins			Haemorrhoids		
	Cases (n)	RR	95% CI	Cases (n)	RR	95% CI
Non-user	315	1	–	115	1	–
≤12	11	0.5	0.2–0.9	12	1.5	0.7–2.7
13–24	20	0.8	0.5–1.2	7	0.7	0.3–1.5
25–48	47	0.7	0.5–0.9	19	0.7	0.4–1.2
49–72	54	0.8	0.6–1.0	34	1.2	0.8–1.8
73–96	34	0.6	0.4–0.8	23	1.0	0.6–1.5
97–120	61	0.8	0.6–1.0	32	1.2	0.8–1.7
121+	86	0.8	0.6–1.0	25	0.6	0.4–1.0
All durations of use	628	0.7	0.6–0.8	267	0.9	0.7–1.2

\*RRs for varicose veins adjusted for age, parity and height. RRs for haemorrhoids adjusted only for age. CI, confidence interval; OC, oral contraceptive; RR, rate ratio.

unrelated to parity, social class, smoking, BMI, body weight and height. RRs increased with age (55+ compared with 25–29 years, RR 2.6, 95% CI 1.1–6.4). Referral was unrelated to OC use (Table 1).

In conclusion, our prospective data on referral for VVs showed the expected positive relationships with advancing age and parity. It is of interest that the only association with body size concerned height. The negative association between OC use and VVs was unsurprising. Thus our admission question about hospital referral permitted little control for selection in our prospective analyses. Doubtless many women had VVs not leading to hospital referral but which still influenced the clinic doctor's recommendation about contraceptive method. The absence of any association between VVs and duration of OC use strongly suggests an effect of selection and certainly does not support the idea of a protective effect of OC use against VVs.

Data on haemorrhoids were included to provide a 'control' analysis. The absence of any association with OC use supports our conclusion about the data on VVs. Data on venous thromboembolism in the Oxford-FPA study have been published elsewhere.<sup>4</sup>

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### Competing interests

None.

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