Risk of endometrial cancer after use of fertility drugs

Dear Sir,

Infertility and subsequent fertility treatments have been suggested as risk factors for female hormone-related cancers (Meirow and Schenker, 1996). Several studies have investigated cancer incidence in infertile women who have been exposed to fertility drugs, suggesting a possible excess risk for ovarian cancer and controversial data for endometrial and breast cancer (Whittemore *et al.*, 1992; Franceschi *et al.*, 1994; Modan *et al.*, 1998; Ricci *et al.*, 1999). An Australian cohort study by Venn *et al.* (1999) found a significant excess of uterine cancer risk in infertile women not treated with fertility drugs. In a cohort study conducted in Israel, Modan *et al.* (1998) showed that the standardized incidence ratio for endometrial cancer was higher in the treated than in the untreated group, although the difference was not significant.

Table I. Odds ratios* (OR) with 95% confidence interval (CI) of developingendometrial cancer by fertility drugs use. Milan, Italy 1983–1988

	Cases n (%)	Controls <i>n</i> (%)	OR (95% CI)
Use of fertility drugs			
No	566 (99.6)	1779 (99.6)	1**
Yes	2 (0.4)	8 (0.4)	0.8 (0.2–4.3)

*Estimates from multiple logistic regression models including terms for age, education, parity, body mass index, oral contraceptive and hormonal replacement therapy use.

**Reference category.

To provide further information on the association between endometrial cancer risk and fertility drugs, we analysed data from a case-control study conducted in northern Italy between 1983 and 1988, whose general design has already been described (Parazzini *et al.*, 1991). Cases included 568 women aged <75 years with histologically confirmed endometrial cancer diagnosed within the year preceding the interview. Controls included 1787 women residing in the same area, who had been admitted for acute non-neoplastic, non-gynaecological conditions to the same network of hospitals.

Two (0.4%) cases and eight (0.4%) controls reported ever use of fertility drugs: the corresponding odds ratio, after allowance for age, education, parity, body mass index, oral contraceptive and hormonal replacement therapy use was 0.8 (95% confidence interval 0.2–4.3). The two cases reporting fertility drug use were treated >10 years before diagnosis of endometrial cancer. Consequently, our data do not provide meaningful information on the time-risk relation, nor on type of treatment.

Despite the low frequency of use, and hence the wide confidence interval, our findings indicate that fertility drugs are not a major risk factor for endometrial cancer in Italy.

References

- Franceschi, S., La Vecchia, C., Negri, E. et al. (1994) Fertility drugs and risk of epithelial ovarian cancer in Italy. Hum. Reprod., 9, 1673–1675
- Meirow, D. and Schenker, J.G. (1996) The link between female infertility and cancer: epidemiology and possible etiologies. *Hum. Reprod.*, *Update*, 2, 63–75
- Modan, B., Ron, E., Lerner-Geva L. et al. (1998) Cancer incidence in a cohort of infertile women. Am. J. Epidemiol., 147, 1038–1042
- Parazzini, F., La Vecchia, C., Negri, E. et al. (1991) Reproductive factors and risk of endometrial cancer. Am. J. Obstet. Gynecol., 164, 522–527
- Ricci, E., Parazzini, F., Negri, E. et al. (1999) Fertility drugs and the risk of breast cancer. Hum. Reprod., 14, 1653–1655
- Venn, A., Watson, L., Bruinsma, F. et al. (1999) Risk of cancer after use of fertility drugs with in-vitro fertilisation. Lancet, 354, 1586–1590
- Whittemore A., Harris R., Intyre J. and the Collaborative Ovarian Cancer Group. (1992) Characteristics relating to ovarian cancer risk: collaborative analysis of 12 case-control studies: II, invasive epithelial ovarian cancers in white women. Am. J. Epidemiol., 136, 1184–1203

Fabio Parazzini^{1,3}, Elena Ricci¹, Cristina Rosa¹, Eva Negri¹ and Carlo La Vecchia² ¹Istituto di Ricerche Farmacologiche Mario Negri, 20157 Milano and ²Istituto di Statistica Medica e Biometria, Università degli Studi di Milano, 20133 Milano, Italy

³To whom correspondence should be addressed