

Cataract in older women exposed to hormone replacement

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In 2003–2004 there were 6 712 407 surgical procedures performed on the NHS in England, of which 457 382 (6.8%) were ophthalmological and 298 404 (4.4%) were cataract operations. The mean age of cataract surgery patients was 75 years and 62% were female, indicating that around 185 000 cataract operations were performed in older women during the year.¹ The prevalence of current Hormone Replacement Therapy (HRT) use among women in England aged 45–64 years in 1992 was 15%, with the prevalence of long-term use being 10%.² Women who were using HRT just over a decade ago will now have reached an age where many can be expected to be requiring cataract surgery. A full understanding of both the health benefits and risks of HRT use requires a knowledge of short- and long-term desired and unwanted effects. Age-related cataract mostly develops over a period of years with multifactorial personal, socioeconomic, dietary, lifestyle, environmental, health, and genetic risk factors having been implicated for nuclear, cortical, and posterior subcapsular cataract.^{3–10}

Evidence for a possible protective effect of oestrogen on cataract formation has been mixed.^{8,11–14} In this issue, Aina *et al*¹⁵ have provided fresh evidence in favour of a small protective effect in a population-based sample of women from the UK general practice research database.¹⁵ In addition, their large age-matched case–control study has confirmed a range of established risk factors for cataract (diabetes, hypertension, glaucoma, and systemic steroid). Also of interest is that aspirin use was observed to confer an increased risk, while body mass index, alcohol use, and smoking were not found to be associated with cataract. From a methodological point of view their study illustrates well the importance of adjustment for potentially confounding variables. At face value

their unadjusted analyses would suggest a possible increase in risk from HRT use, an effect which was however reversed to a significant protective effect following adjustment for the confounding influence of consultation rate. This reversal highlights the importance of a clear understanding of the methodological weaknesses inherent in observational studies, and the need to adjust for potential effect modifiers in a multivariable analysis. Likewise similar studies on different populations should be in broad agreement before observational evidence on risk associations is accepted. Associations found in cross-sectional studies of disease prevalence may suggest an effect,^{11,16} which later cannot be confirmed with longitudinal observation of incident (newly developed) disease in the same cohort.^{8,17} Selective survival may in certain circumstances be plausibly invoked to explain such shifting observations, but for the most part uncertainty remains. Of further interest to ophthalmologists would have been an analysis of the risk associations with subtypes of cataract, but these data were apparently not available in the data set used by Aina *et al*.

A full understanding of potential benefits and risks of widely used treatments is key to enabling patients to arrive at an informed judgement about their use. The debate around benefits and risks of HRT use will no doubt continue, with the results of the study by Aina *et al*¹⁵ offering some reassurance that from the point of view of cataract formation at least, this medication does not appear risky and may indeed confer a small protective effect.

References

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