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Increases in disease in Malayan war veterans' children may be misleading

The conclusions reached by Carran and Shaw [1] on the health of offspring of Malayan war veterans who served in 1948 to 1960 and live in Canterbury are likely to be incorrect and misleading. McBride and Schep [2] have already emphasised the weaknesses in this study, which uses data from a questionnaire sent not to the people concerned, but to their fathers, with only a 34% response rate, without any validation of the data, and without information on the attained ages of the offspring. As well as these issues, the comparison figures used are incorrect.

For breast cancer, 3 cases in 76 women were reported (4%); this is compared to a figure of 0.48% from a US source. But this comparison rate is an annual incidence rate, while the survey assessed any breast cancer occurring up to the time of the survey. This will give a cumulative incidence rate, dependent on age at diagnosis, age at the time of the survey, and calendar year (none of which are given). An approximate rate can be calculated from New Zealand incidence data;[3] the risk reaches 4% at age 50–55, and 8% by age 69. The 4% observed cumulative incidence may not be any greater than the usual rate.

For hypospadias, Carran and Shaw report a rate of 2 cases in 79 males, 2.5%, which they say was statistically significantly higher than comparison rates they use of 0.33% in 2000 and 0.30% in 2005. Perhaps they have included both male and female livebirths in the denominator. The correct national rate for 2000 is 0.65% (189 cases [4], which also includes a small number of epispadias cases, among 29,157 male livebirths [5]) and for 2005, 0.55% (162 cases among 29,546 male livebirths). The period over which the survey cases were born is not given. The 2000 to 2005 national rate is 0.65% (1125 cases among 173,177 male livebirths). Using that gives a relative risk is 3.90 with a 95% confidence interval of 0.99–15.3, which indicates that the rate of hypospadias in the survey is marginally statistically significantly higher than this national rate, but not to the extent cited by Carran and Shaw.

The calculations for cryptorchidism (or undescended tests) are similarly flawed; the correct rates are 2.13% (622 cases) in 2000 and 1.79% (529 cases) in 2005 [4]. Again using the national rate for 2000 to 2005, 1.78% (3427 cases among 173,177 male livebirths), the 4 cases recorded give a relative risk of 2.56 with a 95% confidence interval of 0.98–6.65, not quite statistically significantly increased.

So for both cryptorchidism and hypospadias, Carran and Shaw's data do show increased rates compared to the national data for 2000 and 2005, but the rates are based on very small numbers (4 and 2 cases); the excess is not quite statistically significant at the 5% level and so could be due to chance, and the potential for recall and selection bias in using questionnaire data only from the father, with a minority of subjects responding, is high. Time trends over the last 60 years could also affect the expected numbers; there have been recorded increases in both these defects, but these could be influenced by changes in recording [6]. For breast cancer the data has not been correctly analysed and no excess may be present.

A much better study is needed before conclusions are drawn. The conclusions of Carran and Shaw may be misleading, and may create unwarranted anxiety in veterans and their families.

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