

題名:A study on risk factors of male subfertility

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摘要:BACKGROUND: An association between male subfertility and an increased risk of testicular cancer has been proposed, but conflicting results of research on this topic have rendered this theory equivocal. To more precisely assess the association between subfertility and the risk of testicular cancer, we performed a systematic review of international epidemiologic evidence. PRINCIPAL FINDINGS: We searched the Medline database for records from January 1966 to March 2008 complemented with manual searches of the literature and then identified studies that met our inclusion criteria. Study design, sample size, exposure to subfertility and risk estimates of testicular cancer incidence were abstracted. Summary relative risks (RRs) with 95% confidence intervals (CIs) were calculated using the DerSimonian and Laird model. All statistical tests were two-sided. We identified seven case-control studies and two cohort studies published between 1987 and 2005. Analysis of the seven case-control studies that included 4,954 participants revealed an overall statistically significant association between subfertility and increased risk of testicular cancer (summary RR = 1.68, 95% CI: 1.22 to 2.31), without heterogeneity between studies ($Q = 8.46$, P heterogeneity = 0.21, $I(2)$ statistics = 0.29). The association between subfertility and testicular cancer was somewhat stronger in the United States (summary RR = 1.75, 95% CI: 1.01 to 3.02) than it was in Europe (summary RR = 1.53, 95% CI: 1.22 to 1.92). The source of the control subjects had a statistically significant effect on the magnitude of the association (population-based summary-RR = 2.15, 95% CI: 1.11 to 4.17; hospital-based summary--RR = 1.56, 95% CI:

0.93 to 2.61). After excluding possible cryptorchidism, an important confounding factor, we also found a positive association between subfertility and increased risk of testicular cancer (summary RR = 1.59, 95% CI: 1.28 to 1.98). These results were consistent between studies conducted in the United States and in Europe ($Q = 0.20$, P heterogeneity = 0.66). Of the two cohort studies that reported standardized incidence ratios, both reported a statistically significant positive association between subfertility and increased risk of testicular cancer. CONCLUSIONS: Our findings support a relationship between subfertility and increased risk of testicular cancer and apply to the management of men with subfertility, and prevention and diagnosis of testicular cancer.