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Review

Sexual Activity and Risk of Prostate Cancer: A Dose–Response Meta-Analysis

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Outline



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Abstract

Introduction

The role of sexual activity (SA) on prostate cancer (PCa) risk is still controversial.

Aim

To determine the associations among number of female sexual partners, age at first intercourse, ejaculation frequency (EF), and the risk of PCa.

Methods

A systematic literature search on MEDLINE, Cochrane Central Register of Controlled Trials, and Web of Science based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines was conducted to identify the relevant studies published before April 2018. We calculated the summary odds ratio (OR) and 95% CI to determine the association between SA and PCa.

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Results

A total of 21 case-control studies and 1 cohort study with 55,490 participants (14,976 patients and 40,514 controls) were included in this meta-analysis. Linear and significant dose–response associations were found among number of female sexual partner as well as age at first intercourse and PCa risk, an increment of 10 female sexual partners associated with a 1.10-fold increase of PCa risk (OR 1.10, 95% CI 1.01–1.21), and the risk of PCa was decreased by 4% for every 5-year delay in age at first intercourse (OR 0.96, 95% CI 0.92–0.99). Although no linear association was observed between EF and the risk of PCa, moderate EF (2–4 times per week) was significantly associated with a lower risk of PCa (OR 0.91, 95% CI 0.87–0.96).

Clinical Implications

Modification of SA factors would appear to be a useful low-risk approach to decreasing the risk of PCa.

Strengths & Limitations

This is the first dose–response meta-analysis performed to describe the association between SA and PCa risk. However, the direction of causality between SA and risk of PCa should be interpreted with caution because most included studies used case-control design.

Conclusion

Meta-analysis of the included studies indicated that men with fewer sexual partner numbers, older age at first intercourse, and moderate frequent ejaculation were associated with a significantly decreased risk of PCa.

Jian Z, Ye D, Chen Y, et al. Sexual Activity and Risk of Prostate Cancer: A Dose–Response Meta-Analysis. J Sex Med 2018;15:1300–1309.

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The first 2 authors contributed equally.

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