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Association of testicular microlithiasis with semen quality : a systematic review and a meta-analysis

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ADMINISTRATIVE INFORMATION

Support - No.

Review Stage at time of this submission - Data extraction.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 March 2024 and was last updated on 18 March 2024.

INTRODUCTION

Review question / Objective The relationship between testicular microlithiasis and male semen quality. The impact of different types of testicular microlithiasis on male semen quality.

Condition being studied Testicular microlithiasis (TM) usually represents an incidental finding during a scrotal ultrasonography (US) examination which shows a typical speckled pattern of the testicular parenchyma with multiple, tiny, bright non-shadowing echogenic foci, involving one or both testes, due to intratubular microcalcifications. It is not yet known whether Testicular microbiology has an impact on semen quality in male reproductive health.

METHODS

Search strategy We conducted a comprehensive search of the literature in the web of science, pubmed, cochrane library, embase and scopus

electronic databases using subject words plus free words. The search strategy used the relevant keywords, such as testicular microlithiasis, semen analysis, semen analyses, semen quality, sperm, spermatozoa, and combined these keywords together using the appropriate boolean operators (e. g., and, or). Web of Science, PubMed, Cochrane Library, Embase and Scopus.

Participant or population Male diagnosed with testicular microlithiasis by b- ultrasound. Excluding those with TM and other testicular diseases, such as testicular cancer, testicular atrophy, absence of vas deferens, varicocele, etc. And patients with known major infertility factors (genetic diseases (chromosomal abnormalities, such as 47XXY and Y chromosome microdeletions) and various causes of azoospermia.

Intervention Testicular microlithites group.

Comparator Normal male group.

Study designs to be included Queue studies, case-control studies, cross-sectional studies, and control studies.

Eligibility criteria Inclusion criteria: (1) men diagnosed with TM by b- ultrasound.(2) Data on the following results can be obtained: semen volume, sperm concentration, percentage of progressive active sperm (pr), percentage of normal form sperm (3) Cohort studies, case-control studies, cross-sectional studies, and control studies.(4) Only studies published in English were included. Exclusion criteria: 1. In addition to tm, it is accompanied by other testicular diseases, such as testicular cancer, testicular atrophy, missing vas deferens, varicocele and other diseases.2. Patients with azoospermia with known major infertility factors (genetic diseases [chromosomal abnormalities, such as 47 xxy and y-chromosome microdeletions] and azoospermia with various causes 3. Case analysis, review, systematic evaluation, animal experiments, conference abstracts, etc.

Information sources We conducted a comprehensive search of the literature in the web of science, pubmed, cochrane library, embase and scopus electronic databases using subject words plus free words. The search strategy used the relevant keywords, such as testicular microlithiasis, semen analysis, semen analyses, semen quality, sperm, spermatozoa, and combined these keywords together using the appropriate boolean operators (e. g., and, or).Web of Science,PubMed,Cochrane Library,Embase and Scopus.WEB OF SCIENCE、PubMed、Cochrane Library、Embase and Scopus.

Main outcome(s) Testicular volume, semen quality, such as concentration, vitality, quantity.

Quality assessment / Risk of bias analysis The risk of bias assessment will be evaluated using the Cochrane Bias Risk Tool NOS, and differences will be resolved through consensus through negotiation.

Strategy of data synthesis The data extracted from literature will be processed using Rev Man 5.3 software.

Subgroup analysis If available, TM will be classified into LTM and CTM.

Sensitivity analysis Sensitivity analysis was performed after removing the data one by one using Rev Man 5.3 software.

Country(ies) involved China (The Second People's Hospital of Yibin).

Keywords testicular microlithiasis; semen quality; meta-analysis.

Contributions of each author

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