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Urinary Tract Endometriosis: Literature from 1976 to 2023

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ADMINISTRATIVE INFORMATION

Support - No financial support.

Review Stage at time of this submission - Completed but not published.

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 12 February 2024 and was last updated on 12 February 2024.

INTRODUCTION

Review question / Objective To review and summarize the epidemiology, diagnostic modalities, and treatment methods of urinary tract endometriosis.

Rationale Endometriosis is the presence of active endometrial gland and stroma outside the uterine cavity. This disease has significant impact on the quality of life of affected women. Endometriosis manifests in a number of painful ways including dysmenorrhea, dyspareunia, and dysuria. 1-2% of endometriosis cases occur in the urinary tract, known as urinary tract endometriosis (UE). UE is prevalent in 0.3-12% of all endometriosis cases and 19-53% of deep infiltrating endometriosis. UE, an infrequent finding, presents with diverse clinical entities in terms of etiology, symptoms, and consequences on renal function. Consequently, diagnosis and treatment is challenging with regard to alleviating symptoms and preserving the renal function within reasonable morbidity levels.

Condition being studied Endometriosis involving the bladder, ureters, kidneys, and urethra.

METHODS

Search strategy Retrospective literature systematic review of select articles on urinary tract endometriosis by using databases including PubMed, Ovid, Embase, MEDLINE, and Cochrane.

Participant or population Published articles between 1976 to March 2023.

Intervention N/a.

Comparator N/a.

Study designs to be included Systematic review.

Eligibility criteria We did not attempt to identify unpublished articles or abstracts. We also excluded articles that did not explore issues specific to the UE. In addition, we excluded articles that reported redundant findings.

Information sources Electronic databases including PubMed, Ovid, Embase, MEDLINE, and Cochrane. We did not attempt to identify unpublished articles or abstracts, and we did not contact study authors.

Main outcome(s) Bladder endometriosis is the most common (80-85%) and has specific symptoms. Ureteral endometriosis is the second most common (9-23%) with non-specific symptoms. It is up to 50% asymptomatic and often complicated with hydronephrosis. Renal (<1-2%) and urethral (<1-2%) endometriosis are less prevalent with less available data.
Most suitable diagnostic modalities to detect UE are MRI, US, and cystoscopy. Proper initial surveillance measures maximize the preparation for more effective Minimally Invasive Surgery excision plans in multidisciplinary settings, which is a gold standard for early surveillance detection, and leading to definitive treatment with excellent outcomes. Accurate follow-up evaluation minimizes progression and recurrence of UE.

Quality assessment / Risk of bias analysis There were no specific tools used to assess risk of bias.

Strategy of data synthesis Data were extracted from reviewed articles, entered in a spreadsheet to be reviewed by all authors, then presented in tables. No specific tools were used for tabulation. Any data of question were discussed among the authors.

Subgroup analysis No subgroup analysis performed. The emphasis of this review is summarizing the epidemiology, diagnostic modalities, and treatment methods of urinary tract endometriosis.

Sensitivity analysis No sensitivity analyses were performed.

Language restriction English.

Country(ies) involved United States.

Keywords bladder; ureter; kidney; urethra; endometriosis.

Contributions of each author
Author 1 - Soorena Fatehchehr - Extracted & reviewed data, drafted the manuscript.
Author 2 - Maggie Jiang - Extracted & reviewed data, drafted the manuscript.
Author 3 - Susan Nasab - Extracted & reviewed data, drafted the manuscript.