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CASE REPORT PEER REVIEWED | OPEN ACCESS

Ureaplasma: An overlooked pathogen

Beatrice A Burke

ABSTRACT

Ureaplasma is a less recognized pathogen found in women of all ages. Women with unexplained bladder pain, urethritis, or hematuria should be screened with an appropriate culture media; standard urine culture is not sufficient. When given antibiotics effective against ureaplasma (Doxycycline twice daily for at least a week) patients usually experience relief of symptoms within several days.

Keywords: Bladder pain, Hematuria, Ureaplasma, Urethritis, Urinary tract infection

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INTRODUCTION

Ureaplasma may be more prevalent and problematic than is currently appreciated by the medical community. It has been stated in a recent literature review that knowledge of the organism is incomplete and further research, particularly in women's health care, is warranted [1]. Ureaplasma species are more difficult to culture and they are resistant to standard antimicrobial therapy for urinary tract infection [1]. Testing is warranted in cases of otherwise unexplained urethritis and hematuria [2]. Testing is best done by a urethral swab for polymerase chain reaction (PCR) analysis [1].

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CASE REPORT

A 19-year-old college student was seen in our office in June 2018. She reported intermittent symptoms of painful urinary tract infection dating from March 2018. While at school she had received two courses of Macrobid antibiotic and one of Amoxicillin without complete relief. She had been seen urgently by her pediatrician on return from college in May 2018 for ongoing urethral and bladder pain. She was screened for bacterial urine infection; she was sexually active and was also screened for common sexually transmitted infections including chlamydia and gonorrhea. All results were negative; however, red blood cells had been noted on urinalysis.

She was seen in our practice and also sent to urologist for further evaluation. Following our suggestion ureaplasma urine culture was ordered by the urologist through the local hospital laboratory.

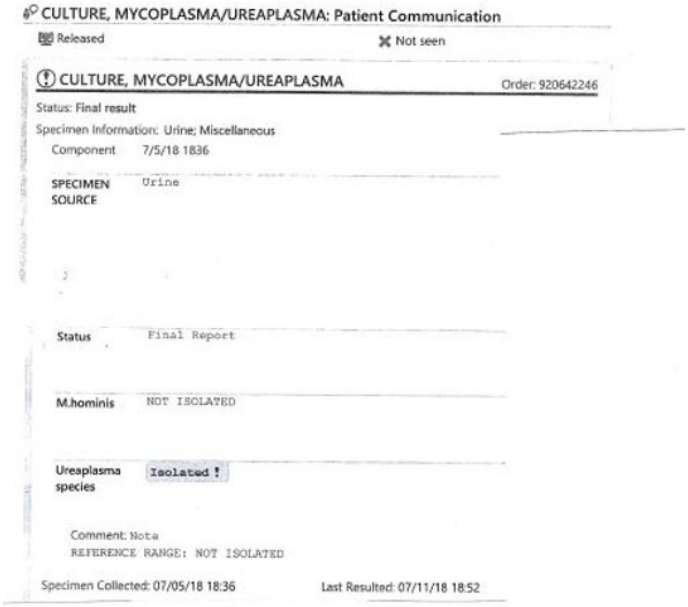
The patient went for testing but unfortunately the specimen was not processed properly and was canceled. She did not return to the laboratory for a repeat test.

She subsequently called in extreme pain in early July with worsening symptoms. She was advised to go to the laboratory immediately for the ureaplasma test. The laboratory was called as she was on her way and proper specimen processing for this less common test was assured. The result subsequently came back as positive for ureaplasma (Figure 1). She was treated with twice daily Doxycycline antibiotic for ten days and was cured of all symptoms.

A local gynecology specialist had a similar case of a patient (also a college student) with prolonged symptoms and months long delayed diagnosis for ureaplasma.

Since this case we have selectively screened more patients for the condition. Among the positive cases whose symptoms improved after diagnosis and treatment are the following:

- A young woman with irritable bladder symptoms who was first given anticholinergic by urologist.
- A pregnant patient with a stable relationship of about ten years duration who developed severe bladder spasms at the end of pregnancy. Azithromycin was used rather than Doxycycline due to pregnancy.
- Otherwise unexplained hematuria in menopausal patient.


CULTURE, MYCOPLASMA/UREAPLASMA: Patient Communication

Released Not seen

CULTURE, MYCOPLASMA/UREAPLASMA Order: 920642246

Status: Final result

Specimen Information: Urine; Miscellaneous

Component 7/5/18 1836

SPECIMEN SOURCE Urine

Status Final Report

M.hominis NOT ISOLATED

Ureaplasma species Isolated !

Comment: Nota

REFERENCE RANGE: NOT ISOLATED

Specimen Collected: 07/05/18 18:36 Last Resulted: 07/11/18 18:52

Figure 1: Urine laboratory result, July 11, 2018.

DISCUSSION

Among the problems and issues are the following:

- Standard urine cultures are not diagnostic. The best and easiest screen is a viral/mycoplasma swab of the urethral meatus [1]. Many primary care offices may not carry this culture media. Urine ureaplasma culture by the lab (without office collection) is an option but without proper processing can lead to delay.
- Blood in the urine of girls and women should never be assumed to be "normal" or from menstrual flow, even when white blood cells are absent. And even if urine culture is normal the presence of blood should be evaluated [2, 3].

There is evidence that the organism is commonly present in the sexually active population, and in many cases may be asymptomatic [4]. Seemingly in the above individuals it caused painful symptoms and hematuria. The individuals' susceptibility may be due to any of a variety of factors (new exposure, numbers of organism present, specific serotypes of ureaplasma present [2], and possibly changes in immunity). Attention should also be given to treatment of sexual partner [5].

CONCLUSION

There needs to be greater awareness and screening of ureaplasma in patients with resistant bladder symptoms. Undiagnosed cases may lead to chronic bladder inflammation, pain, and other unpleasant urinary tract symptoms. Hopefully, following this report that there will be increased awareness and diagnosis of this pathogen, and relief for patients who are impacted.

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Author Contributions
Beatrice A Burke – Conception of the work, Design of the work, Acquisition of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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The corresponding author is the guarantor of submission.

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Author declares no conflict of interest.

Data Availability
All relevant data are within the paper and its Supporting Information files.

ABOUT THE AUTHORS

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