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Highlighting clinical need in diagnosing *Mycoplasma genitalium* infection: use of a modified Delphi approach to obtain a UK perspective

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Background

Despite being a recognised genito-urinary (GU) pathogen for two decades in men [1] and more recently in women [2]; commercial *Mycoplasma genitalium* (MG) testing has not been available until recently [3, 4]. Commercial availability of MG-testing presents an opportunity for improving the diagnostic and management pathways of several associated clinical syndromes including urethritis in men and cervicitis and pelvic inflammatory disease (PID).

Objectives

There is a clear need to identify MG infection [5] and treat correctly to avoid inappropriate or sub-optimal treatment, which is associated with the development of resistance [5]. This group has developed a set of consensus statements aimed at informing clinicians of the views of their peers so that a robust approach may be recommended for the management of MG infection.

Methodology

A group of experts in GU medicine and microbiology (this group) met in order to examine issues facing clinicians in the diagnosis and management of MG infection. All of the group are either currently or were previously involved in MG diagnostic research. Discussion identified 6 themes including; Rationale for MG-testing, Selection of Patients, Diagnostic Strategy, Cost Effectiveness, Antimicrobial Resistance / Antimicrobial Stewardship and Availability of MG-testing. 32 consensus statements were developed and circulated to clinicians and laboratory staff who were asked to evaluate their level of agreement with each statement; 75% agreement was set as the threshold for defining consensus for each statement. A modified Delphi approach was used and high levels of agreement obviated the need to test the original statement set further.

Results

60 respondents completed questionnaires. 27 (84.4%) of the statements achieved greater than 75% agreement with 19 (59.4%) achieving greater than 90% agreement across the respondent group. Five of the statements (15.6%) failed to meet the 75% agreement threshold (Figure 1). Of the 60 completed questionnaires from respondents, the majority (48) were from sexual health consultants, representing a sample of approximately 12% of the sexual health consultant population in the UK. The views of the specialty were therefore well sampled through this exercise.

Recommendations

- More evidence is needed for MG as a cause of unexplained and persistent discharge in women and as a cause of proctitis in MSM and in women
- A UK MG guideline is likely to facilitate the introduction of targeted MG-testing and AMR testing in clinical practice.
- Test of cure is required following the use of azithromycin, and moxifloxacin used for further treatment if required
- Clinicians should ensure that their local laboratories meet the requirements of accepted guidelines for MG-testing

Table 1. Individual Statements and Overall Scores

Ref:	Topic:	Statement:	Score (%)
1	Rationale for <i>M. genitalium</i> testing	<i>M. genitalium</i> is a proven pathogen for urethritis in men	98.3
2		<i>M. genitalium</i> may cause symptoms such as urethral discharge, dysuria and urethral discomfort in men	100
3		Effective targeted treatment for <i>M. genitalium</i> is available and may differ from standard urethritis treatment	93.3
4		<i>M. genitalium</i> is a proven pathogen for cervicitis and may be associated with post coital bleeding	89.8
5		<i>M. genitalium</i> is a proven pathogen for PID in women	83.1
6		<i>M. genitalium</i> is a proven but uncommon pathogen for vaginal discharge and irritation in women	56.7
7		<i>M. genitalium</i> is a proven pathogen for proctitis in MSM	56.1
8	Selection of Patients	Men with symptoms suggestive of urethritis should be tested for chlamydia, gonorrhoea and <i>M. genitalium</i>	85
9		Asymptomatic patients should not be tested for <i>M. genitalium</i>	76.7
10		Current sexual contacts of those with confirmed <i>M. genitalium</i> should be tested regardless of symptoms	81.7
11		Women with a clinical diagnosis of PID should be tested for chlamydia, gonorrhoea and <i>M. genitalium</i>	78.3
12		MSM presenting with proctitis should be tested using NAAT for chlamydia, gonorrhoea, herpes and <i>M. genitalium</i>	65
13		Testing for <i>M. genitalium</i> should be considered in women with unexplained, persistent vaginal discharge	79.7
14		Patients who are chlamydia positive should be tested for <i>M. genitalium</i>	50.9
15	Diagnostic Strategy	Where possible all men with symptoms of urethritis should be assessed with urethral microscopy	95
16		Where possible all men with symptoms of urethritis should be tested for chlamydia, gonorrhoea and <i>M. genitalium</i> concurrently	84.7
17		Where possible all men with confirmed urethritis on microscopy should be tested for chlamydia, gonorrhoea and <i>M. genitalium</i> concurrently	88.3
18		It is likely that targeted testing of symptomatic patients for <i>M. genitalium</i> will be cost effective	81.4
19		More evidence is needed regarding the cost effectiveness of <i>M. genitalium</i> screening	82.8
20		It is unlikely that testing asymptomatic patients for <i>M. genitalium</i> will be cost effective	68.1
21		Individuals identified as <i>M. genitalium</i> positive should have a test of cure performed to confirm clearance	66.3
22	Antimicrobial Resistance / Antimicrobial Stewardship	Confirmed <i>M. genitalium</i> should be treated specifically according to the result of any resistance testing or the knowledge of local resistance patterns	96.3
23		Detection of any macrolide resistance will assist with the selection of prescribed therapy and likelihood of clearance	96.3
24		Treatment of <i>M. genitalium</i> should proceed irrespective of the availability of resistance testing	78.3
25		Antimicrobial stewardship is important and best informed by resistance testing	98.3
26		Detection of quinolone resistance may assist with the specificity of prescribed therapy and likelihood of clearance	90
27		Moxifloxacin should be reserved for those with a confirmed diagnosis of <i>M. genitalium</i>	93.2
28		<i>M. genitalium</i> infection (where antibiotic resistance status is not known) should be treated with azithromycin 500mg then 250mg for 4 days	83.1
29	Availability of <i>M. genitalium</i> testing	Men with NGU found to be <i>M. genitalium</i> positive with persistent urethritis following doxycycline treatment should be treated with a combination of azithromycin 500mg then 250mg for 4 days and metronidazole 400mg bd 5 days.	77.6
30		Use of azithromycin 1g stat is likely to lead to high levels of macrolide resistance in <i>M. genitalium</i> and should be avoided where possible	94.9
31		All level 3 GUM clinics in the UK should have access to <i>M. genitalium</i> testing	98.3
32		All level 3 GUM clinics in the UK should have access to <i>M. genitalium</i> resistance testing	96.6

Figure 1. Plot of Total Agreement Scores

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