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Hospital Universitario Puerta de Hierro Majadahonda

P-360

Treatment of *Mycoplasma genitalium* and detection of macrolide resistance mutations (23S rRNA) in PHIV and HIV-negative individuals

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BACKGROUND

- *Mycoplasma genitalium* (MG) is rapidly developing resistance to antimicrobials.
- Diagnostic tests must include detection of **macrolide resistance mutations** (MRM) in 23S rRNA to guide treatment.
- Our **objective** is to evaluate the characteristics of MG cases and the detection of macrolide resistance mutations (23S rRNA).

MATERIAL AND METHODS

- A **retrospective observational** study of MG cases from 1 March 2023 to 31 January 2024 (**11 months**) was conducted.
- Statistical analyses were performed using STATA v12.0.

RESULTS

Prevalence

- **64** patients were identified with a positive NAAT for MG:
  - **208 PrEP-HIV users** (100% STI screening). MG prevalence: **16.8%** (35/208).
  - **135 patients referred from emergency services** for possible STIs or risky sexual behaviour (80% STI screening). MG prevalence: **10.3%** (14/135). Excludes people living with HIV and those on PrEP.
  - **PHIV** (N=750). MG NAAT detected in 15 PLHIV but calculating a denominator is challenging as screening is not routinely performed.

Table 1. Epidemiological characteristics

Characteristics	Details
Gender	Male 90.63% (58), Female 9.38% (6)
Age (median)	31.5 years (IQR 27-42.5)
MSM (among males)	78.13% (50), 82.8% (48/58)
Country of Origin	Spain 72%, Latin America 23.5%, Others 4.5%
PrEP-HIV Users	Daily PrEP 54.7%, On-demand PrEP 79.5%, Duration on PrEP (months): 9 (IQR 4-21)
PLHIV (previously known)	Duration of HIV infection (years): 8 (IQR 1-12), AIDS 20%, On ART 100%, Virally suppressed (HIV VL <50 copies/ml) 71.4%
Chemsex	14.75%
Slamsex	1.67%

Coinfections

- We did not identify hepatitis C or B. One patient was simultaneously diagnosed with primary **HIV** infection.
- There was a high coinfection rate with **Chlamydia** (37.5%). Gonorrhoea was identified in 22% of cases.

Detection of macrolide resistance mutations in 23S rRNA

- Performed: 81.4%
- No Resistance: 36.7%
- **Resistance: 59.3%**
- Invalid: 4%
- No Resistance in Symptomatic/Asymptomatic: 34.8%/38.5%, P=0.96
- No Resistance in Rectum/Urethritis: 25%/35%, P=0.56
- Negative NAAT Confirmed After Treatment: 40%
- Days Until Negative NAAT After Treatment (median): 90 (IQR 16-90)

Symptoms

- **46,7%** of patients showed different **symptoms** of active infection. Localisation of symptomatic MG infection:
- Rectum 31%
- **Urine/Urethra** 55%
- Rectum and Urine/Urethra 3.5%
- Pelvic Inflammatory Disease 10.5%

Patients who received moxifloxacin after doxycycline despite macrolide being useful according to 23S rRNA: **24%**

90% received sequential treatment with doxycycline and moxifloxacin; 8.3% with doxycycline followed by azithromycin, 1.7% doxycycline only

CONCLUSIONS

- Observed MG prevalence is higher (14%) than expected.
- Symptomatic MG achieved almost half of all positive NAAT.
- Two thirds showed 23S rRNA macrolide resistance mutations (MRM).
- 24% could receive azithromycin after doxycycline instead of moxifloxacin if MRM test was available before.