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Sexually transmitted infections in Portuguese adolescents[☆]



Infecciones de transmisión sexual en adolescentes portuguesas

Dear Editor:

Sexually transmitted infections (STIs) are a global public health problem, with evidence of an alarming increase in their incidence in adolescents. These infections can have long-term repercussions of health, including infertility, pelvic inflammatory disease or cervical, oropharyngeal, or rectal cancer in case of infection by some strains of human papillomavirus, and adverse pregnancy and birth outcomes.¹

Sexually transmitted infections, overall and in the paediatric population, are a global concern. Asking adolescents about their sexual activity and identifying risk factors for STIs are essential for the diagnosis of these infections, which are often asymptomatic. Also, when adolescents present with genitourinary complaints, it is important to consider the possibility of an STI before prescribing empirical antibiotic therapy.

Analysing the prevalence of STIs prevalence and their association with sexual behaviour in adolescents is essential to guide the development of strategies to reduce the incidence of these infections and promote sexual and reproductive health.^{2,3}

We conducted a retrospective study that included all *Neisseria gonorrhoeae* and *Chlamydia trachomatis* infections diagnosed in adolescents aged up to (and including) 18 years between January 1st, 2015, and December 31st, 2019 in a Portuguese tertiary care hospital.

We identified 33 cases, of which 24 (72.7%) were diagnosed in the last 3 years. **Table 1** presents the demographic and clinical characteristics of these patients. **Table 2** sum-

marises the data for the risk factors for STI analysed in the study.

There were 20 cases (60.6%) of infection by *Neisseria gonorrhoeae*, of which 8 (40%) were cases of coinfection with *Chlamydia trachomatis*. The samples used for diagnosis were of urine (16), urethral discharge (12), cervical swab (8) and conjunctival swab (1). The diagnosis was made by molecular testing (30), culture (7) or both (4). Of the 11 cases of *N. gonorrhoeae* detected by culture, 6 were further investigated with an antibiogram, which identified

Table 1 Demographic and clinical characteristics of the sample.

	n (%)
Sex	
Male	21 (63.6%)
Female	12 (36.4%)
Age, years (median, 17.5; range, 13.4–18.4)	
10–14	1 (3%)
15–18	32 (97%)
Clinical manifestations	
Urethritis	17 (51.5%)
Vaginal discharge	3 (9%)
Lower urinary tract symptoms	3 (9%)
Eye discharge	1 (3%)
Pelvic inflammatory disease	1 (3%)
Vaginal bleeding	1 (3%)
Asymptomatic	7 (21.2%)

Table 2 Risk factors for sexually transmitted infections (STIs).

Risk factor	n (%)
Lack of regular condom use for birth control	26 (78.8%)
New or recent sexual partner (last 60 days)	7 (21.2%)
Alcohol and/or drug abuse	4 (12.1%)
Men who have sex with men	4 (12.1%)
Previous STIs	4 (12.1%)
Multiple sex partners (>2)	3 (9%)

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resistance to penicillin and tetracycline in 1 case, and no isolates resistant to cephalosporins or azithromycin.

Testing to identify other STIs (by hepatitis B and C virus, human immunodeficiency virus [HIV] type 1 and 2, and syphilis) was performed in every case. This led to diagnosis of a new case of HIV-1 infection, without detection of any other diseases.

During the follow-up, there was evidence of recurrence or a new STI in 3 patients (9%).

Although STIs are a global public health problem, the data on STIs in adolescents in Portugal is currently scarce, and there is no established protocol for screening STIs in our country. It is important to consider that our study on STIs was conducted in a tertiary care hospital that has a paediatric infectious diseases unit that receives patients admitted from the emergency department.

The most frequent clinical manifestation was urethritis, one of the main clinical presentations of STIs. However, we ought to highlight that there was a significant number of asymptomatic infections (21.2%), which reinforces the importance of proper screening and partner treatment. Furthermore, given high proportion of female adolescents with asymptomatic *Chlamydia* infections and being aware that only a small part of existing infections are actually diagnosed, we ought to consider the potential usefulness of establishing a programme for screening urine for *Chlamydia* infection, which does not currently exist in Portugal.

Our study found that an alarmingly high percentage of adolescents did not use condoms routinely for protection against STIs (78.8%), as described in another study previously conducted in Portugal.² In our study, we also found significant results for other risk factors for STIs, which are important aspects to target in preventive strategies.

Given that recurrence or reinfection occurred in 9% of cases in our study, we must stress the importance of retesting patients after treatment for the STI and offering partner notification and treatment services.

We want to highlight the importance of paediatricians as a source of information on sexuality and sexual and reproductive health for adolescents; furthermore, paediatricians should also play a significant role in providing education for the promotion of healthy relationships and the prevention of STIs and to encourage vaccination, in addition to identifying and treating undiagnosed infections and offering care to partners.⁴ Other efforts, such as sexual education and social media campaigns, should also be prioritised in order to prevent STIs in adolescents.

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