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Resistance to antibiotics in *Neisseria gonorrhoeae* in Russia: There is something to worry about

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BACKGROUND

In Russia, the incidence of gonorrhea was estimated at more than 160 thousand cases in 1997. The real figures might easily be much bigger because the self-treatment is widespread and anyone can get the antibiotics from pharmacies with no prescription.

The diagnostic procedures for gonococcal infection do not include culture for *N.gonorrhoeae* and are based on Gram- or methylene blue stained urethral or cervical discharge.

No data on antimicrobial resistance of gonococci in Russia was available before

OBJECTIVES

- Evaluation of the resistance in *N.gonorrhoeae* isolated from outpatients to the most frequently used for the treatment of gonorrhea antimicrobials
- Developing of recommendations for the management of gonococcal infections based on data obtained

MATERIALS & METHODS

Seventy seven *N.gonorrhoeae* strains isolated from male outpatients visited Smolensk Regional STD Clinic in 1998 have been included in the study

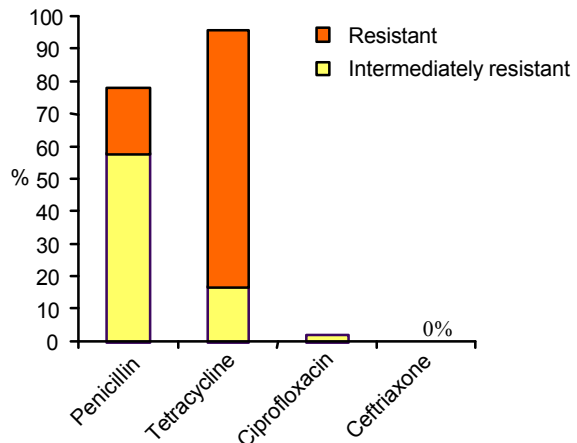
Direct cultures of urethral discharge were made on plates containing GC Agar with Dried Bovine Haemoglobin enriched with PolyVitex. Plates were placed in CO₂ incubator for 24-48 hours at 35°C. Identification of suspected colonies was based upon the presence of Gram-negative Oxidase-positive diplococci. All gonococci were then kept frozen at -70°C

Susceptibility testing to four antimicrobials (penicillin, tetracycline, ciprofloxacin and ceftriaxone) was made by Agar Dilution Method according to NCCLS Recommendations, 1998

RESULTS

	S %	I %	R %	MIC ₉₀ mg/l	MIC's range mg/l
Penicillin	22.1	58.4	19.5	4	0.002-64
Tetracycline	3.9	17.3	78.8	8	0.25-8
Ciprofloxacin	98.7	1.3	-	0.016	0.002-0.5
Ceftriaxone	100*	-	-	0.032	0.002-0.25

* 8% of strains with reduced susceptibility (MIC=0.064-0.25 mg/l)



CONCLUSIONS

- Bearing in mind the obtained results penicillin and tetracycline can no longer be recommended for the treatment of gonococcal infections in Russia
- Ciprofloxacin and ceftriaxone have very favorable results of susceptibility testing and should be considered as the antibiotics of choice for the treatment of gonorrhea in our country
- Since 1.3% of tested strains were intermediately resistant to ciprofloxacin and 8% had reduced susceptibility to ceftriaxone the monitoring of the resistance to antimicrobial agents in *N.gonorrhoeae* must be established in Russia on permanent basis