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Increase in *Neisseria gonorrhoeae* isolation from urogenital tract clinical specimens and resistance to Quinolones at the “Institut national d’hygiène (INH)”, Lome, Togo, 2010-2022

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Background

Achieving the objective of reducing new HIV infections requires a reduction and effective management of sexually transmitted infections. During routine diagnostic activities, we observed an abnormal frequency in isolation of *Neisseria gonorrhoeae* and decreases in antibiotic susceptibility.

Aim/Methods

We aim to describe the trend of *Neisseria gonorrhoeae* isolations from clinical specimens and their resistance to Quinolones at the “Institut national d’hygiène” in Lome from 2010 to 2022. We analyzed the reports of bacteriological examinations of samples received at the bacteriology laboratory. Antibiotic susceptibility testing was performed by the diffusion in agar medium method using the standards of the antibiogram committee of the French society of microbiology / EUCAST. Annual prevalences were calculated, compared and tested using the linear trend Chi-square at the significance threshold $\alpha=0.05$.

Results

From 2010 to 2022, 413 strains of *Neisseria gonorrhoeae* were isolated from clinical specimens, mainly genital (97%) with a clear annual increase from 4 isolates (2010) to 76 (2022). The respective average prevalences of *Neisseria gonorrhoeae* resistance to Nalidixic acid, Ofloxacin and Ciprofloxacin were (96.9%, CI95 [94.7-98.2]), (96.1%, CI95 [93.2-98.1]) and (96.2%, CI95 [93.8-97.7]). During the 13 years, we noted a statistically significant increase in the resistance rates of *Neisseria gonorrhoeae* to quinolones from 0% to 100% with a $p=0.000$.

Conclusions

This study has revealed a significant increase in the laboratory isolation of *Neisseria gonorrhoeae* strains, completely resistant to fluoroquinolones, which were the first line antibiotics for the management of sexually transmitted infections. Does this increase in isolation reveal an epidemic of *Neisseria gonorrhoeae* sexual infections? This situation could also reveal an increase in risky behaviors compromising the sustainable development objectives for the fight against HIV/AIDS/STIs. Appropriate actions are essential to meet these challenges

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[Trend of *Neisseria gonorrhoeae* resistance rate to quinolone, INH-Lome, 2010 to 2022](#)

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