

عنوان مقاله:

Plasmid Profile and Characterization of Escherichia coli Isolated from Diabetic Foot Ulcers in Imo State, South Eastern Nigeria

محل انتشار:

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خلاصه مقاله:

Background: The study aimed at evaluating the plasmid profile and characterization of E. coli isolated from chronic diabetic foot ulcers among patients in Imo State, South East Nigeria. **Methods:** A total of ۱۵۰ wound swab samples were collected and analyzed. Standard microbiological methods processed samples. Antibigram was done by Kirby-Bauer disc diffusion method. Tests were conducted to determine biofilm potential, ESBL and AmpC production. Plasmid profiling was done by the alkaline lysis method and Gel electrophoresis. **Results:** Based on the results, out of the ۱۵۰ swab samples, ۶۱(۴۰.۶%) E. coli isolates were recovered. ۵۷.۸%, ۳۲.۸%, and ۸.۲% of the E. coli isolates were positive for biofilm formation, ESBL, and AmpC production, respectively. Further, the study revealed a pattern of multiple-drug resistance of E. coli to amoxicillin/clavulanic acid (۹۶.۷%), septrin (۹۵.۱%), and ampicillin (۹۳.۴%). **Conclusion:** Analysis of the multiple antibiotic resistance (MAR) index showed that the organism had MAR index values above the low-risk region (≤ 0.2) for all the tested antibiotics. Post-curing antibiogram tests revealed that nine isolates carried plasmids, suggesting that the mode of resistance may be plasmid-mediated. Findings could act as a therapeutic guide for antibiotic prescriptions in this environment.

کلمات کلیدی:

Diabetic ulcers, E. coli, antibiogram, plasmid profile, Isolates, زخم دیابتی، اشرشیاکلی، آنتی بیوگرام، ویژگی پلاسمید

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