

P1732 Genotypic characterization and phylogenetic groups of ESBL *Escherichia coli* of street food in Quito, Ecuador

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Background: The sale of street food is a widely accepted phenomenon in many cities worldwide. It is a evident problem in Quito city. Street foods vendors tend to locate in high human traffic areas such as surroundings of educational centers and public institutions, pattern that promotes high rates of consumption, which emphasizes the certainty that food chain is an unquestionable source of Gram negative bacilli for human gut colonization. The aim of this study was to determine whether street food in Quito is a source of colonization/infection of extended spectrum beta-lactamase (ESBL) producing *Escherichia coli*.

Materials/methods: From November 2016 to January 2017, sampling was carried out around of five hospitals and five educational centers located in the most populated district in Quito. 150 street food samples were collected. These were cultured in Brilliant Green Bile Broth 2% in Durham tubes supplemented with 5 µg/mL of cefotaxime. In case of bacterial growth, 10 µL was streaking to ESBL CHROMagar™. The isolates were identified by MALDI-TOF and antimicrobial susceptibility by VITEK2 (CLSI). All the isolates were screened genes *bla*_{CTX-M}, *bla*_{TEM} and *bla*_{SHV} by PCR. The PCR products were sent for DNA sequencing and the sequence results were analyzed using the NCBI BLAST program. *E coli* strains were tested via PCR for phylogenetic groups A, B1, B2, D.

Results: ESBL-*Escherichia coli* were isolated in 20 food samples (13.3%). These foods, on average, contained 1.81 UFC/gr. CTX-M-55 were identified in 9 isolates, CTX-M-15 in 6 isolates, CTX-M-14 in 2 isolates, TEM-1 in 3 isolates and SHV 7 in 1 isolate. CTX-M-24, CTX-M-65, CTX-M-8 ESBL had one isolated each. Phylogenetic group A and B1 were the most common obtained.

Conclusion: The transmission of ESBL-*E coli* street food is undeniable. It would be certainly a hot-spot origin of ESBL/E coli transmission. The most contaminated street food was those that had a large amount of ingredients (homemade sauces, raw vegetable salads and cow's stomach). Despite CTX-M-55 has described occasionally in the Latin America in this study was the most prevalent. Further research is necessary to establish the capacity of dissemination of these strains into the food chain.