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Abstract (poster session)

Isolation and characterisation of extended-spectrum beta-lactamase (ESBL)-producing *Escherichia coli* from migratory Franklin's gull (*Leucophaeus pipixcan*) in Antofagasta, Chile

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Background: ESBL-producing *E. coli* isolates are increasingly detected worldwide in different settings. Nevertheless, differences at local level can be established. The aims of this work were i) to determine the prevalence of ESBL isolates in the migratory bird Franklin's gull which cross the entire American continent, ii) to characterize the corresponding blaESBL genes, and iii) to study their population structure. Samples and Methods: 124 fecal swabs from independent seagulls located in the coast of Antofagasta (Chile) in 2011 were collected. Swabs were seeded on MacConkey agar supplemented with cefotaxime (8 mg/L) and grown colonies (1 per morphotype) were tested by the double disk ESBL-synergy test. Positive isolates were identified by biochemical test and MALDI-TOF. Antibiotic susceptibility was determined by the agar dilution method (CLSI) and blaESBL characterized by PCR and sequencing. Genetic diversity was also studied (PFGE-XbaI, MLST and phylogenetic groups). Results: A total of 66 ESBL producing *E. coli* isolates were obtained from the 124 seagulls (53,2%). Most of the blaESBL genes corresponded to CTX-M-15 (46 isolates, 70%) whereas minority variants (CTX-M-1, CTX-M-3, CTX-M-9 and CTX-M-2) were detected alone or in combination. SHV- or TEM-ESBLs were not detected. Isolates exhibited a high genetic diversity by PFGE, although 35% (23/66) of the isolates grouped in ST131-phylogroup B2, all of them CTX-M-15 producers. High level of resistance was observed to non-beta-lactam antibiotics including quinolones and tetracycline, whereas almost all isolates remains susceptible to amikacin and chloramphenicol. Conclusions: Free living migratory birds represent a reservoir of ESBL-producing bacteria affecting geographically separated regions. The most prevalent lineage and blaESBL gene detected in the Franklin's gull corresponded to the high risk clone ST131-B2-CTX-M-15.