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P1749 Occurrence of ESBL-producing Escherichia coli ST131 in humans, poultry and cattle in Tunisia

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Background: *Escherichia coli* ST131 is a multidrug pandemic clone causing serious infections particularly in humans. We investigate the colonization status and prevalence of *E. coli* ST131 and its subclones H30 and H30Rx on collections of extended spectrum beta-lactamase (ESBL)-producing *E. coli* isolates (EPE) obtained from healthy animal and human carriers and community and nosocomial human infections.

Materials/methods: 353 consecutive nosocomial EPE isolates were collected at the Habib Bourguiba university hospital of Sfax, Tunisia, between 2001 and 2015. 180 community EPE isolates were collected from Sfax settings between 2012 and 2016. We collected and examined 2136 faecal samples from randomly selected Tunisian inhabitants for EPE carriage. Rectal swabs from 236 Healthy chickens and 283 cattle were also examined for EPE carriage. Genes encoding ESBL were determined by PCR-sequencing. ST131 screening and subclone (H30 and H30Rx) detection was performed by PCR

Results: 252 out of the 353 nosocomial EPE isolates were analysed. Overall, O25b-ST131 prevalence was 29% varying from 9% in 2003 to 32% in 2013 ($p<0.05$). Subclonal typing revealed that H30 subset comprised 80% of the total ST131-EPE isolates. Of these, 50% were H30Rx. In the community setting, 76(42%) of the 180 analysed EPE isolates belonged to the B2 phylogenetic group. Of these 82% belonged to the O25b-ST131 of whom 98% were H30. 17,6% (376) of the 2136 human faecal samples, 34,4% (81) of the poultry rectal swabs and 4.24% (12) of the cattle ones carried EPE isolates. 14% of the healthy Tunisian carried O25b-ST131 however no explored animal carried this clone. Within the H30 population, the H30Rx subset had the highest prevalence in the community setting, 98% and 95% among the clinical and colonizing H30 EPE, the lowest in the nosocomial setting, 50%, and was not found in animal setting. H30Rx subset was highly associated with CTX-M-15 ESBL

Conclusions: Important differences in the occurrence of ESBL-producing Escherichia coli ST131 isolates in humans, poultry and cattles in Tunisia proving that ST131 and its H30Rx subset are highly human specific clones.