Hypervirulent *Klebsiella pneumoniae* liver abscess in Tunisia

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**Background:** Hypervirulent Klebsiella pneumoniae liver abscesses (HKLA) have emerged during the past 2 decades in Asia and then worldwide. The objective of this study was to describe the increasing prevalence of HKLA in Tunisia and their clinical and microbiological characteristics.

**Materials/methods:** Clinical characteristics of 25 consecutive patients with HKLA from Habib Bourguiba Hospital teaching hospital in Tunisia, Sfax, between 2010 and 2018 were retrospectively evaluated.

*K. pneumoniae* isolates were obtained from drainage samples aseptically collected from patients with pyogenic liver abscess or blood cultures. The hypemucoviscosity (HV) phenotype was identified by a positive string test. The K1 and K2 genotypes, virulence genes: *rmpA*, *magA*, *aerobactin*, *iroN*, *kfu*, and *alls* were detected by PCR amplification. The sequence types (STs) were identified by multiplex PCR.

**Results:** All the 25 hypermucoviscous *K. pneumoniae* strains were *rmpA* positive. Most of them belonged to K1/K2 serotype (17, 68% for K2 serotype and 4, 16% for K1 serotype). All K2 strains were *iutA* and *iroN* positive and all K1 ones were *magA* and *alls* positive. The majority of K2 strains, 10, belonged to ST86 and two to the clonal complex 380. All the strains were susceptible to antimicrobials. The mean age was 59 years (range: 38-83 years). All patients had no known past medical history of immunodeficiency, but more than 60% had diabetes mellitus. 4 patients had multiple liver abscesses at the time of initial presentation. In eight patients, the source of entry of *K. pneumoniae* was the gastrointestinal tract. In three patients there was concomitant *K. pneumoniae* bacteraemia and in one metastatic localisations. Only one patient died due to septic shock.

**Conclusions:** Hypervirulent *K. pneumoniae* are emerging as serious pathogens isolated from liver abscesses in Tunisia.