Ongoing outbreak due to \textit{Klebsiella pneumoniae} OXA-48 in an Italian referral hospital

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\textbf{RESULTS} At the beginning of September 2015 a patient underwent a cholecystectomy and after 20 days he needed a CT-driven drainage at the surgical site. We isolated an MDR \textit{Klebsiella pneumoniae} strain from drained liquid, subsequently identified as an OXA-48 producer. Then in the following 3 months, until the first week of January 2016, another 13 MDR OXA-48 producers \textit{Klebsiella pneumoniae} strains (OXA-48-Kp) were isolated in our hospital, all from clinical specimens. The outbreak was initially contained to the Surgical Department, but it soon spread to the Medical Wards and eventually to the Emergency Department and to the Geriatric Ward (the Infectious Disease Ward was involved only because they received an infected patient from the Surgical Department). Soon after the first isolate, the OXA-48-Kp strain was found in another four patients, two in the Surgical Department (both in CT-driven drained liquids) and two in the Medical Wards (colonizations). After two weeks we discovered another case in a Medical Ward, and then, at the end of November 2015 we found four other cases, all in the Medical Wards (one in a blood culture, one from a BAL and two from colonizations). Thereafter, 4 colonized patients were detected in two Medical Wards and in the Geriatric Ward between the second week of December and the first week of January. Up until now, no other cases were reported.

\textbf{CONCLUSIONS} Trieste Hospital is located in a Region of low-level endemicity of carbapenem-resistant \textit{Klebsiella pneumoniae}, and before September 2015 the only mechanism of resistance to carbapenems detected in \textit{Klebsiella pneumoniae} had been KPC production. In this report we describe the first outbreak of OXA-48 \textit{Klebsiella pneumoniae} in Italy, which lasted for about three months, from late September 2015 to early January 2016. It involved fourteen patients, both in Surgical and Medical wards and it was due to a monoclonal strain. Despite investigations, it was not possible to find out the source of the outbreak. A strong surveillance program had been carried out in almost all the wards involved, and probably the ‘search and isolates’ approach has been once again demonstrated to be an efficient tool to strain the spreading of CPE. Sequencing of the strain is ongoing in order to determine the specific sequence type to which the strain belongs.