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MICOLOGIA

FIRST ISOLATION OF CANDIDA AURIS IN ITALY FROM INVASIVE AND NONINVASIVE SAMPLES OF A PATIENT SUFFERING FROM VASCULAR DISEASE.

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INTRODUZIONE

Candida auris is a rapidly emerging, multi-drug resistant, health care-associated fungal pathogen. We report the first isolation of C.auris in Italy from a blood culture and cutaneous swabs of 75-years old patient. Without history of recent travel abroad, she was admitted to our hospital on 16 June 2019. The first episode of fever developed on day 17 from admission and C. auris grew from blood cultures collected on day 31. C.auris also grew from axillary and ear swabs.

METODI

The pathogen was not identified by VITEK2 AES (software version 8.01) (bioMerieux) but by a species-specific PCR for GPI protein-encoding genes. MALDI-TOF MS analysis using BD^{TM} MALDI Biotyper System (Bruker Daltonics) confirmed the identification (score 2.7). This result was further confirmed by D1/D2 region and ITS sequencing. Sequence similarity searches were performed using the BLAST tool at the NCBI database (http://www.ncbi.nlm.nih.gov/blast). The D1/D2 sequences were aligned with the ClustalW program. A neighbour-joining tree based on these domains sequences was generated using MEGA software version X.

RISULTATI

Our sequences (GenBank accession numbers MN275234 and MN294701) showed >99% identity with C.auris. Phylogenetic analyses showed that our isolate (C.auris FG-1GE) clustered with the south-Asian strains.

CONCLUSIONI

This is the first isolation of C.auris in Italy, but this finding is not surprising due to the widespread distribution of this pathogen and its previous description in several European countries including France, Spain and Greece. A correct identification of the microorganism was possible using MALDI-TOF and molecular techniques, an approach still not available in many diagnostic laboratories. The first finding of C.auris in Italy, should promote in our Country a more careful approach to yeast identification when Candida spp. strains are detected. Four major phylogenetically distinct clades of C.auris have been described and recently a potential fifth clade has been reported in Iran. The isolate in this study clusters with the south-Asian strains. Clade I has been already described in European and US hospitals and it has been linked to outbreaks with invasive infections. Epidemiological investigations have not yet revealed the potential source of the infection and at present, we have no basis for any speculation about the origin of C.auris in our hospital.