

TITLE: ENTEROBACTER AEROGENES: THE MAIN CONTAMINANT OF HEALTHCARE WORKER'S WHITE COATS IN A PUBLIC HOSPITAL IN MACEIO, ALAGOAS.

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ABSTRACT:

Enterobacter aerogenes are gram-negative rods that cause several ailments including urinary tract infections, gastrointestinal tract, respiratory tract, as well as osteomyelitis and bacteremia. They are opportunistic nosocomial pathogen that are commonly found hospitals. For this reason, patients admitted to hospital with two weeks or more, in invasive surgeries and in the intensive care unit are prone to develop infections by this agents. In addition to this, the widespread prescription of broad-spectrum antibiotics, especially second- and third-generation cephalosporins, is related to multidrug-resistant bacteria. Patient-to-patient transmission of nosocomial pathogens has been linked to transient colonization of health care workers, and studies have suggested that contamination of health care worker's clothing, including white coats, may be a source for this transmission. This work aims to evaluate the level of bacterial contamination on the surface of coats of health professionals of a public hospital situated in Maceió, Alagoas. 28 white coats were analyzed, with samples collected in three distinct areas: preselected front; radial internal portion of the handle of the dominant hand and lower pocket corresponding to the dominant hand. The samples were collected with swabs moistened in saline solution 0.9%, with posterior Brain Heart Infusion broth inoculation and incubation at 35° C the bacteriological greenhouse for 24h. Subsequently, these samples were ridged on the surface of the MacConkey agar, incubated for 24-48 hours being the 35° C under aerobic organism. Later, the bacterial growth was verified and the colonies obtained were identified. Suspicious colonies that belonged to the Enterobacteria were subjected to specific tests for identification in relation to the fermentation of sugars (TSI), use of the citrate, urease production, production of indole, motility and lysine decarboxylase. It was found in 89 bacterial colonies, the presence of the family *Enterobacteriaceae* with predominance of *Enterobacter aerogenes* (35.95%). This study suggests that a large proportion of health care workers' white coats may be contaminated with *Enterobacter aerogenes*, being able to contribute as an important source in the spread of this bacteria in the hospital area.

Keywords: *Enterobacter aerogenes*, nosocomial infection, white coat

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