TITLE: BIOFILM FORMATION BY STAPHYLOCOCCUS COAGULASE POSITIVE ISOLATED FROM SUSHIS MARKETED IN SHOPPINGS CENTERS OF THE METROPOLITAN REGION OF RECIFE-PE

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ABSTRACT:
The hygienic-sanitary quality of the food can be influenced by the hygienic habits of the manipulators and the consumption of the raw fish can represent a risk to the health of the consumers since they do not pass through thermal barriers that guarantee its innocuity. When constituted in biofilm, the microorganisms become resistant to antimicrobial agents and represent a source of contamination and transmission of food toxinfections. Adhesion and biofilm formation are important virulence factors of Staphylococcus, in this context we aimed to investigate the biofilm formation in coagulase-positive Staphylococcus isolated from sushis marketed in Shopping Centers of the Metropolitan Region of Recife-PE. 58 samples were collected on alternating days with 200g of salmon sushis at shopping centers in the Metropolitan Region of Recife-PE. The samples were stored in sterile plastic bags, identified, and transported in isothermal boxes containing recyclable ice and sent for analysis in the Laboratory of Inspection of Meat and Milk of the Federal Rural University of Pernambuco (UFRPE). The positive samples in the coagulase test were submitted to DNAse test, mannitol fermentation and VP Acetonine. To evaluate the formation of biofilms only the isolates of coagulase-positive Staphylococcus were used and the optical density (OD) was determined in ELISA reader and the isolates were classified according to the biofilm production capacity. Staphylococcus was detected in all samples. When submitted to the coagulase test, 6.8% of the isolates (4/58) were positive-coagulase *Staphylococcus*. Of these, 75% (3/4) were classified as poor biofilm builders and 25% (1/4) didn't produce the biofilm. Bacteria of the Staphylococcus genus are part of the normal microbiota of human skin, facilitating contamination of the food during handling. Inadequate cleaning and improper disinfection of equipment are among the main sources of contamination in establishments that produce and market food and may favor biofilm formation. This study evidences the need for a greater rigor in the hygienic-sanitary measures adopted by the professionals responsible for the manipulation of food, thus reducing the possible risks to consumer health.

Keywords: Fast-food; Food safety; Pathogenic microorganisms; Public health.