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MRSA in carcass abscesses of slaughtered piglets

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Roasted piglets (about 2 months old and 6 to 8 kg live weight) constitute an important gastronomic dish in Portugal, being the production and slaughter of these animals of increasing economic importance. In 2015, 1 148 025 piglets were slaughtered in Portugal. From those, 956 carcasses (0.08%) were totally condemned due to the presence of multiple abscesses, representing the third main cause of piglets' carcass condemnation at post mortem inspection. One of the pathogens enrolled in the etiology of abscesses it is *Staphylococcus aureus* and, within this specie, MRSA may represent an additional threat, if present. The main objective of this study was to evaluate the involvement of MRSA in abscesses in piglet carcasses at slaughter. During 12 weeks in the spring 2016, 48 samples of abscesses purulent content were aseptically collected from piglets carcasses condemned at post mortem inspection. Briefly, at laboratory, samples were inoculated in Brain Heart Infusion Broth and after plated in Manitol Salt Agar (OXOID™) agar. Suspicious colonies were identified by Gram staining and catalase test. Those positive to both testes, were plated in ORSAB agar (Oxacillin Resistance Screening Agar Base, OXOID™) and suspicious isolates of MRSA were confirmed by using a multiplex PCR assay targeting the 16S rDNA, *nuc* and *mecA*. In this study, MRSA was identified in 23 samples (23/48, 48%), being the first report of MRSA identified in carcass abscesses of piglets in Portugal. Since all analysed samples were from carcasses declared unfit for human consumption, the presence of MRSA can't be considered a direct food safety issue. Nevertheless, although it is known that asymptomatic slaughtered pigs may be a source of MRSA into the abattoir, the high prevalence (48%) found in carcass abscesses must be taken into consideration by FBO as an important and additional source of contamination, requiring provision of adequate decontamination measures to avoid cross contamination. Also, personnel must be aware of the potential risk of exposure during manipulation of these carcasses. More studies should

be undertaken, at primary production level, to understand the reason and level of this problem, under One Health perspective.

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