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Effects of catching and transportation versus pre-slaughter handling at the abattoir on the prevalence of wing fractures in broilers

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Abstract

Fractures occurring in conscious broiler chickens are painful and severely compromise animal welfare. The aim of this study was to investigate the effects of pre-slaughter handling procedures on the frequency of wing fractures. Wings were examined for fractures in 11,609 broilers, from 12 different flocks, slaughtered in two abattoirs: one using bi-phasic CO_2 stunning (CS); and one using electric water-bath stunning (ES). The same broilers were examined: i) in lairage, representing fractures attributed to catching and transportation; ii) after evacuation of transport containers and shackling (only ES); and iii) post-stunning. The mean frequencies of wing fractures were: in the lairage; 0.8% (CS 0.73%, ES 0.88%); after shackling prior to stunning; 2.90% (only ES); and after stunning; 2.35% (CS 1.80%, ES 2.90%). Regardless of stunning method, significantly more fractures occurred during pre-slaughter handling at the abattoirs than during catching/transportation. The difference in prevalence between CS and ES was not significant. All fractures observed in the ES occurred in conscious animals, whereas in the CS it was not possible to distinguish between fractures occurring in conscious or stunned broilers. From a welfare perspective, fractures occurring on-farm/transport result in prolonged suffering and are thus considered more serious in risk assessments of broiler welfare, even though more fractures occur at the abattoir. Monitoring of wing fractures at abattoirs should be included as an indicator of broiler welfare.

Keywords: *animal welfare, broiler, catching, pre-slaughter handling, transport, wing fractures*