Acute Behavioral and Biochemical Responses of Sheep to S/C Ivermectin Injection

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Abstract:

This study was designed to compare between the effects of subcutaneous injection of ivermectin at the left neck region versus behind the left elbow on the acute behavioural and biochemical responses of sheep, with the aim of selecting the most suitable injection strategy causing the least adverse effects on the animal health and welfare. Twenty-five sheep were assigned to 5 groups: one control group (C, without injection), and two groups injected with 0.9% NaCl either at neck (SN) or elbow (SE), and two groups injected with ivermectin (IVM) at a dose of 0.2 mg kg-1 BW either at neck (IN) or elbow (IE). Results reflected that head shaking and neck scratching showed significant increases in the IN group, while standing was significantly lower in the IE group compared to the C group. Pawing was significantly higher in both SE and IE groups compared to the C group. Plasma levels of cortisol, glucose and lactate were significantly increased in both IN and IE groups. There were no obvious changes in the levels of other stress markers among the different treated groups. In conclusions, the magnitude of acute stress reactivity was not significantly different between IVM injections behind the elbow and at the neck region.

Keywords:

Ivermectin, sheep, behaviour, biochemical

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