SUMMARY

A study was conducted to evaluate the prophylactic efficacy of doramectin against field infestations of Cochliomyia hominivorax in sheep following castration and to verify the clinical changes in infested animals. Eight adult sheep were randomly allocated in two experimental groups of four animals each. The treated group received an injection of doramectin at a dose rate of 200 μg/kg; the control group didn’t receive any treatment. After treatment, all animals were castrated surgically. From day zero through day fourteen post-treatment all animals were exposed to field infestations of *C. hominivorax*. The clinical parameters were daily registered. The animals were examined daily to verify the presence of myiasis and to evaluate the healing process of the wounds. One animal of control group died 24 hours after castration and thus, this group was constituted by only three animals. The 3rd stage larvae recovered from infested animals were incubated to evaluate the viability. On days one, three and six post treatment, eggs of *C. hominivorax* were found in doramectin-treated animals, but none of those eggs developed into larvae. Therefore, doramectin was 100% effective in preventing the establishment of *C. hominivorax* infestations. During the experimental period 1010 3rd stage larvae were recovered from the animals in the control-group, of which 925 (91.58%) developed into adult flies. Rectal temperature and respiratory frequency of the animals in control group were higher than the treated-group (P < 0.01); the cardiac frequency was elevated from day five through day fourteen post-treatment (P < 0.05); swelling, exudation and behavior changes, characterized by aggressiveness and irritation were also observed in control animals. In the treated-group no clinical changes were observed and the wounds healed more rapidly.

KEY WORDS: Doramectin, myiasis, Cochliomyia hominivorax, sheep, clinical changes, prophylactic efficacy.