



Successful Treatment of Acaricide Resistant Ticks in Cattle

KEYWORDS

Cattle, ticks, acaricides, resistance, sesame oil

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ABSTRACT Sixty three cattle of different breed and age were presented with varying degree and period of tick infestation. All the animals had previous treatment with many available acaricides which were found to be ineffective. On clinical examination, external tick infestation and resistant to the treated drugs were confirmed. A new method involving topical application of Sesame oil tried and found 75-90% effective.

INTRODUCTION

Resistance of cattle ticks against the existing acaricides is a major problem at present throughout the world. Thus prevention of diseases transmitted by the ticks in cattle has become questionable.

MATERIAL AND METHOD

Over a period of one year, 63 cattle (59 cows and 4 bull-ocks) of different breeds, aged between 3 months and 7 years were presented for tick infestation at varying degree from mild to severe and for weeks to months. All had treatment for the same with various brands of acaricides available in market but found to be ineffective. Clinical examination revealed varying symptoms such as debility, roughened skin, anaemia, presence of small to engorged ticks, lymphnode enlargement and reduced production. Invariably all were treated with topical application of Sesame oil, 100 – 150 milli litre per square metre body surface area depending on tick burden, throughout the body only once. No other treatment given.

RESULT

From 24 to 72 hours, 75-90% ticks were clinically found reduced.

DISCUSSION

The prolonged or incorrect use of tick chemicals can lead to resistance in ticks, enabling the ticks to tolerate and survive chemical applications (Kearney, 2013). Ticks collected from Madras veterinary college clinics and Pudukcherry, India were 100% resistant to synthetic pyrethroids (Lakshmi-priya, 2014). New chemicals with different modes of action must be found if resistant ticks are to be controlled but ticks will re-develop resistance to these compounds if they are used in the same manner (Drummond, 2012). Successive evolution of resistance of ticks to each group of acaricides result in diversity of acaricides (George JE and et al., 2004), however the ticks were found to develop concomitant resistance. Traditionally, sesame oil along with Fabaceae root powder (... 1995), with neem oil (John Lust et

al., 2010) and *Sesamum indicum* leaves with native black soap (Dubey, 2014) were used to check ticks/ lice infestation in animal/ human. In this trial, a new method is followed. Sesame oil alone when applied topically, ticks feed on the oil, engorge and fall down from the animal's body. It is miraculous to understand the voracious feeding habits of cattle ticks on sesame oil. It needs further study. It is also important that the ticks had not developed resistance against sesame oil even the oil is in use from time immemorial and now proved comparatively effective than present acaricidal treatment.

CONCLUSION

Cattle infested with acaricide resistant ticks treated with topical application of sesame oil and found 75 – 90 % effective in reducing the ticks.

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