RESEARCH COMMUNICATION

THE PRESENCE OF THE TRICHOSTRONGYLD "TELA DORSAGIA DAVTIANI" IN SHEEP IN THE SOUTH-WESTERN CAPE

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ABSTRACT


Teladorsagia davtiani in sheep in the south-western Cape, is recorded in the Republic of South Africa for the first time. The literature dealing with this helminth is briefly reviewed.

According to Skrjabin, Shikhobalova & Schulz (1954) Andreeva & Satubaldin first reported Teladorsagia davtiani from sheep in Kazakhstan and they suggested a widespread but unnoticed distribution of this worm because it so closely resembles Ostertagia trifurcata. After attention was drawn to its presence in the United Kingdom, a widespread distribution of T. davtiani in that country was reported (Rose, 1962). Previously it was probably wrongly identified as O. trifurcata. This is likely to be the case also in this country. Studies on the epidemiology of helminths in sheep in the winter rainfall region of the south-western Cape has shown that T. davtiani is a very common parasite found together with Ostertagia circumcincta and O. trifurcata in the abomasum of sheep.

T. davtiani is differentiated from O. trifurcata on the shape and structure of the male genital cone which in the case of O. trifurcata has a well developed accessory bursal membrane with two supporting ribs (Fig. 1b). The genital cone of T. davtiani lacks an accessory bursal membrane but has a very characteristic sclerotized distal extension covered with numerous small sessile papillae.

A prominent distal protuberance is a further very conspicuous feature of the genital cone of T. davtiani (Fig. 1a).

Rose (1962) reported that the spicules of the 2 species were very similar in shape and only slightly different in size (T. davtiani: up to 0.21 mm long and 0.028 mm wide and O. trifurcata: up to 0.28 mm long and 0.032 mm wide).

The 2 species are easily distinguished with a little practice. The distal protuberance of the genital cone of T. davtiani can be distinguished not only ventro-dorsally but in cleared specimens also laterally (Fig. 1c) from the lateral aspects of the genital cone of O. trifurcata (Fig. 1e).

The classification of the Ostertaginæ even at generic level is still to be resolved. Gibbons & Khalil (1982) recognize Ostertagia by the characteristic of an enlarged proconus of the male genital cone. Durette-Desset (1983) characterizes Ostertagia by the 2-1-2 configuration of the lateral bursal rays, with rays 5 and 6 as long as or longer than rays 2 and 3. Ostertagia lyrata and Ostertagia ostertagi are therefore recognized species of this genus. The authors Gibbons & Khalil (1982) as well as Durette-Desset (1983) all suggest the use of Teladorsagia for T. circumcincta, T. trifurcata and T. davtiani because these species lack a proconus on the male genital cone and the lateral bursal rays show a 2-2-1 configuration with ray 4 as long as or longer than ray 5.

Recent studies (Lichtenfels, Pillit & Lancaster, 1987) on the patterns of the cuticular ridges (synlophe) and the shape and size of the oesophageal valve suggest that the species of Teladorsagia are more closely related to some species of Ostertagia than the species of Ostertagia to each other and DNA studies are underway in an attempt to confirm certain morphological findings.

Dunn (1978), like many other authors, refers to T. davtiani as the only species of Teladorsagia.

REFERENCES


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FIG. 1 After Gibbons & Khalil (1982)
(a) Teladorsagia davtiani, ventral view of genital cone
(b) Teladorsagia trifurcata, ventral view of genital cone
(c) Teladorsagia davtiani, lateral view of genital cone
(d) Teladorsagia circumcincta, ventral view of genital cone
(e) Teladorsagia trifurcata, lateral view of genital cone