Bluetongue virus serotype 16 in a three-month-old lamb

Bluetongue is an endemic disease in Israel⁷; it was first diagnosed in this country in 1950⁶. The peak season for bluetongue and incidence of *Culicoides* midges is in autumn (September–November)³. High prevalence of BTV serotype 16 in sheep has been reported from Pakistan¹ and Australia⁴ and recently also from Israel.

This report concerns unusual bluetongue morbidity in a single animal, a 3-month-old cross-bred lamb from an unvaccinated sheep flock comprising 120 ewes, that occurred at the end of October 1996. The clinical manifestations in the affected lamb were a rise in body temperature to a peak of 41.6 °C, hyperaemia of the buccal and nasal mucosae, increased salivation and lachrymation. The hooves were warm and painful; the animal was reluctant to move them, and was recumbent.

A blood sample was submitted to the

laboratory for virus isolation. The suspected blood was inoculated into 12 embryonating chicken eggs via the intravenous route5. Six embryos died within 2-7 days following inoculation. The group-specific RT-PCR method for detection of bluetongue virus (BTV)² was applied to RNA extracted from supernatant of homogenate of embryos. The RT-PCR results demonstrated the presence of BTV nucleic acid in the embryo homogenate. The BTV was isolated on a hamster lung cell line and a cytopathic effect was observed after 3 days. BTV serotype 16 was identified by means of the virus neutralisation test.

The lamb was treated with phenylbutazone once daily for 3 consecutive days and recovery was noted a week later.

REFERENCES

1. Akhtar S, Howe R R, Jadoon J K, Naqvi M A 1995 Prevalence of five serotypes of blue-

- tongue virus in a Rambouillet sheep flock in Pakistan. *Veterinary Record* 136: 495
- Akita G Y, Chinsangaram J, Osburn B I, Ianconescu M, Kaufman R 1992 Detection of bluetongue virus serogroup by polymerase chain reaction. *Journal of Veterinary Diagnostic Investigation* 4: 400–405
- 3. Braverman Y, Galun R 1973 The occurrence of *Culicoides* in Israel with reference to the incidence of bluetongue. *Refuah Veterinarith* 30: 121–127
- Flanagan M, Johnson S J, Hoffman D, Polkinghorne I G, Reid D J, Shepherd M A 1993 Clinical pathology of Australian bluetongue virus serotype 16 infection in merino sheep. Australian Veterinary Journal 70: 101–104
- 5. Goldsmit L, Barzilai E 1968 An improved method for the isolation and identification of bluetongue virus by intravenous inoculation of embryonating chicken eggs. *Journal of Comparative Pathology* 78: 477–487
- 6. Komorov A, Goldsmit I 1951 A disease similar to bluetongue in cattle and sheep in Israel. *Refuah Veterinarith* 8: 96
- 7. Shimshoni A 1970 Bluetongue in cattle a review. *Refuah Veterinarith* 27: 36–42

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