Communication

Lentiviral arthritis and encephalitis in goats in north-west Syria

M. Giangaspero 1

E. Vanopdenbosch ²

H. Nishikawa 1

GIANGASPERO (M.), VANOPDENBOSCH (E.), NISHIKAWA (H.). Arthrite-encéphalite à lentivirus chez la chèvre dans le nord-ouest de la Syrie. Revue Élev. Méd. vét. Pays trop., 1992, 45 (3-4): 241

Un dépistage des anticorps contre le virus de l'arthrite-encéphalite des caprins a été effectué au nord-ouest de la Syrie en utilisant le test d'immunodiffusion en gélose. Sur 72 sérums testés, 12,5 p. 100 montraient une réaction positive. Aucune évidence clinique de la maladie n'a été trouvée chez les animaux testés. Ces résultats indiquent que l'infection est endémique dans la région étudiée. *Mots clés* : Caprin - Virus arthrite-encéphalite caprine - Anticorps - Technique d'immunodiffusion - Syrie.

Caprine arthritis and encephalitis (CAE) is a widespread disease of goats caused by a non-oncogenic retrovirus, subfamily lentivirinae, antigenically very close to the Maedi Visna (MV) virus of sheep. Clinical forms include a rapidly progressive leukoencephalitis and pneumonia in newborn and young goats (1), a chronic arthritis (4) and mastitis (2) and a sporadic slowly progressive pneumonia-encephalitis in adults goats (6). The disease has not been reported to occur in Syria.

Goat blood samples were collected from 4 flocks in different locations of north-west Syria, the Aleppo province, which has a large population of small ruminants. All sampled animals, females aged 2 to 6 years, were traditionally managed crossbreds (Shami x local). They were mixed with the remainder of the sheep flock, grazed a native pasture or cereal and crop residues.

The sampled sera were tested for antibodies against CAE virus using agar immuno-diffusion test (3). Maedi Visna virus (WLC-1) and control antiserum against Maedi Visna virus gp 135 (Central Veterinary Laboratory, Weybridge) were used to perform the test.

Out of 72 sera, 9 showed identity lines with the positive control (12.5 %). In two flocks, 20 and 16.5 % of the goats were positive. The other two flocks were CAE-free. The percentage of positiviveness was low compared to the incidence of up to 100 % in individual herds in the USA, Australia and Europe (5). Despite the seropositiveness, no clinical evidence of the infection was found in the tested animals. This may be related to the fact that most CAE infections are subclinical although they may cause pathological lesions (CORK, CRAWFORD, unpublished data, 1974), e.g. mastitis, only detectable by histological examination (2).

These findings indicate that the infection is endemic in the area studied and suggest prophylactic measures to be taken against the disease because of the productivity losses caused by CAE in the goat flocks. At present, these measures rely on the identification and elimination of infected animals and on the maintenance of closed herds.

GIANGASPERO (M.), VANOPDENBOSCH (E.), NISHIKAWA (H.). Lentiviral arthritis and encephalitis in goats in north-west Syria. Revue Élev. Méd. vét. Pays trop., 1992, 45 (3-4): 241

A survey for antibodies against caprine arthritis and encephalitis (CAE) virus was undertaken in north-west Syria. Out of 72 sera, using agar immuno-diffusion test, 12.5 % showed a positive reaction. Despite the seropositiveness, no clinical evidence of the infection was found in the tested animals. The findings indicate that the infection is endemic in the area studied. Key words: Goat - Caprine arthritis encephalitis virus - Antibodies - Immuno-diffusion test - Syria.

References

- 1. CORK (L.C.), HADLOW (W.G.), CRAWFORD (T.B.), GORHAM (J.R.), PIPER (R.C.). Infectious leukoencephalomyelitis of young goats. J. Infect. Dis., 1974, 129: 134-141.
- 2. CORK (L.C.), NARAYAN (O.). The pathogenesis of viral leukoence-phalomyelitis-arthritis of goats. *Lab. Invest.*, 1980, 42: 596-602.
- 3. CRAWFORD (T.B.), ADAMS (D.S.). Caprine arthritis encephalitis: Clinical features and presence of antibody in selected goat populations. *J. Am. Vet. Med. Assoc.*, 1981, 178: 713-719.
- 4. CRAWFORD (T.B.), ADAMS (D.S.), CHEEVERS (W.P.), CORK (L.C.). Chronic arthritis in goats caused by a retrovirus. *Science*, 1980, **207**: 997-999.
- 5. NARAYAN (O.). CAE virus. In: HORZINEK (M.C.) Ed. Virus infections of ruminants. Vol. 3. Amsterdam, Elsevier, 1990, 41: 441-451.
- 6. SUNDQUIST (B.), JONSSON (L.), JACOBSON (S.O.), HAMMER-BERG (K.E.). Visna virus meningoencephalomyelitis in goats. *Acta Vet. Scand.*, 1981, **22**: 315-330.

Reçu le 21.7.1992, accepté le 16.12.1992.

^{1.} International Center for Agricultural Research in the Dry areas, POB 5466, Aleppo, Syrie.

^{2.} National Institute for Veterinary Research, Groeselenberg 99, 1180 Brussel, Belgique.