

SHORT COMMUNICATION

**SOME CLINICAL & SEROLOGICAL OBSERVATION ON
RINDERPEST IN SHEEP AND GOATS IN AN
ENDEMIC AREA IN IRAQ**

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Rinderpest is a highly contagious disease of ruminants, in 1985 an outbreak of rinderpest has occurred in a village near Baghdad where cows and buffaloes suffered from the disease and showed very high morbidity and mortality.

There are several reports from other countries concerning the incidence of the disease in sheep and goats (Hamdy *et al.*, 1967; Manohar *et al.*, 1974). In Iraq there is no record about the occurrence of the disease in sheep and goats. An attempt has been made to study the epidemiology of the disease in 30 adult sheep (Awassibreed) and 20 adult goats (Shamibreed), both clinical and serological methods have been used in detection of the disease in these animals after three months of being in close contact with cows and buffaloes with rinderpest.

Sera collected from these animals and heat inactivated at 56°C for 30 minutes. All collected sera were tested for the presence of rinderpest virus-neutralizing antibodies by using serum-neutralization

screening test, 0.1 ml of each undiluted serum sample was mixed with 0.1 ml of 100 TCID₅₀. 1ml of cell culture adapted kabete "O" strain of rinderpest virus. Known positive and negative control sera were used and treated like the examined sera, after one hour incubation of all sera at room temperature 22°C, each serum-virus mixture was added to each of three calf kidney culture tubes, control virus was mixed with equal volume of phosphate buffer saline and used to inoculate similar culture.

Inoculated calf kidney tubes were incubated at 37°C and were examined periodically under light microscope for the development of cytopathic effect, two readings were taken 3 and 5 days after inoculation.

The case history of these two flocks studied indicated that there was no clinical abnormality among tested animals. Serological examination of the collected sera from sheep and goats did not show presence of antibodies against rinderpest virus similar to positive. Virus control showed clear cytopathic effect on calf kidney cells while absence of cytopathic was evident with a known positive serum.

There are many reports describing the natural outbreaks of rinderpest in cattle and buffaloes, while in sheep and goats only few reports discussing the incidence of this disease. The disease which appears early in infection in goats in southern Nigeria is characterized by stomatitis and enteritis (Whintery *et al.*, 1967). The same clinical signs were reported also by Nudunka and Themelandu (1973) in eastern state of Nigeria. Provost (1973) described the clinical signs and named Kato disease, he proposed a multiple aetiology to the disease and possible implication of the clinical signs was due to rinderpest virus, mycoplasma and parainfluenza "3". Hamdy *et al.*, (1967) proved that the causative agent of

stomatitis and pneumonia complex in goats was due to a virus which was immunologically and serologically identical to rinderpest virus. Manohar *et al.*, (1974) described the clinical signs of natural rinderpest in sheep in an endemic area where most affected cases manifested by pyrexia, lesions in the buccal mucosa, diarrhea was a dominant feature and faeces was mixed with blood and mucous. The absence of specific antibodies against rinderpest virus in sera taken from sheep and goats raised together with infected cattle and buffaloes is possibly an indicative of the absence of the inapparent infection. This may suggest that these animals may be resistant to rinderpest virus infection but this still need further investigation.

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REFERENCES

- Hamdy, F. M. A. H. Dardiri, O. Nduake. S. S. Breese Jr. and E. C. Themelandu (1967). Etiology of stomatitis pneumoenteritis complex in Nigeria in Dwarf goats. *Can. J. Comp. Med.* Vol. 40: 276-284.
- Manohar Rao and T. Indra Devi and S. Ramachandran and G. R. Scott (1974). Rinderpest in sheep in andhra paradesh and its control by vaccination (1974). *Indian Vet. J.* 51:439-450.
- Nduaka, O and E. C Themelandu (1973). Observation on pneumoenteritis complex in Dwarf goats in eastern states of Nigeria (Preliminary report). *Bull. Epizoot. Dis. Afr.* 21: 87-98.

Provost A. (1973). Parainfluenza "3" virus and Kato.
 Bull. Epizoot, Dis. Afr. 21: 339-340.

Whintery. J. C. G. R. Scott and D. H. Hill (1967).
 Preliminary observation on a stomatitis and
 enteritis of goats in Southern Nigeria. Bull.
 Epizoot. Dis. Afr. 15:31-41.

بعض الملاحظات السريرية والسيرولوجية عن مرض
الطاعون البقري في الاغنام والماعز
في منطقة موبوءة في العراق

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الخلاصة

اجريت هذه الدراسة كمحاولة لمعرفة وسائبة مرض الطاعون
البقري في الاغنام العواشي والماعز الشامي في منطقة موبوءة
بالتاعون البقري. لقد تم فحص قطيع مكون من الاغنام والماعز التي
هي في تماس مع الابقار والحاموس التي اصيبت بمرض الطاعون البقري
وبصورة طبيعية. جمعت عينات من الدم وفحصت باستعمال اختبار
التعادل على النسيج الزرعي المحضر من كلية العجول. لم تلاحظ اية
علامات سريرية على الاغنام والماعز التي كانت تعيش بتماس مع
الابقار والحاموس المصاب بالطاعون البقري.

اثبتت هذه الدراسة عدم وجود الاجسام المضادة لراشح الطاعون
البقري في امصال الاغنام والماعز التي فحصت مما يدل على عدم
وجود خمخ الطاعون البقري الخفي.