

PRELIMINARY REPORT ON TETRAMERES INFECTION IN A CHICKEN

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SUMMARY

Tetrameres was diagnosed in a free-range-reared chicken. Macroscopically, there were dark spots on the subserosal surface of the proventricular wall; small dark red nodules were present on the cut surface of the proventricular wall. Histologically, each of the nodules was a Tetrameres female in a greatly distended lumen of a gastric gland lobule.

PRELIMINARY REPORT

The genus Tetrameres is a nematode parasite which occurs in the proventriculus of some avian species (Soulsby, 1968). The common names for this nematode are the globular nematode and stomach-wall worm (Hubbard and Kelm, 1984). The genus includes 9 species among which 6 were reported in the proventriculus of domestic fowl (Levine, 1980). This report is the first record of Tetrameres infection in a domestic fowl in Iraq.

A free-range-reared, three-month-old brown egg-type chicken was brought to the central veterinary hospital in Baghdad with a typical facial lesion of pox. After external examination, the bird was killed and necropsied. Lesions were confined to the proventriculus. There were numerous dark red, 2-3 mm in diameter spots on the subserosal surface of the proventriculus. The proventriculus was cut longitudinally. No lesion was present on the mucosal surface of the proventriculus, but the cut surface of the

proventricular wall contained dark-red nodules about 3-4 mm in diameter (Fig.1). Laying within each nodule was an easily removed, blood-clot-like globular body about 2-3 mm long and 1-2 mm wide. Some of these bodies were removed and placed in 10% formalin for microscopic examination. In addition, a scraping from the mucosa was also placed in 10% formalin for microscopic examination. Pieces from the proventriculus was fixed in 10% formalin for histologic examination.

Examination of the blood-clot-like globular bodies under the stereoscope revealed globular-shaped worms which their surfaces were divided into 4 divisions by 4 superficial longitudinal furrows, with transverse striation and anterior and posterior short conical projections. The mucosal scraping contained filiform, 2-4 mm long nematodes which had posteriorly directed double rows of spines along the whole length of the body. Histologically, each of the nodules in the proventricular wall was a nematode female in a greatly distended lumen of a gastric gland lobule. The glandular alveoli were compressed and infiltrated with mononuclear inflammatory cells (Fig.2).

On the basis of site of infection, morphology of the worms, and gross and microscopic lesions, the parasite was identified as the genus *Tetrameres* nematode (Soulsby, 1968; Shadduck and Pakes, 1978). Six species of this genus occur in the proventriculus of chicken (Levine, 1980); the investigation is under way to identify the species in this case. The globular-shaped worms found within the nodules are *Tetrameres* females, while the filiform nematodes seen in the mucosal scraping are *Tetrameres* males (Ruff, 1978). *Tetrameres* has an indirect life cycle; the embryonated eggs are passed in the feces and digested by different intermediate hosts (Ruff, 1978). Birds become infected by eating the infected intermediate hosts. Treatment with mebendazole and levamisole was found to be effective in controlling *Tetrameres* infection (Hubbard and Kelm, 1984).



Fig.1 Nodules in the cut surface of the proventricular wall.



Fig.2 Tetrameres female in a greatly distended lumen of a gastric gland lobules. The glandular alveoli are compressed.

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الاصابة بالتتراميريس في دجاجة

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الخلاصة

تم تشخيص طفيلي التتراميريس في دجاجة. تميزت التغيرات العيانية بوجود بقع حمراء داكنة على السطح تحت المطلي للمعدة الحقيقية، وعند فتح المعدة الحقيقية طوليا لوحظت عقيدات صغيرة حمراء داكنة في جدار المعدة. اظهر الفحص النسيجي ان كل عقيدة عبارة عن اثني طفيلي التتراميريس في داخل تجويف فصيص من فصيصات غددة المعدة الحقيقية.