EPENDYMOMA IN A SHEEP

Ependymoma bij een schaap

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SUMMARY

This paper is the first description of an ependymoma in a sheep, diagnosed by chance from a fallen stock sheep included in the TSE epidemiosurveillance. Macroscopically only a very small grayish fluffy mass was present in the third ventricle of the mid-brain. Microscopically, the fluffy mass was diagnosed as an ependymoma.

SAMENVATTING

Dit is de eerste beschrijving van een ependymoma bij een schaap, per toeval vastgesteld bij een gestorven schaap opgenomen in de TSE epidemiologische bewaking. Macroscopisch was er slechts een kleine, grijze, vlokkige massa te zien in het derde ventrikel. Microscopisch werd de vlokkige massa gediagnosticeerd als een ependymoma.

INTRODUCTION

Active TSE epidemiosurveillance in sheep was introduced in April 2002 via a rapid screening test of a certain number of fallen stock (depending on the total sheep population per member state) and clinically suspected sheep older than 18 months (EC regulation 999/2001). By definition, "fallen stock" are also considered suspect and are therefore examined for TSE. Within this surveillance, a rare interesting case is occasionally diagnosed, as has already occurred in the past (Roels *et al.*, 2000; Roels and Vanopdenbosch, 2001; Roels *et al.*, 2002; Roels *et al.*, 2003). Ependymoma has already been described in cattle, horses, dogs, cats, rats (Hayes *et al.*, 1975; Palmer, 1961; Palmer *et al.*, 1974), hamsters (Corallini *et al.*, 1987) and mice (Lo *et al.*, 1974), but to our knowledge this is the first description of ependymoma in a sheep.

CASE REPORT

A Suffolk sheep aged less than one year was found dead on presentation at the slaughterhouse. According to the TSE epidemiosurveillance protocol, this sheep was considered suspect and was therefore tested at our research facility. All the tests performed (Elisa [De Becker *et al.*, 2000], scrapie associated fibrils [SAF], histology [haematoxilin eosin (HE)] and immunohistology [Vanopdenbosch *et al.*, 1998]) were negative for TSE. Macroscopically, however, a small, fluffy grey mass was observed in the third ventricle. Histologically a tumorous mass was observed in the third ventricle. It was an intraventricular, densely cellular, well demarcated, expansively growing, unencapsulated neoplasm of 5 mm in diameter. The cells formed closely packed tubules, rosettes and cords with a very scanty but well-vascularized stroma. The cells were round to cuboidal, with indistinct cell borders and cilia at the apex of the cells. They had abundant eosinophilic granular cytoplasm and a round centrally located hyperchromatic nucleus (Fig. 1). Mitotic activity was sparse. No characteristics of malignancy were observed. This description corresponds well with the description given by Cordy (1990), Jubb and Huxtable (1993) and Summers *et al.* (1995). Differentiation should be made with choroid

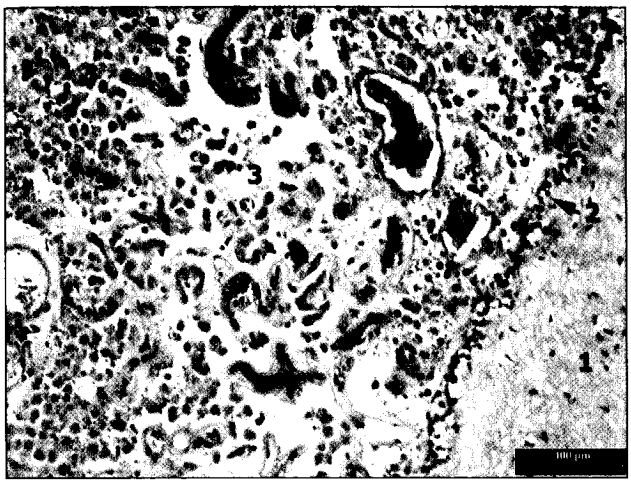

Figure 1. Microphotograph of ependymoma characterized by a densely cellular appearance of closely-packed tubules and cords, with a very scanty but well-vascularized stroma: 1: white matter; 2: outlining of ventricle by ependymic cells; 3: ependymoma. HE staining.

plexus tumors and neuroblastomas, both of which lack true rosettes with cells containing cilia. An ependymoma also lacks the presence of a collagenous stroma, which is present in choroid plexus tumors (Summers *et al.* 1995).

In conclusion, the precise cause of death of this sheep could not be determined due to lack of case information and the impossibility of performing a thorough autopsy on the animal due to the TSE epidemiosurveillance protocol (Vanopdenbosch *et al.*, 1998). An ependymoma should be added to the list of interesting cases detected within this TSE surveillance protocol and sheep should be added to the list of animals in which this neoplasm has been reported.

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