Bovine disseminated haemangiomia

SIR. — We wish to report a case of disseminated haemangiomia in a dairy heifer. Previous reports refer to haemangiomia-like lesions (Trotter 1963, Cotchin and Swarbrick 1963) but it would appear that haemangiomia in the bovine are rare. Baker and others (1992) described a case of disseminated cavernous haemangiomia in a calf but this case differed in several respects from our own.

In January 1992 a 16-month-old Friesian heifer developed multiple skin lesions. These became progressively more numerous and noticeable and in June 1992 she was first presented for examination. Fluid-filled nodules, varying in size from 5 to 40 mm in diameter, were distributed over the whole body within the skin, and firm granulating ulcers were present on the distal extremities of the limbs. These ulcers were considered to have arisen as a result of trauma to nodules. Drainage lymph nodes appeared normal and the heifer had thrived as well as the remainder of her group, none of which was similarly affected. She had suffered no recognisable illness.

Despite of the nodules yielded fresh blood which clotted normally. The even distribution of the nodules, with no predisposition for points of contact, suggested that they were not traumatic in origin. The mucous membranes lacked petechiae and there was no other clinical evidence of haemorrhage. Biopsies of three lesions revealed that the swellings were confined to the dermis. They were composed of multiple interconnecting vascular spaces lined by normal flattened endothelium and separated by collagen bundles or fibrous septa of variable thickness. The spaces ranged from wide cavities to narrow passages. Although the lesions were fairly clearly defined, they were not encapsulated and small foci of vascular tissue could be found at the margins. The epidermis and the skin adnexae were not involved. Based on these histological findings the nodules were classified as cavernous haemangiomata.

The heifer remained in good health for several months, showing a slight increase in the number of lesions, before referral to the Royal (Dick) School of Veterinary Studies, Edinburgh, for further clinical investigation and post mortem examination.

A more detailed report on the pathology is in preparation.

Differential diagnosis of such a condition is limited but includes lymphosarcoma and skin tuberculosis. While the overall distribution of the lesions in this case is similar to that seen in skin lymphosarcoma, the soft, fluctuating nature of the blood-filled nodules separates them readily from the solid lesions of lymphosarcoma. Skin tuberculosis, on the other hand, has a more limited distribution affecting principally the lower limbs, where the ulcerated nodular lesions are not dissimilar to the traumatised lesions seen in this case. However, the cut surface of TB lesions reveals caseous, purulent and occasionally mineralised foci with no evidence of free blood. Skin tuberculosis is less likely to be limited to a single animal within a group.

Thanks are due to Ronald Munro at Lasswade Veterinary Laboratory for assistance with the histopathological interpretation.

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References
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Fatal bovine viral diarrhoea virus infection of adult cattle

SIR. — We wish to report brief details of a severe outbreak of bovine viral diarrhoea virus (BVDV) in a herd of 160 commercial Friesian dairy cows. During the first three weeks of December 1992, 32 cows became ill with anaemia, loss of milk yield and a severe watery diarrhoea. In spite of the debilitation and serious outcome of the outbreak, only five of the 22 cases examined were pyrexic (103.5-106°F/39.7-41°C) and only six animals presented small punctate erosions of the lower surface of the tongue and pharynx. Many cases showed an exacerbatated lameness in one or more legs. Twelve cows died, six within 48 hours of the onset of clinical signs and a further five were slaughtered on humane grounds between seven and 21 days after the onset of illness. Of the 15 survivors, six are particularly thin, have stopped milking and may yet be culled as worthless. Overall, therefore, there was a probable total economic loss of 23 cows (14 per cent of the herd) in one month.

A diagnosis of BVDV infection was made by the Reading Veterinary Investigation Centre with BVDV being isolated from tissues taken at necropsy early in the outbreak. Treatment of subsequent cases with intravenous fluids, antibiotics and oral astringents proved quite ineffective. Two cases were each given 1 litre of bovine intravenously from a healthy cow of unknown immune status. One of these made a good recovery!

Several cows had died by the third week of December and cow HT 916, typical of these severely affected cases, was examined post mortem for gross lesions. Widespread punctate erosions were observed in the oral and upper gastrointestinal tract. Tissue samples from lesions in the small and large intestines, oesophagus and abomasum were examined for both non-cytopathogenic and cytopathogenic biotypes of BVDV. In all four tissues only the non-cytopathogenic biotype was demonstrated. Even after three passages, cytopathogenic virus was not recovered from any of the tissues and thereby helps distinquish this present acute outbreak from mucosal disease (Brownlie and others 1984).

There are several farm management factors which may have contributed to the severity of this outbreak. The farmer had previously milked two dairies of about 110 cows each on premises two miles apart. In July 1992, one dairy was closed and most of the cows were sold apart from 50 which were transferred to the remaining dairy. Interestingly, of the first 18 clinical cases, 14 were introduced cows but subsequent serological investigations showed both herds to be naive to BVDV infection. Although the combining of the two herds is unlikely to have introduced infection, it certainly caused social and housing stresses in the herd. For example, the introduced cows had been accustomed to stray yards whereas they now had to lie in cubicles, resulting in a problem in that several animals habitually laid in the passageways. Feeding stresses were also present at this time. During a period of prolonged gales and rainfall both before, and during, the disease outbreak, the cows were being fed behind troughs of barren bunting in a yard fully exposed to the weather. This probably resulted in reduced feed intakes; a decline in herd milk yield had been noticed in the fortnight before the start of severe clinical signs.

The herd was undergoing vaccination against Leptospira hardjo at the time of the outbreak. We had found raised L. hardjo titres in two cows which aborted in late September, thereby reflecting the outbreak reported by Pritchard and others (1989). However, the serological data (to be reported later) convincingly shows that BVDV is the causative pathogen of the present outbreak.

The source of BVDV has not been established but the practice on these farms was to hire bulls late in the breeding season to 'sweep up' animals that returned to oestrus following AI.

Recently, in the USA, death following acute infection with BVDV has been observed in young animals (Rebhun and others 1989). The report concerned veal calves which developed profound thrombocytopenia. However, this was probably due to over feeding and a disturbing aspect of BVDV pathogenesis; the ability of acute infection with non-cytopathogenic BVDV to cause fatal disease in adult cattle. We wish to alert cattle practitioners to this possibility and recommend that it should be considered in any differential diagnosis from cases presenting a profuse watery diarrhoea and/or death.

We gratefully acknowledge the laboratory work of Mr D. B. Harker and Mr T. R. Crawshaw from the Reading Veterinary
common infectious agents will be returned by post or fax, free of charge.

If any veterinary surgeons are interested and able to help would they please contact Trudy Netherwood (telephone 0638 661111, ext 229) or send samples, with clinical details, to: Poal Diarrhoea Project, Bacteriology Department, Animal Health Trust, Lanwades Park, Kenning, Newmarket, Suffolk CB8 7PN.

Trudy Netherwood, Animal Health Trust, Newmarket, Suffolk

Elevated GLDH levels in cattle

SIR, - My colleagues and I are interested to hear from any veterinary surgeons in bovine practice who have identified herds with a sig-

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special offers' 'loss leaders', 'marketing', 'maximising profit', etc, we cannot be surprised if the public comes to suspect that commercial considerations intrude too much in our professional work, carried out under the same roof. More and more people, whom I regard as responsible and whose values I respect, tell me of their feelings of unease, and sometimes, I fear, of icon, at what they see on visits to 'the vet's'.

We should remember that a high profile, especially if associated with what are regarded, however unjustly, as high fees, can be a powerful stimulus to the probing scepticism, or consumer protection investigation, to which all professions are now liable. Society expects professional people to provide professional services which are, as far as possible in this imperfect world, scientifically based and critically appraised for their continuing validity.