are sensitive, can be used prophylactically, though care should be taken not to under-dose, which could promote bacterial resistance. Both benzathine penicillin and long-acting tetracyclines are effective against S aureus, while the latter are effective against the rickettsial agent of tick-borne fever also. However, the use of oxytetracycline may delay the development of immunity to the tick-borne fever agent. A combination of acaricidal preparations with antibiotic prophylaxis may be the best means of combating the disease.

Erysipelothrix infections in lambs

Erysipelothrix rhusiopathiae, which causes swine erysipelas and erysipeloid in man, has a very wide host range and can survive for long periods at low temperatures in the environment, particularly the soil. Sheep or lambs between two and six months old become infected through docking or castration wounds, shear wounds or abrasions acquired through dipping ('post-dipping lameness'). Recently born lambs acquire infection in the same way as they acquire the more common infections of joint-ill, namely, through the navel.

Erysipelothrix polyarthritis of the neonate

E rhusiopathiae infection in neonates causes a bacteraemia in which organisms settle in the joints and elsewhere, resulting in an acute polyarthritis, osteomyelitis and, in some lambs, endocarditis. Morbidity may be as high as 40 per cent, but mortality is low. Affected lambs are lame or stiff, and have a fever of up to 40-5°C (105°F). In acute cases the joints are not swollen, thus the presence of arthritis may go unsuspected. The untreated disease soon becomes chronic, and the affected lambs lose condition and become emaciated. By this stage, affected joints are swollen and may be ankylosed. Necropsy of a lamb at the acute stage shows that the joints contain a brownish or greenish turbid, gelatinous or floccular fluid. Articular cartilages are covered by the exudate, and leakage of fibrin occurs. Later, this fibrinous exudate coagulates, and fibrosis and osteophyte formation in and around the joint can cause stiffening and deformity. Diagnosis on the basis of history and clinical signs is, at best, tentative. The organism can be isolated on culture following aspiration of fluid from acutely infected joint cavities. In chronically affected animals, a serum agglutination test can be used to confirm the infection.

Parenteral administration of penicillin in the early stages of infection is an effective treatment and full courses of injections are necessary to prevent recurrence. Local treatment of inflamed joints will help to alleviate lameness but is labour intensive. Delay in treatment results in the development of chronic lameness leading to early culling of affected animals.

Control measures should concentrate on providing clean, dry conditions for lambing and all other procedures. Regular movement of feeding troughs will help to control build up of infection. The dressing of navel of newborn lambs and maintenance of good hygiene during docking or castration should be routinely practised. Vaccination of pregnant ewes with an erysipelothrix vaccine licensed for sheep (Erysorb; Hoechst Animal Health) will reduce the incidence in flocks where erysipelothrix is a problem. Pregnant ewes should be given two doses of vaccine three to six weeks apart, the last dose being given three weeks before lambing. Lambs can also be vaccinated at six to eight weeks of age, once maternal antibody has waned.

Post-dipping lameness

Characteristically, post-dipping lameness presents as an explosive outbreak of acute lameness in a flock dipped up to a week previously, affecting up to 80 per cent of all age groups. Lesions are usually confined to the coronary band, hoof, skin and subcutaneous tissues up to the fetlock, but some sheep may develop a septicæmia with polyarthritis. Affected parts are hot and acutely painful, and sheep often have high temperatures. The lesion is an acute cellulitis of the soft tissues following infection through abrasions or small wounds in the vicinity of the coronary band. Inflammation extends to the sensitive laminae of the hoof, and the resultant swelling causes acute pain. The organism can be isolated by incising the skin over the coronary band and culturing from the exudate.

The usual cause of this condition, which occurs infrequently, is re-use of non-bactericidal dips contaminated with mud containing the causative organism. The interval between dippings allows the organism to proliferate before the next batch of sheep is dipped. Ideally, dip baths should be cleaned out after dipping, and the contents discarded. If it is absolutely necessary to re-use the dip, a bactericidal preparation should be added to it. Some proprietary dips do contain antibacterial agents, but it is still bad practice to re-use these as the sheer weight of infection may overcome the bactericidal activity of the dip.

Other infectious polyarthritis

Various agents other than the ones described above have been isolated from polyarthritis in lambs and sheep, but so far there have been no reports of disease following infections with these agents in Britain.

Pathogenic strains of Chlamydia psittaci may spread from the gut to the liver and mesenteric nodes, causing a primary chlamydæmia. Multiplication in the spleen, lungs and kidneys is followed by a secondary wave of infection about 10 days later, during which the joints become involved. Affected lambs are stiff or lame, and may have conjunctivitis. Morbidity is high but few lambs die, though many are unthrifty.

A non-suppurative polyarthritis of lambs which resembles the various manifestations of E rhusiopathiae infections can be caused by Corynebacterium ovis, as the result of infection of skin wounds or abrasions. Treatment with antibiotics is advocated.

Haemophilus agni can cause an acute septicæmia in lambs, usually with sudden death. Some animals which survive for longer than 24 hours develop a fibrinopurulent arthritis and menigitis. The epidemiology and pathogenesis of the disease are not fully understood.

Both Mycoplasma mycoides subspecies mycoides and M capricolum will cause septicæmia or synovitis, serositis and menigitis when given experimentally to sheep, but natural infections are rare and have not been reported in British sheep. Actinobacillus seminis, which can cause posthitis in rams and mastitis in ewes, has been associated with polyarthritis in six-week-old lambs.

Virus infections of joints are rare in sheep, but maedi-visna virus is known to cause chronic arthritis in adult sheep.

References


Correction

Common conditions of domestic pigeons

by A S Wallis

In Practice 13, 99

In the table Mycosan T (Univet) is mention as useful for the treatment of some respiratory tract problems in pigeons. Please note that this product is no longer licensed and is now unavailable.
Common conditions of domestic pigeons

In Practice 1991 13: 207
doi: 10.1136/inpract.13.5.207

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