Brucellosis in South-west Scotland

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The situation in Scotland with reference to brucellosis is reflected in serological evidence of the disease submitted by the Scottish laboratories to the Communicable Diseases Scotland Unit. The figures are an indication of the prevalence of abortus antibodies and are highest in Aberdeenshire and Dumfriesshire; it is not possible to identify clinical forms of the disease; it is suggested that many persons could have acquired antibodies from exposure but have never suffered an illness resembling brucellosis.

The clinical picture of the acute infection is based on 22 patients admitted to Ruchill Hospital over a 10-year period. Fever, headache, sweating, fatigue, and joint pains are predominant. Characteristic drenching sweats and low backache are clinically almost diagnostic. The blood picture is not diagnostic but a low white count with lymphocytosis and a polymorphonuclear leucopenia is a valuable sign. Cases illustrative of acute, subacute, and chronic infection are discussed.

The epidemiological situation in a small residential area which produced 11 of 16 acute cases caused by the consumption of raw milk is described. The results of serological surveys of this area and of other parts of the adjacent countryside are shown; they would appear to confirm that Brucella abortus is a low invasive type for man.

Three points are emphasized. (1) There are probably many cases of acute brucellosis not clinically recognizable. (2) All cases must be followed up clinically and serologically in order to establish their clinical category. (3) A diagnosis of chronic brucellosis should never be made without a critical evaluation of history, clinical signs, and serial serology.

Brucellosis in Eastern Turkey

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Brucellosis is still a problem in Turkey. In this limited survey we have tried to find out its incidence in the eastern part of the country. Erzurum is a city located in eastern Turkey: it has a medical school and other technical facilities, and is an active medical centre for a population of about eight million. The main occupation of the population of the region is raising cattle; as well, cattle from other parts of the region are brought to Erzurum to be slaughtered.

In this survey we have selected different groups of people and animals and applied the acridine precipitated serum test for brucellosis agglutination, using Br. abortus standard antigen. Agglutination titres of 1/80 or over have been accepted as positive for man, 1/40 and over for cattle, and 1/20 and over for sheep. Selected groups for survey are as follows:

I. Close animal contact with no evidence of clinical brucellosis (385 samples with 1-5% positives); II, no animal contact and no evidence of clinical brucellosis (616 samples with 1-3% positives); III, close contact with meat or meat products with no clinical evidence of brucellosis (283 samples with 18% positives); IV, no contact with animals or meat or meat products with brucellosis but high consumption of milk or milk products (505 samples with 7-4% positives); V, slaughtered cattle (337 samples with 11-7% positives); VI, slaughtered sheep (300 samples with 39-9% positives).

This limited survey shows that asymptomatic brucellosis is present in eastern Turkey in man and animals. Handlers of meat and meat products have a higher seropositivity than other groups. The seropositive cases are particularly common in males aged 20-29 years. Consumers of milk and milk products also have a high seropositivity without clinical evidence of brucellosis. Cattle and sheep slaughtered in the main Erzurum slaughterhouse also have a high incidence of seropositivity for brucellosis without evidence of active disease.

Progress of the British Eradication Scheme for Brucellosis

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The successful eradication of an infectious disease is dependent on knowledge of its epidemiology, accurate methods of diagnosis, effective means of vaccination and/or its treatment.

Mass therapy of bovine brucellosis is neither effective nor economically feasible, and, since 1905 when a departmental committee was set up, the Ministry's main activities in the field of brucellosis have been concerned with advances in diagnostic methods and in vaccination as means of control. Limited trials in the eradication of brucellosis began in 1933 but these had to be abandoned at the outbreak of the Second World War.

In 1942, the use of strain 19 was introduced as a means of controlling the disease; its use in mature animals, however, led to difficulties when using the serum agglutination test in differentiating postvaccinal titres from those due to infection. As a result, the permissible age when vaccination was allowed was restricted to 4 to 8 months.

The use of a reference serum for standardizing the agglutinating antigens and the development of the complement fixation test in differentiating postvaccinal from infection titres as well as in detecting the chronic carrier were important landmarks in diagnosis.

The Brucellosis (Accredited Herds) Scheme was introduced in 1967, aimed at identifying and registering brucella-free herds; at this time the use of strain 19 vaccine was restricted to female calves between 91 and 180 days of age. In September 1970, this was replaced by the Brucellosis Incentives Scheme, incentives being used to replace the payment for reactors disclosed at the 'official' test. At this stage too, the Rose Bengal test was introduced as the first test to which all...