

A case of human anthrax in Victoria

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A human case of anthrax was identified through surveillance of knackery workers who had been exposed to infected cattle. The outbreak in cattle has affected 38 herds in the Stanhope/Tatura area of central northern Victoria. The human case, a 39 year old male, was treated in hospital and is recovering. Surveillance of other knackery workers has now been completed, and no other cases were found. Public health measures are in place to prevent further human cases. *Comm Dis Intell* 1997;21:47-48.

Background

Anthrax, caused by *Bacillus anthracis*, is primarily a disease of ruminants which occasionally infects humans. Cases in animals, particularly cattle, occur sporadically in Victoria across a wide area in the south of the State, and along the Goulburn and Murray rivers. The last cases of human anthrax in Victoria were two in 1980, two in 1975, and an outbreak of nine cases in 1971 in association with an outbreak in cattle. Six of these human cases were associated with a knackery.

Outbreak in cattle

Anthrax was detected on two adjoining dairy farms in the Stanhope/Tatura area in central northern Victoria on Sunday, 26 January 1997. The number of affected properties remained low until the weekend of 8 - 9 February, when the number of affected properties and cattle began to escalate rapidly. Up to 14 February, 38 herds had been affected, including both milking and non-milking dairy herds. The number of cattle confirmed with anthrax was 80. The affected properties are confined to an irregular area approximately 15 kilometres by three kilometres, except for one outlying property which is located approximately 15 kilometres away close to a knackery.

Thirteen cattle died in the period 10 January to 26 January before the diagnosis of anthrax was made. Eight of the carcasses had been sent to a local knackery for disposal. Meat from these carcasses was sold as pet food from a shop at the knackery, and hides were sent to a tannery in Melbourne.

Immediate control measures taken by the Department of Human Services

following identification of the outbreak of anthrax in cattle were:

- we requested that the local medical officer of health undertake surveillance of workers at the knackery;
- similar surveillance was instituted at the tannery;
- a public recall of all pet food sold through the knackery was initiated;
- local doctors were advised of the outbreak, provided with a fact sheet, and advised what steps to take if they saw a suspected case.

Measures taken by the Department of Natural Resources and the Environment were:

- the knackery was closed and disinfected;
- all infected cattle are being collected in sealed trucks and transported to burn sites for disposal. Burn sites are being carefully selected away from areas with a high water table;
- disinfection of sites where cattle have died and disinfection of burn sites;
- immunisation of cattle on all affected properties and all adjoining properties has been carried out, along with penicillin treatment of cattle.

Three persons with suspicious lesions were examined by a physician between 31 January and 3 February and specimens were sent to the Victorian Infectious Diseases Reference Laboratory (VIDRL). All were negative for anthrax.

Human case

On 8 February the Infectious Diseases Unit was informed that the medical officer who was conducting surveillance on the knackery workers

had seen one of these men, who had worked only on 26 January skinning and gutting cattle. The 39 year old man had seen a local GP on 26 January prior to the organised surveillance commencing. The GP administered 1.5 gm ciliaeine penicillin IM and amoxycillin 500 mg TDS for five days. As part of the surveillance, the man was examined on 7 February and stated he had remained well until 5 February when he noticed an elevated skin lesion on the lower right forearm which he thought was enlarging. On examination he had a one centimetre elevated reddish papular lesion but no axillary lymphadenopathy. An isolate from a swab of the lesion was presumptively identified as *Bacillus anthracis* by the local laboratory on 8 February, and was confirmed by VIDRL on 11 February. The man was admitted to the local hospital on 8 February and was commenced on benzyl penicillin, 600 mg IV. The following day he became pyrexial, complained of a headache and joint pains and the dosage was increased to 1.2 gm IV 4 hourly. By 10 February the skin lesion on the forearm had developed a blackened centre surrounded by small vesicles with increasing oedema of the forearm and tender axillary lymphadenopathy. On 11 February he was transferred to the Goulburn Valley Base Hospital in Shepparton, where he is recovering.

Further public health measures

Surveillance of the other knackery workers has now been completed, and no other cases were found. An information sheet advising the public in the area of the symptoms of anthrax and the procedure to follow if they have a suspicious lesion, was distributed through the local media

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and delivered directly to the affected farms.

Further measures taken during the week of 10-14 February, after the escalation of the number of affected properties, were:

- an information sheet was produced and distributed to all families on affected properties;

- penicillin prophylaxis and surveillance of the laboratory workers by the local medical officer of health was instituted;
- public meetings organised by the Department of Natural Resources and the Environment were attended by public health officers, and human health

information was presented at these meetings.

On 14 February, there were no new cattle deaths, and immunisation of all cattle in the affected area was almost completed.

Notices to readers

The Pacific Public Health Surveillance Network

The Pacific Public Health Surveillance Network (PPHS Network) is an affiliation of member countries and territories of the South Pacific Commission and other official bodies such as regional organisations and universities. The aim of the Network is to enhance public health surveillance and response capabilities among Pacific island nations. It was formally established at the Pacific Island Meeting on Public Health Surveillance in Noumea, New Caledonia in December 1996.

The PPHS Network has a Coordinating Body presently composed of representatives from five Pacific island countries and territories (Federated States of Micronesia, Fiji, New Caledonia, Solomon Islands and Western Samoa) and five international, regional and training institutions (Australian National University/ National Centre for Epidemiology and Population Health, South Pacific Commission, United Nations International Children's Emergency Fund, University of Hawaii and World Health Organization Regional Office for the Western Pacific). The current focal point of the Coordinating Body is at the South Pacific Commission Community Health Programme. Its immediate objective is to establish a

supportive framework for Pacific island countries to enhance their public health surveillance capabilities. Among other strategies, this includes the development of an early warning system for outbreaks of disease and ensuring a national response and international collaboration to control outbreaks.

For further information on the PPHS Network contact Dr Yvan Souares, Epidemiologist, or Dr Tom Kiedrynski, Notifiable Disease Specialist, both at the South Pacific Commission, Noumea, New Caledonia. Telephone (687) 260143, Facsimile (687) 263818 or email: Yvan@spc.org.nc or Tom@spc.org.nc.

WHO International Travel and Health Vaccination Requirements and Health Advice, 1997 Edition

The 1997 edition of International Travel and Health has just been published by the World Health Organization in English and French. This booklet is intended for national health administrations, practising physicians, tourist agencies, shipping companies, airline operators, and other bodies who are called upon to give health advice to travellers.

In addition to summarising the vaccination requirements of individual countries, the booklet indicates the main areas where malaria transmission occurs and where *Plasmodium falciparum* is resistant to drugs. The recommended chemoprophylactic regimen is also given for each country with malarious areas.

Other chapters cover certain health hazards to which the traveller may be exposed, and indicate the areas in which these hazards are most likely to occur. The booklet also recommends a number of precautions that travellers should take when visiting unfamiliar places.

World Health Organization, 1997; 106 pages (available in English and French); ISBN 92 4 158022 4; Order No. 1189700.