

Abstract

# Outbreak of Brucellosis Among Workers of Cattle Dairy Farm at Renala Khurd- District Okara, Pakistan, January 2017

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## Abstract

**Background:** Brucellosis is endemic in Pakistan and poses a great challenge owing to nonspecific clinical manifestations. On 7th January 2017 three workers of cattle dairy farm at Renala Khurd reported to have intermittent fever.

**Objective:** A team was sent on 8th January 2017 to estimate magnitude of outbreak, evaluate risk factors and recommend control measures.

**Methods:** A case was defined as prolonged intermittent fever, profuse night sweats and headache in a worker of cattle dairy farm at Renala Khurd from 7th to 21st January 2017. Cases and controls were matched by age and locality (1:4). Epidemiological information was recorded on a questionnaire. Serological testing was conducted using Rose Bengal plate test & iELISA. Frequencies were calculated, odd ratios determined at 95% confidence interval with p value less than 0.05.

**Results:** A total of 9 cases were identified and mean age was 30 year (range 24-42 years). Overall attack rate was 29% and attack rate in cattle attendant was 47%. Among cases 78% (7/9) were involved in milking, feeding, cleaning, 44% (4/9) were habitual consumers of raw milk while 22% (2/9) were drivers and watchmen. Persons consuming contaminated raw milk (OR: 10; 95% CI: 1.4-70.2;  $P=.024$ ) and workers having direct contact with animals (OR: 8.3; 95% CL: 1.4-49;  $P=.01$ ) were more likely to have brucellosis. Apart from intermittent fever, night sweats (88%), headache (88%), fatigue (44%) and backache (11%) were the most frequent symptoms. All 9 cases were positive for brucella antibodies.

**Conclusions:** The most probable cause of this outbreak was consumption of unprocessed contaminated milk and contact with secretions/excretions of infected animals. Monthly screening of workers, for a period of six months was recommended. Human cases were referred for medical treatment and Department of Health was notified.

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