

Regional study of anthrax foci

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Objective

The purpose of this study was to describe anthrax foci along the Georgia-Azerbaijan border and to describe control measures in identified areas.

Introduction

Anthrax is endemic in the South Caucasus region. There is a lack of understanding of the regional epidemiology of the causative pathogen, *Bacillus anthracis*, and the trans-boundary factors related to its persistence.

Methods

To increase the local and regional understanding of anthrax ecology, ecological risk factors, and the genetic relationships and distribution among Georgian and Azerbaijani *B. anthracis* strains, a regional study of the ecology of anthrax foci was conducted in Georgia and Azerbaijan. Six regions in Georgia (that border Azerbaijan) were selected for environmental sampling based on historical data. Soil samples were collected in Lagodekhi and Sagarejo and tested at the Laboratory of the Ministry of Agriculture using standard bacteriological and molecular biology methods.

Results

A total of 185 soil samples were collected. Bacteriological tests revealed four positive samples from Kakheti (two from Lagodekhi, Gelati; two from Dedoplistskaro), from which, cultures were isolated and confirmed by PCR. Georgian scientists continue collecting and testing soil samples. After sample collection and bacteriological testing is completed, the molecular characteristics of the pathogen will be examined.

Conclusions

This study will assist in the formulation of targeted public health interventions aimed at increasing knowledge of the disease within specific demographics. Public health interventions can focus on livestock surveillance and control in identified areas.

Keywords

Anthrax; One Health; Endemic; Trans-boundary; Public health

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