

Data for: Prevalence of protective tetanus antibodies and immunological response following tetanus toxoid vaccination among men seeking medical circumcision services in Uganda

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Citation

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Creator/Principal investigator(s)

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Description

Introduction: Tetanus infection associated with men who had male circumcision has been reported in East Africa, suggesting a need for tetanus toxoid-containing vaccines (TTCV).

Objective: To determine the prevalence of tetanus toxoid antibodies following vaccination among men seeking circumcision.

Methods: We enrolled 620 consenting men who completed a questionnaire and received TTCV at enrollment (day 0) prior to circumcision on day 28. Blood samples were obtained at day 0 from all enrollees and on days 14, 28 and 42 from a random sample of 237 participants. Tetanus toxoid (TT) IgG antibody levels were assayed using EUROIMMUN. Analyses included prevalence of TT antibodies at enrollment and used a mixed effects model to determine the immunological response.

Results: Mean age was 21.4 years, 65.2% had knowledge of tetanus, 56.6% knew how tetanus was contracted, 22.8% reported ever receipt of TTCV, and 16.8% had current/recently healed wounds. Insufficient tetanus immunity was 57.1% at enrollment, 7.2% at day 14, 3.8% at day 28, and 0% at day 42. Antibody concentration was 0.44IU/ml (CI 0.35-0.53) on day 0, 3.86IU/ml (CI 3.60-4.11) on day 14, 4.05IU/ml (CI 3.81-4.29) on day 28, and 4.48IU/ml (CI 4.28-4.68) on day 42. TT antibodies increased by 0.24IU/ml (CI 0.23, 0.26) between days 0 and 14 and by 0.023IU/ml (CI 0.015, 0.031) between days 14 and 42 days. Immunological response was poorer in HIV-infected clients and men aged 35+ years.

Conclusion: Insufficient immunity was common prior to TTCV, and a protective immunological response was achieved by day 14. Circumcision may safely be provided 14 days after vaccination in HIV-uninfected men aged less than 35 years.

Purpose:

To determine the prevalence of tetanus toxoid antibodies following vaccination among men seeking circumcision.

Observations: 1,217 variables: 14 size: 116,832 Social demographics, TT antibody concentration,

interpretation of concentration, participant identification variable

Language

[English](#)

Variables

14

Number of individuals/objects

620

Response rate/participation rate

Data format / data structure

[Numeric](#)

Data collection 1

- Mode of collection: Interview
- Time period(s) for data collection: 2016-01-10 - 2016-11-02
- Source of the data: Population group

Data collection 2

- Mode of collection: Measurements and tests
- Time period(s) for data collection: 2016-01-10 - 2016-11-02
- Source of the data: Population group

Geographic spread

Geographic location: [Uganda](#)

Geographic description: 13 sites in the 5 geographical regions (North, Western, Eastern Central and Kampala)

Ethics Review

Uganda National Council of Science and Technology - Ref. HR 1959

Research area

[Medical and health sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Health](#) (CESSDA Topic Classification)

Keywords

[Tetanus toxoid](#)

Publications

Makumbi F, Byabagambi J, Muwanika R, Kigozi G, Gray R, et al. (2018) Prevalence of protective tetanus antibodies and immunological response following tetanus toxoid vaccination among men seeking medical circumcision services in Uganda. PLOS ONE 13(12): e0209167.

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Accessibility level

Access to data through SND
Access to data is restricted

Use of data

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Versions

Version 1.0. 2019-01-14

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[DDI 2.5](#)

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