Smallpox Bibliography
May 2004

1: Acad Emerg Med. 2004 Jan;11(1):115-6.

The smallpox immunization program compared with clinical research.

Bania TC, Almond GL.

Publication Types:
Letter

PMID: 14709441 [PubMed - indexed for MEDLINE]

2: Am J Ophthalmol. 2004 Mar;137(3):554-6.

Ocular vaccinia following exposure to a smallpox vaccinee.

Hu G, Wang MJ, Miller MJ, Holland GN, Bruckner DA, Civen R, Bornstein LA, Mascola L, Lovett MA, Mondino BJ, Pegues DA.

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PURPOSE: To describe the presentation and management of the first identified case of ocular vaccinia infection associated with the current smallpox vaccination program. DESIGN: Case report. METHODS: Vaccinia virus was isolated by cell culture of a conjunctival swab. Direct staining with fluorescein isothiocyanate-labeled vaccinia antibody and polymerase chain reaction testing confirmed the diagnosis. RESULTS: In February 2003, a 26-year-old woman developed right preseptal cellulitis and blepharoconjunctivitis following contact with a vaccinated member of the military. The preseptal cellulitis resolved with antibacterial therapy, and the conjunctival infection was treated successfully with a 14-day course of topical trifluridine and a single dose of intravenous vaccinia immune globulin. CONCLUSIONS: To facilitate rapid diagnosis and appropriate treatment, clinicians must maintain a high index of suspicion for ocular smallpox vaccine-associated adverse reactions in vaccine recipients and their close contacts.

Publication Types:

Case Reports

PMID: 15013881 [PubMed - indexed for MEDLINE]

3: Biosecur Bioterror. 2003;1(3):185-92.

Public resistance or cooperation? A tale of smallpox in two cities.

Leavitt JW.

Dept. of Medical History and Bioethics, University of Wisconsin, Madison, 1300 University Ave., Madison, WI 53706, USA. jwleavit@wisc.edu

Publication Types:
Historical Article

PMID: 15040196 [PubMed - indexed for MEDLINE]

4: Biosecur Bioterror. 2003;1(1):47-52.

Ethical considerations in the formation of smallpox vaccine policy.

Taylor HA, Faden RR.

Department of Health Policy and Management, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland, USA. htaylor@jhsph.edu

Publication Types:
Review
Review, Tutorial

PMID: 15040215 [PubMed - indexed for MEDLINE]

5: Biosecur Bioterror. 2003;1(1):53-4.

Key information regarding smallpox vaccine.

Mair M, Borio L.

Center for Civilian Biodefense Strategies, Johns Hopkins University, USA.

PMID: 15040216 [PubMed - indexed for MEDLINE]

6: Can Commun Dis Rep. 2003 Nov 15;29(22):194-6.

Update: adverse events following civilian smallpox vaccination--United States, 2003.

[Article in English, French]

[No authors listed]

PMID: 14650096 [PubMed - indexed for MEDLINE]

7: Emerg Infect Dis. 2003 Dec;9(12):1649-50.

Generalized vaccinia 2 days after smallpox revaccination.

Miller JR, Cirino NM, Philbin EF.

Publication Types:
Case Reports
Letter

PMID: 14725307 [PubMed - indexed for MEDLINE]

8: J Am Acad Dermatol. 2004 Apr;50(4):591-4.

The scarring mechanism of smallpox.

Regan TD, Norton SA.

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USA.

BACKGROUND: Smallpox is notorious for leaving its survivors with disfiguring scars, but it is unclear how these scars are produced. Modern dermatopathology textbooks report that smallpox produced epidermal lesions, yet the process of scarring requires dermal involvement. OBJECTIVES: Our goal was to uncover past theories on the mechanism of smallpox scarring. METHODS: We conducted a comprehensive review of English-language textbooks and English-translations of textbooks in general medicine, dermatology, pathology, and dermatopathology from the past 150 years as well as relevant journal publications for the same time period. RESULTS: We identified five different theories to explain the scarring of smallpox. The five proposals are that scarring resulted from: the extension of suppuration into the dermis; the extension of suppuration into the dermis along with inappropriate treatment and scratching; secondary bacterial ecthyma; the destruction of elastic fibers; or the destruction of sebaceous glands. CONCLUSION: The theory that best fits clinical and histological observations is that smallpox caused scars through the destruction of sebaceous glands, first proposed by Gerrit Bras in 1952. Although this explanation is not found in any dermatopathology text, it is supported by today's leading authorities on smallpox. However, since variola virions have never actually been identified in sebaceous glands, or even in the dermis, further study of preserved tissue is warranted. Until then, the mechanism of scar formation remains speculative.

Publication Types:
Review
Review, Academic

PMID: 15034509 [PubMed - indexed for MEDLINE]

9: J Clin Microbiol. 2004 Mar;42(3):1373-5.

Laboratory confirmation of generalized vaccinia following smallpox vaccination.

Kelly CD, Egan C, Davis SW, Samsonoff WA, Musser KA, Drabkin P, Miller JR, Taylor J, Cirino NM.

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The reinitiation of smallpox vaccination has renewed interest in implementing modern diagnostic methods to assess orthopoxvirus infection and adverse events following vaccination. We report here the laboratory confirmation of vaccinia virus in pustular lesions of a healthy adult vaccinee by use of a two-tier algorithm incorporating TaqMan PCR and electron microscopy.

Publication Types:
Case Reports

PMID: 15004124 [PubMed - indexed for MEDLINE]

10: J Virol. 2004 Apr;78(8):3811-6.

Long-lived poxvirus immunity, robust CD4 help, and better persistence of CD4 than CD8 T cells.

Amara RR, Nigam P, Sharma S, Liu J, Bostik V.

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The currently used smallpox vaccine is associated with a high incidence of adverse events, and there is a serious need for a safe and effective alternative vaccine. Here, we carried out a longitudinal evaluation of vaccinia virus-specific CD4 and CD8 T cells in smallpox-vaccinated individuals by using a highly sensitive intracellular cytokine staining assay. Our results demonstrate that, in addition to the CD8 response, the smallpox vaccinations raised a robust CD4 response with a Th1-dominant cytokine profile. These CD4 T cells were stable and exhibited only a twofold contraction between peak effector and memory phases compared with an approximate sevenfold contraction for CD8 cells. A significant proportion of vaccinated individuals lost detectable CD8 memory while maintaining CD4 memory. After a booster immunization, these individuals generated a robust CD8 response, which some of them rapidly lost. Thus, the current smallpox vaccine provides long-lasting CD4 help that may be critical for long-lived B-cell memory. We suggest that the provision of adequate CD4 help for CD8 and humoral effector functions will be critical to the success of the next generation of smallpox vaccines.

PMID: 15047796 [PubMed - indexed for MEDLINE]

11: JAMA. 2004 Apr 21;291(15):1825.

New smallpox vaccine shows promise.

Hampton T.

PMID: 15100185 [PubMed - indexed for MEDLINE]

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Smallpox vaccination in the shadow of Jenner.

Young DC.

Publication Types:
Historical Article
Letter

PMID: 15001344 [PubMed - indexed for MEDLINE]

13: Nature. 2004 Apr 22;428(6985):789.

Side effects leave smallpox vaccine in limbo.

Check E.

Publication Types:
News

PMID: 15103344 [PubMed - indexed for MEDLINE]

14: Nebr Nurse. 2003 Jun-Aug;36(2):28-30; quiz 31-2, 34.

Independent study. Smallpox: what every nurse should know.

[No authors listed]

Publication Types:
Review
Review, Tutorial

PMID: 12830688 [PubMed - indexed for MEDLINE]

15: US News World Rep. 2004 Mar 22-29;136(10):59.

Safer pox protection.

Boyce N.

Publication Types:
News

PMID: 15069905 [PubMed - indexed for MEDLINE]