



Smallpox Bibliography October 2004

1: Ann Emerg Med. 2004 Jun;43(6):787-8.

Comment on:

Ann Emerg Med. 2003 Nov;42(5):665-80.

Ann Emerg Med. 2003 Nov;42(5):681-4.

Ann Emerg Med. 2003 Nov;42(5):685-8.

The smallpox vaccine and coronary artery disease: a personal perspective.

Lammert GR.

Publication Types:

Case Reports

Comment

Letter

PMID: 15259164 [PubMed - indexed for MEDLINE]

2: Ann Emerg Med. 2004 Jun;43(6):783, 791.

Images in emergency medicine. Generalized vaccinia.

Lemery J.

Department of Emergency Medicine, New York University/Bellevue Hospital, New York, NY, USA.

Publication Types:

Case Reports

PMID: 15159712 [PubMed - indexed for MEDLINE]

3: Arch Ophthalmol. 2004 Sep;122(9):1407; author reply 1407-8.

Comment on:

Arch Ophthalmol. 2003 May;121(5):715-9.

The ocular complications of smallpox and smallpox immunization.

Smith JA, Casey CG, Tierney BC.

Publication Types:

Comment

Letter

PMID: 15364730 [PubMed - indexed for MEDLINE]

4: Clin Infect Dis. 2004 Jun 15; 38(12):1749-53. Epub 2004 May 19.

Modified vaccinia Ankara: potential as an alternative smallpox vaccine.

McCurdy LH, Larkin BD, Martin JE, Graham BS.

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Despite the declaration of smallpox eradication in 1980, the existence of variola stockpiles and the threat of bioterrorism demand that immunity to smallpox through vaccination be maintained. Although the currently available vaccine was used for the most successful medical intervention ever accomplished, it also is associated with side effects that are difficult to accept in a vaccine for a disease that has not been present for >25 years. Herein, we review alternative approaches to maintaining immunity to smallpox through vaccination with attenuated poxviruses, and we suggest modified vaccinia Ankara (MVA) as a leading candidate for an alternative smallpox vaccine.

PMID: 15227622 [PubMed - indexed for MEDLINE]

5: Hist Sci (Tokyo). 2004 Mar; 13(3):164-75.

Western medicine, Korean government, and imperialism in late nineteenth-century Korea: The cases of the Choson government hospital and smallpox vaccination.

Shin DW.

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Publication Types:

Biography

Historical Article

Personal Name as Subject:

Chi SY

Allen HN

PMID: 15212040 [PubMed - indexed for MEDLINE]

6: J Allergy Clin Immunol. 2004 Aug; 114(2): 454-6.

Latex allergens are not detectable in reconstituted smallpox vaccine or vaccine vial stoppers.

Poland G, Ovsyannikova IG, Jones RT, Yunginger JW.

Publication Types:
Letter

PMID: 15341028 [PubMed - indexed for MEDLINE]

7: J Am Coll Cardiol. 2004 Jul 7; 44(1): 201-5.

Incidence and follow-up of inflammatory cardiac complications after smallpox vaccination.

Eckart RE, Love SS, Atwood JE, Arness MK, Cassimatis DC, Campbell CL, Boyd SY, Murphy JG, Swerdlow DL, Collins LC, Riddle JR, Tornberg DN, Grabenstein JD, Engler RJ; Department of Defense Smallpox Vaccination Clinical Evaluation Team.

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OBJECTIVES: The purpose of this study was to assess the follow-up of patients with vaccinia-associated myocarditis. **BACKGROUND:** With the threat of biological warfare, the U.S. Department of Defense resumed a program for widespread smallpox vaccinations on December 13, 2002. One-year afterwards, there has been a significant increase in the occurrence of myocarditis and pericarditis among those vaccinated. **METHODS:** Cases were identified through sentinel reporting to military headquarters, systematic surveillance, and spontaneous reports. **RESULTS:** A total of 540,824 military personnel were vaccinated with a New York City Board of Health strain of vaccinia from December 2002 through December 2003. Of these, 67 developed myopericarditis at 10.4 +/- 3.6 days after vaccination. The ST-segment elevation was noted in 57%, mean troponin on admission was 11.3 +/- 22.7 ng/dl, and peak cardiac enzymes were noted within 8 h of presentation. On follow-up of 64 patients (96%) at a mean of 32 +/- 16 weeks, all patients had objective normalization of echocardiography, electrocardiography, laboratory testing, graded exercise testing, and functional status; 8 (13%) reported atypical, non-limiting persistent chest discomfort. **CONCLUSIONS:** Post-vaccinial myopericarditis should be considered in patients with chest pain within 30 days after smallpox vaccination. Normalization of echocardiography, electrocardiography, and treadmill testing is expected, and nearly all patients have resolution of chest pain on follow-up.

Publication Types:
Review
Review, Tutorial

PMID: 15234435 [PubMed - indexed for MEDLINE]

8: J Antimicrob Chemother. 2004 Jul;54(1):1-5. Epub 2004 May 26.

Antiviral prophylaxis of smallpox.

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Proof-of-concept studies suggest that current defences against smallpox could be strengthened by supplementing vaccination with antiviral drug prophylaxis, based on aerosolized or orally available forms of the long-acting medication cidofovir. Delivery of aerosolized cidofovir to mice results in its prolonged retention in respiratory tissues and protection against lethal intranasal or aerosol poxviral challenge. Although cidofovir itself is not orally available, the addition of an alkoxyalkanol ether side-chain allows it to be absorbed from the gastrointestinal tract. This also markedly increases its antiviral activity and lengthens its intracellular half-life from roughly 3 to 8-10 days. Oral treatment also protected mice against lethal poxviral challenge. These results suggest that a single aerosol dose of cidofovir (or an alkoxyalkanol-ether derivative) could provide prolonged protection against initiation of smallpox infection, whereas oral treatment could prevent both initiation of infection and internal dissemination of virus. Both approaches may avoid the nephrotoxicity that occasionally results from intravenous cidofovir therapy.

Publication Types:

Review
Review, Tutorial

PMID: 15163655 [PubMed - indexed for MEDLINE]

9: J Environ Health. 2004 Jun;66(10):41.

Report assesses tools for measuring smallpox readiness.

[No authors listed]

Publication Types:

News

PMID: 15216567 [PubMed - indexed for MEDLINE]

10: J Gen Intern Med. 2004 May;19(5 Pt 1):451-5.

Differential willingness to undergo smallpox vaccination among African-American and white individuals.

Micco E, Gurmankin AD, Armstrong K.

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OBJECTIVE: To examine potential disparities in willingness to be vaccinated against smallpox among different U.S. racial/ethnic groups. **DESIGN:** Cross-sectional survey using an experimental design to assess willingness to be vaccinated among African Americans compared to whites according to 2 strategies: a post-exposure "ring vaccination" method and a pre-exposure national vaccination program. **SETTING:** Philadelphia County district courthouse. **PARTICIPANTS:** Individuals awaiting jury duty. **MEASUREMENTS:** We included 2 scenarios representing these strategies in 2 otherwise identical questionnaires and randomly assigned them to participants. We compared responses by African Americans and whites. **MAIN RESULTS:** In the pre-exposure scenario, 66% of 190 participants were willing to get vaccinated against smallpox. In contrast, 84% of 200 participants were willing to get vaccinated in the post-exposure scenario ($P = .0001$). African Americans were less willing than whites to get vaccinated in the pre-exposure scenario (54% vs 77%; $P = .004$), but not in the post-exposure scenario (84% vs 88%; $P = .56$). In multivariate analyses, overall willingness to undergo vaccination was associated with vaccination strategy (odds ratio, 3.29; 95% confidence interval, 1.8 to 6.1). **CONCLUSIONS:** Racial disparity in willingness to get vaccinated varies by the characteristics of the vaccination program. Overall willingness was highest in the context of a post-exposure scenario. These results highlight the importance of considering social issues when constructing bioterror attack response plans that adequately address the needs of all of society's members.

PMID: 15109343 [PubMed - indexed for MEDLINE]

11: JAMA. 2004 Sep 8;292(10):1205-12.

Vaccination success rate and reaction profile with diluted and undiluted smallpox vaccine: a randomized controlled trial.

Talbot TR, Stapleton JT, Brady RC, Winokur PL, Bernstein DI, Germanson T, Yoder SM, Rock MT, Crowe JE Jr, Edwards KM.

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CONTEXT: Additional smallpox vaccine doses are needed to augment current US national stockpile. Aventis Pasteur smallpox vaccine (APSV), initially manufactured in the 1950s from the New York Board of Health vaccinia strain in a frozen preparation, appears as effective as lyophilized vaccine but the effectiveness of diluted doses of APSV is unclear. **OBJECTIVE:** To compare the vaccination success rate and the reaction profile of various APSV dilutions. **DESIGN, SETTING, AND PARTICIPANTS:** A double-blind, randomized controlled trial of 340 healthy vaccinia-naive adults aged 18 to 32 years from 3 academic medical centers who were vaccinated with 1 of 3 strengths of APSV dilutions (undiluted, 1:5, and 1:10) between October 9, 2002, and February 24, 2003. Volunteers were followed up every 3 to 5 days until the vaccination site healed for bandage changes, vaccine response assessment, and adverse event evaluation, followed by 1- and 2-month clinic evaluations and 6-month telephone interview. **MAIN OUTCOME MEASURES:** Successful vaccination, defined by presence of a vesicle or pustule at the inoculation site 6 to 11 days postvaccination, and local and systemic

reactions to vaccination. RESULTS: A total of 340 volunteers were vaccinated (vaccine dose: undiluted, n = 113; 1:5 dilution, n = 114; and 1:10 dilution, n = 113). Following vaccination, 99.4% (95% confidence interval [CI], 97.9%-99.9%) of all volunteers had successful vaccinations. Success rates did not differ between the dilution groups (undiluted, 100.0%; 95% CI, 96.8%-100.0%; 1:5 dilution, 98.2%; 95% CI, 93.8%-99.8%; 1:10 dilution, 100.0% 95% CI, 96.8%-100.0%; P = .33). Overall, 99.7% of volunteers reported at least 1 local symptom at the vaccination site, and 61.8% had axillary lymphadenopathy, 15.0% developed satellite lesions, and 7.6% developed a rash away from the vaccination site. Fever developed in 21.5%. No differences were noted in local or systemic reactions between the 3 dilution groups (P>.05 for each comparison). A total of 25% of volunteers missed scheduled duties due to vaccine-related symptoms. CONCLUSIONS: Even at diluted doses, APSV is an effective smallpox vaccine, allowing for expansion of the current stockpile. However, reactogenicity was not reduced with dilution of the vaccine and, as with other smallpox vaccines, may impair daily activities.

Publication Types:

Clinical Trial
Multicenter Study
Randomized Controlled Trial

PMID: 15353533 [PubMed - indexed for MEDLINE]

12: Mayo Clin Proc. 2004 Sep;79(9):1193-6.

Stevens-Johnson syndrome after immunization with smallpox, anthrax, and tetanus vaccines.

Chopra A, Drage LA, Hanson EM, Touchet NL.

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A 19-year-old male military recruit developed erythema multiforme 20 days after receiving a triad of vaccinations: smallpox (vaccinia virus), anthrax, and tetanus. Over the course of a few days, the erythema multiforme evolved into Stevens-Johnson syndrome, associated with widespread bullae, stomatitis, conjunctivitis, and fever. After 7 days of conservative management, the patient's signs and symptoms improved. This case serves as a timely reminder of a severe and potentially life-threatening complication of smallpox vaccination.

Publication Types:

Case Reports

PMID: 15357044 [PubMed - indexed for MEDLINE]

13: Med Hist. 2004 Apr;48(2):199-228.

Variolation, vaccination and popular resistance in early colonial south India.

Brimnes N.

Department of History, Aarhus University, DK-8000 Aarhus C, Denmark.

Publication Types:
Historical Article

PMID: 15151104 [PubMed - indexed for MEDLINE]

14: Minn Med. 2004 May;87(5):34-9.

Smallpox in Saint Paul and Minneapolis, 1924-1925.

Nelson PD.

Publication Types:
Historical Article

PMID: 15191066 [PubMed - indexed for MEDLINE]