



Chemical/Biological Terrorism August 2004

1: Anal Chem. 2003 Aug 1;75(15):355A-358A.

Seeing SAW potential.

Harris CM.

PMID: 14572027 [PubMed - indexed for MEDLINE]

2: Anesth Analg. 2004 Jun;98(6):1753-8, table of contents.

Intraosseous vascular access in the treatment of chemical warfare casualties assessed by advanced simulation: proposed alteration of treatment protocol.

Vardi A, Berkenstadt H, Levin I, Bentencur A, Ziv A.

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Current treatment protocols for chemical warfare casualties assume no IV access during the early treatment stages. Time constraints in mass casualty scenarios, impaired manual dexterity of medical personnel wearing protective gear, and victims' complex clinical presentations render standard IV access techniques impractical. A newly developed spring-driven, trigger-operated intraosseous infusion device may offer an effective solution. Sophisticated simulators were developed and used to mimic scenarios of chemical warfare casualties for assessing the feasibility of intraosseous infusion delivery. We evaluated the clinical performance of medical teams in full protective gear. The success rate in intraosseous insertion, time to completion of treatment goals, and outcome were measured in a simulated setting. Medical teams from major hospitals in Israel, designated for emergency response in a real chemical warfare mass casualty scenario, were trained in a simulated setting. All 94 participating physicians were supplied with conventional treatment modalities: only the 64 study group physicians received intraosseous devices. The simulated survival rate was 73.4% for the study group and 3.3% for the controls ($P < 0.001$). Treatment goals were achieved within 3.5 min (range, 1-9 min) in the study group and within >10 min for controls ($P < 0.001$), and the complication rate for intraosseous use was 13.8%. Personnel satisfaction with the intraosseous device was unanimous and high. New-generation intraosseous infusions have great potential value in the early treatment stages of chemical warfare casualties. IMPLICATIONS: In a chemical warfare mass casualty scenario, the protective gear worn by medical personnel, the time constraints, and the casualties' medical condition impose limitations on the establishment of IV access during early treatment of the victims. A spring-driven, trigger-operated intraosseous infusion delivery system may offer an effective solution.

PMID: 15155341 [PubMed - indexed for MEDLINE]

3: Biosecur Bioterror. 2004;2(1):41-5.
Synopsis of the January 22-23, 2004, Secretary's Council on Public Health Preparedness.
Department of Health and Human, Services Secretary's Council on Public Health Preparedness.
PMID: 15106611 [PubMed - indexed for MEDLINE]

4: Biosecur Bioterror. 2004;2(1):47-50.
Ready or not? Protecting the public's health in the age of bioterrorism.
Hearne SA, Davis M, Segal LM, Unruh PJ, Earls MJ, Lesperance L, Meyers J, Dillingham A; Trust for America's Health.
PMID: 15068678 [PubMed - indexed for MEDLINE]

5: Biosecur Bioterror. 2004;2(1):25-40.
Leading during bioattacks and epidemics with the public's trust and help.
Working Group on Governance Dilemmas in Bioterrorism Response.
PMID: 15068677 [PubMed - indexed for MEDLINE]

6: Biosecur Bioterror. 2004;2(1):17-23.
Strategic dilemmas of biosecurity in the European Union.
Sundelius B, Gronvall J.
Uppsala University, Sweden.
Systems for societal/homeland security in both Europe and the United States are in flux to adjust to 21st century threats, such as terrorism, the proliferation of weapons of mass destruction, regional conflicts, state failures, and organized crime. It is important that reforms take place on both sides of the Atlantic that recognize the interdependence of Europe and the United States.
Security, including biosecurity, for Europe is strongly connected to security in the U.S. Diseases transcend borders, and their consequences can be the same, irrespective of where the outbreak occurs or whether it is a natural occurrence or an act of bioterrorism. This article examines the political and strategic dilemmas and complexities that would confront the European Union (EU) in the event of a bioterrorism attack or a naturally occurring outbreak. Although several initiatives have been taken by the 15 member states and within the EU Commission, the EU is not institutionally prepared for transnational, rapidly moving diseases that could cause grave consequences in Europe and other regions, including the U.S. The prime responsibility for protecting European citizens against outbreaks rests with each member state. However, with intertwined and open European societies, the consequences would likely spill across borders. The EU Commission would have to become involved because such aspects as the internal market and freedom of movement would be affected. Responsibility, but not authority, would be pushed to the top. A coordinated EU response to such crises depends on European political leadership.
PMID: 15068676 [PubMed - indexed for MEDLINE]

7: Biosecur Bioterror. 2004;2(1):7-16.
Implementation of biosurety systems in a Department of Defense medical research laboratory.
Carr K, Henchal EA, Wilhelmsen C, Carr B.
U S Army Medical Research Institute of Infectious Diseases, Fort Detrick, Maryland 21702, USA. Kathleen.carr@us.army.mil

New biosurety regulations and guidelines were implemented in 2003 because of increased concern for the safety and security of biological select agents and toxins (BSAT) that may be used as weapons of mass destruction. Biosurety is defined as the combination of security, biosafety, agent accountability, and personnel reliability needed to prevent unauthorized access to select agents of bioterrorism. These new regulations will lead to increased scrutiny of the use of select biological agents in registered research laboratories, but the regulations may have unintended effects on cost, progress, and perceptions in programs previously considered part of the academic research community. We review the history of biosurety, evolving guidelines, implementation of the regulations, and impacts at the lead research laboratory for medical biological defense for the Department of Defense.

Publication Types: Review Review, Tutorial
PMID: 15068675 [PubMed - indexed for MEDLINE]

8: BMC Microbiol. 2004 May 17; 4(1):21.

Multi-pathogens sequence containing plasmids as positive controls for universal detection of potential agents of bioterrorism.

Charrel RN, La Scola B, Raoult D.

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BACKGROUND: The limited circulation of many of the agents that are likely to be used in a bioterrorism attack precludes the ready availability of positive controls. This means that only specialized laboratories can screen for the presence of these agents by nucleic amplification assays. Calibrated controls are also necessary for quantitative measurements. Primers and probes to be used in both conventional and real-time PCR assays were designed for the detection of agents likely to be used by a bioterrorist. Three plasmids, each of which contains 4 to 6 specific sequences from agents on the CDC Category A and B list (excluding RNA viruses) were constructed. Two plasmids incorporate the sequences of Category A and B agents, respectively. The third plasmid incorporates sequences from Variola major and organisms that cause rash-like illnesses that may be clinically confused with smallpox. An "exogenic sequence", introducing a NotI restriction site was incorporated in the native sequences of the bioterrorism agents inserted in plasmids. The designed molecular system for detection of bioterrorism agents was tested on each of these agents (except Monkeypox virus, Smallpox virus and 2 Burkholderia species for which no native DNA was available) and a collection of 50 isolates of *C. burnetii* using constructed plasmids as positive controls. **RESULTS:** Designed primers and probes allowed molecular detection, in either single or multiplex assays, of agent-specific targets with analytical sensitivities of between 1 and 100 DNA copies. The plasmids could be used as positive controls. False-positive results due to contamination by the positive control were easily detected by sequencing and eliminated by digestion with NotI. **CONCLUSION:** Plasmid A and B can be used as positive controls in molecular assays for the detection of bioterrorism agents in clinical specimens or environmental samples. Plasmid C can be used as a positive control in differentiation of vesicular rashes. It is also possible to avoid or to ensure immediate detection of false positive results due to contamination by positive controls using these plasmids. These plasmids and the corresponding primers and probes are immediately available for all clinical microbiology laboratories provided they have molecular amplification equipment.

Publication Types: Evaluation Studies
PMID: 15147587 [PubMed - indexed for MEDLINE]

9: BMJ. 2004 Jul 31;329(7460):250.
Bush signs law to protect US from bioterrorism.
Charatan F.
Publication Types: News
PMID: 15284136 [PubMed - in process]

10: Clin Chem. 2004 Jun;50(6):1060-2.
Molecular beacons for multiplex detection of four bacterial bioterrorism agents.
Varma-Basil M, El-Hajj H, Marras SA, Hazbon MH, Mann JM, Connell ND, Kramer FR, Alland D.
Department of Medicine, Division of Infectious Disease, New Jersey Medical School, The University of Medicine and Dentistry of New Jersey, Newark, NJ, USA.
PMID: 15161722 [PubMed - indexed for MEDLINE]

11: Clin Med. 2004 May-Jun;4(3):289; author reply 289.
Bioterrorism: the need to be prepared. Holdstock D.
Publication Types: Comment Letter
PMID: 15244370 [PubMed - in process]

12: Creighton Law Rev. 2003 Apr;36(3):359-74.
Terror and triage: prioritizing access to mass smallpox vaccination.
Silverman RD, May T.
Southern Illinois University School of Medicine, USA.

In response to the threat of a smallpox attack on the United States, the Centers for Disease Control and Prevention ("CDC") recommended the establishment of smallpox clinics designed to distribute a vaccine to the entire U.S. population in a ten day period. However, a number of potential obstacles raise questions about the feasibility of this plan. What is needed is a plan that applies principles of triage to smallpox vaccine distribution following a bioterrorism attack. Only in this way can those most vulnerable--the previously unvaccinated--be protected from a significantly increased risk due to delays that might arise in executing the CDC plan.
PMID: 15199933 [PubMed - indexed for MEDLINE]

13: Curr Opin Investig Drugs. 2004 Feb;5(2):135-40.
Current therapy and the development of therapeutic options for the treatment of diseases due to bacterial agents of potential biowarfare and bioterrorism.
Greenfield RA, Bronze MS.
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An important part of biodefense is the optimization of current therapy and the development of new therapeutic options for the treatment of the diseases most likely encountered in the form of biological weapons. Guidelines for the prevention and treatment of anthrax, plague, tularemia and botulinum toxin intoxication are reviewed. The strategies in development for the prevention of anthrax focus primarily on active and passive immunization against protective antigen, because of its central role as a toxin delivery module. Novel vaccine strategies for plague, tularemia and botulism are also reviewed.

Publication Types: Review Review, Tutorial
PMID: 15043386 [PubMed - indexed for MEDLINE]

14: Disaster Manag Response. 2004 Jul-Sep;2(3):69-74.

Physician preparedness for bioterrorism recognition and response: A Utah-based needs assessment.

Alder SC, Clark JD, White GL, Talboys S, Mottice S.
PMID: 15286596 [PubMed - in process]

15: *Epidemiology*. 2004 May; 15(3):264-70.

Comment in: *Epidemiology*. 2004 May; 15(3):258-60; discussion 260-1.

Preventing second-generation infections in a smallpox bioterror attack.

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This article presents a new probabilistic model for the prevention of second-generation infections by different vaccination strategies in the event of a smallpox bioterror attack. The main results are independent of the reproductive number R_0 (the number of secondary infections transmitted per index infected individual) and population mixing patterns. General expressions are derived for the fraction of second-generation infections that can be prevented through vaccination, whereas specific results are obtained for traced and mass vaccination, respectively. Expressions for total outbreak size in controlled epidemics are also presented. The analysis highlights the importance of vaccination logistics in addition to beliefs and assumptions regarding smallpox epidemiology in evaluating alternative responses to a smallpox bioterror attack.

Publication Types: Review Review, Tutorial

PMID: 15097005 [PubMed - indexed for MEDLINE]

16: *Epidemiology*. 2004 May; 15(3):258-60; discussion 260-1.

Comment on: *Epidemiology*. 2004 May; 15(3):264-70.

Smallpox: a vulnerable specter

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Publication Types: Comment Review Review, Tutorial

PMID: 15097002 [PubMed - indexed for MEDLINE]

17: *Expert Opin Biol Ther*. 2003 Dec; 3(8):1279-89.

Defensive applications of gene transfer technology in the face of bioterrorism: DNA-based vaccines and immune targeting.

Ackley CJ, Greene MR, Lowrey CH.

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Gene transfer involves the introduction of an engineered gene into a person's cells with the expectation that the protein expressed from the gene will produce a therapeutic benefit. Strategies based on this principle have led to the approval of > 600 clinical trials and enrollment of approximately 3500 subjects worldwide in attempts to treat diseases ranging from cancer to AIDS to cystic fibrosis. While gene therapy has met with limited success and still has many hurdles to overcome before it sees wide application, it may be useful as a defensive strategy against bioterrorism agents including infectious microbes and toxins. Although many defensive strategies are possible, immunological strategies are currently the most developed and are being actively applied to the development of strategies against several of the most virulent potential bio-weapons. While most of these strategies are not yet ready for human

application, DNA-based vaccines appear to be among the most promising in the fight against bioterrorism.

Publication Types: Review Review, Academic
PMID: 14640954 [PubMed - indexed for MEDLINE]

18: Expert Opin Biol Ther. 2003 Dec;3(8):1201-7.

Bacterial biofilms of importance to medicine and bioterrorism: proteomic techniques to identify novel vaccine components and drug targets.

Hassett DJ, Limbach PA, Hennigan RF, Klose KE, Hancock RE, Platt MD, Hunt DF. Biofilms are highly ordered microbial communities enmeshed in a carefully sculpted matrix designed for survival of organisms either in multi- or mono-genus/species in a specific microniche. In human disease, biofilm infections are some of the most recalcitrant to treat. Even with rigorous antibiotic regimens, some biofilms, such as those within the thick airway mucus of cystic fibrosis (CF) patients, persist throughout the course of the disease

process. In this editorial, discussion will cover the utility of using advanced proteomic techniques to help identify potential weaknesses in the already impressive defensive armamentarium of biofilm bacteria. Two biofilm systems will be discussed herein, one of which is that of *Pseudomonas aeruginosa* biofilms within CF airway biofilms. The other is referred to as persistent 'bioterrorist agent biofilms' in which *Francisella tularensis* can grow on surfaces where environmental amoeba can phagocytose them, allowing for growth of *F. tularensis* within the amoebae.

Publication Types: Editorial Review Review, Tutorial
PMID: 14640945 [PubMed - indexed for MEDLINE]

19: IEEE Eng Med Biol Mag. 2004 Jan-Feb;23(1):136-41.

Microbiological threats to homeland security.

Yadav P, Blaine L.

Department of Bioinformatics, American Type Culture Collection, (ATCC), P.O. Box 1549, Manassas, VA 20108, USA. pyadav@atcc.org

Publication Types: Review Review, Tutorial
PMID: 15154270 [PubMed - indexed for MEDLINE]

20: IEEE Eng Med Biol Mag. 2004 Jan-Feb;23(1):119-21.

Technological challenges in counter bioterrorism.

Laxminarayan S, Stamm BH.

Institute of Rural Health, Idaho State University, Pocatello, ID, USA.

s.n.laxminarayan@ieee.org

PMID: 15154267 [PubMed - indexed for MEDLINE]

21: IEEE Eng Med Biol Mag. 2004 Jan-Feb;23(1):58-64.

A biointelligence system for identifying potential disease outbreaks.

Zhang X, Fiedler R, Popovich M.

Scientific Technologies Corporation, 4400 E. Broadway Blvd, Tucson, AZ 85711, USA.

PMID: 15154260 [PubMed - indexed for MEDLINE]

22: Infect Genet Evol. 2004 Jun;4(2):159-66.

The best defence against bioweapons has already been invented by evolution.

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Bioweapons are considered from the viewpoint of the mutual evolution of microbe/victim ecological systems. Cases considered include accidental, experimental, and real exploitation of bioweapons as well as other cases in the history of epidemics, and also experimental investigations. It is proposed here

that speculations about bioweapon's very high mass annihilating ability are based on over-extrapolation from limited data selected from the ancient history of epidemics and on a false supposition that all people are susceptible to any bioweapon's infectious agent. The history of epidemics, clinical and genetic observations, data from experimental investigations, and results of accidental, experimental, and real exploitation of bioweapons do not confirm the mass annihilating capability of bioweapons. Many people possess constitutional (genetic) immunity presumably formed by natural selection over many human generations. This genetic protection exists in an individual prior to infection. The power of constitutional immunity played an important role during all human evolution. Its protective capability continues to defend humanity from mass annihilation by both epidemics and bioweapons. In this context of constitutional immunity for the majority of individuals, the main goal of modern medicine is to identify and defend the defenseless ones.

PMID: 15157634 [PubMed - indexed for MEDLINE]

23: Int J Health Serv. 2004;34(1):169-72.

Anthrax versus the flu.

Smith S.

Boston Globe, USA.

As state governments in the United States slash their public health budgets, federal money is pouring in for bioterror preparedness.

PMID: 15088680 [PubMed - indexed for MEDLINE]

24: J Clin Invest. 2004 Jul;114(1):2-3.

Biodefense cost and consequence.

Goodman L.

Publication Types: News

PMID: 15232603 [PubMed - indexed for MEDLINE]

25: J Clin Microbiol. 2004 Apr;42(4):1753-5.

First international quality assurance study on the rapid detection of viral agents of bioterrorism.

Niedrig M, Schmitz H, Becker S, Gunther S, ter Meulen J, Meyer H, Ellerbrok H, Nitsche A, Gelderblom HR, Drosten C.

Robert Koch-Institute, Berlin, Germany.

We have conducted an international quality assurance study of filovirus, Lassa virus, and orthopox virus PCR with 24 participants. Of the participating laboratories, 45.8 and 66.7% detected virus in all plasma samples, which contained > or = 5,000 and > or = 100,000 copies per ml, respectively.

Sensitivity levels were not significantly different between viruses.

False-negative results were attributable to a lack of sensitivity.

PMID: 15071040 [PubMed - indexed for MEDLINE]

26: J Environ Health. 2004 May;66(9):32.

Ricin: the next biological terror agent?

[No authors listed]

PMID: 15137349 [PubMed - indexed for MEDLINE]

27: J Invest Surg. 2003 Nov-Dec;16(6):311-4.

Early American medicine.

Toledo SE, Toledo-Pereyra LH.
Massachusetts General Hospital, Boston, Massachusetts, USA.
Publication Types: Historical Article
PMID: 14660329 [PubMed - indexed for MEDLINE]

28: J Occup Environ Med. 2004 Aug; 46(8):801-11.
Experience in the Medical Management of Potential Laboratory Exposures to Agents of Bioterrorism on the Basis of Risk Assessment at the United States Army Medical Research Institute of Infectious Diseases (USAMRIID).
Rusnak JM, Kortepeter MG, Aldis J, Boudreau E.
Special Immunizations Clinic (Drs Rusnak, Aldis, and Boudreau) and Medical Division (Dr Kortepeter); United States Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, Maryland.
Experience in managing laboratory exposures to potential agents of bioterrorism is limited. The United States Army Medical Research Institute of Infectious Diseases reviewed laboratory exposures involving these agents (1989 to 2002) to assess the effectiveness of medical management. The evaluation of 234 persons (78% vaccinated) for exposure to 289 infectious agents revealed 5 confirmed infections (glanders, Q fever, vaccinia, chikungunya, and Venezuelan equine encephalitis). Postexposure antibiotic prophylaxis was given for most moderate- or high-risk bacterial exposures (41/46; 89%); most unvaccinated minimal-risk (7/10; 70%), and subsets of vaccinated minimal-risk exposures (18/53; 34%) but generally not negligible-risk exposures (6/38; 16%). Vaccine "breakthroughs" were not unexpected (enzootic Venezuelan equine encephalitis, localized vaccinia) or presented with mild symptoms (Q fever). A multifaceted policy of personal protective measures, vaccination, early assessment, and postexposure antibiotic prophylaxis was effective in minimizing morbidity and mortality in at-risk laboratory workers.
PMID: 15300132 [PubMed - in process]

29: J Occup Environ Med. 2004 Aug; 46(8):791-800.
Management Guidelines for Laboratory Exposures to Agents of Bioterrorism.
Rusnak JM, Kortepeter MG, Hawley RJ, Boudreau E, Aldis J, Pittman PR.
Special Immunizations Clinic (Dr. Rusnak, Dr Boudreau, Dr Aldis); Medical Division (Dr Kortepeter); Safety and Radiation Protection (Dr Hawley); and Anthrax Vaccine Research Center (Dr Pittman); United States Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, Maryland.
Over the past several years, funding for biodefense research has increased dramatically, leading to the possibility of increased laboratory-acquired infections with potential bioterrorism agents. The Special Immunizations Program at United States Army Medical Research Institute of Infectious Diseases reviewed its policy and management of potential occupational exposures (1989-2002) to assess guidelines for determining the risk of exposure and disease and to determine criteria for initiating postexposure prophylaxis (PEP). Initiating antibiotic PEP was based primarily on exposure risk but was also influenced by vaccination status and agent virulence. PEP was given to nearly all moderate- and high-risk bacterial exposures, regardless of vaccination status, to most unvaccinated and subsets of vaccinated minimal-risk exposures, but generally not to negligible-risk exposures. Algorithms for evaluating and managing potential exposures are presented to provide guidance to other agencies as they begin to work with these agents.

PMID: 15300131 [PubMed - as supplied by publisher]

30: J Public Health Manag Pract. 2004 May-Jun;10(3):234-40.

The public health dashboard: a surveillance model for bioterrorism preparedness. Foldy SL, Biedrzycki PA, Baker BK, Swain GR, Howe DS, Gieryn D, Barthell EN, Pemble KR.

City of Milwaukee Health Department, Milwaukee, Wisconsin 53202, USA.

The City of Milwaukee Health Department piloted a short-term, near real-time syndromic surveillance and communication tool by using an existing secure regional Internet infrastructure. Voluntary, active syndromic case reporting by hospital Emergency Departments was combined with other data streams, including clinical laboratory reports of communicable disease, hospital emergency room diversions, ambulance runs, medical examiner reports of unusual or suspicious deaths, poison control and nursing hotline call volumes, and pharmacy over-the-counter sales. These data were aggregated into a "Surveillance Dashboard" format that was used to communicate community syndromic health trends

to hospitals, Emergency Departments, and other providers using a secure Internet technology. Emergency Departments at 8 area hospitals reported a total of 314 cases meeting syndromic criteria from 26,888 patient encounters. Participants were satisfied with data entry and communications. All participating Emergency Departments received e-mail and text pager alerts sent by the Milwaukee Health Department. No unexplained findings or suggestions of an early outbreak were reported through syndrome surveillance for the 4-week duration of the project. Similar surveillance and communications systems could provide multiple benefits to Emergency Department workflow and management, as well as to public health and emergency response.

PMID: 15253519 [PubMed - in process]

31: J R Army Med Corps. 2003 Dec;149(4):311-6.

Self assessment exercises in toxicology.

Bland SA, Smith JE.

Frimley Park Hospital, Frimley, Camberley GU16 7UJ. sa.bland@btinternet.com

PMID: 15015806 [PubMed - indexed for MEDLINE]

32: J Toxicol Clin Toxicol. 2004;42(2):201-8.

Ricin: mechanism of toxicity, clinical manifestations, and vaccine development. A review.

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Ricin is one of the most potent plant toxins known, and the castor plant from which it is derived, *Ricinus communis*, is ubiquitous. The harvesting of castor beans exceeds one million tons annually, and ricin is easier to produce than either anthrax or botulinum. As a result, ricin is a convenient, potent, and available toxin for terrorist acts. This paper will review the mechanism of toxicity, major clinical manifestations, treatment, current methods of detection, and vaccine development.

Publication Types: Review Review, Tutorial

PMID: 15214627 [PubMed - indexed for MEDLINE]

33: JAMA. 2004 Aug 4;292(5):566; author reply 566.

Comment on: JAMA. 2004 Apr 28;291(16):1994-8.
Posttraumatic stress among survivors of bioterrorism.
Gross R, Neria Y.
Publication Types: Comment Letter
PMID: 15292080 [PubMed - indexed for MEDLINE]

34: Lancet. 2004 Jul 31;364(9432):449-52.
Clinical predictors of bioterrorism-related inhalational anthrax.
Kyriacou DN, Stein AC, Yarnold PR, Courtney DM, Nelson RR, Noskin GA, Handler JA, Frerichs RR.
Department of Emergency Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, USA. dkyriacou@aol.com
Limitation of a bioterrorist anthrax attack will require rapid and accurate recognition of the earliest victims. To identify clinical characteristics of inhalational anthrax, we compared 47 historical cases (including 11 cases of bioterrorism-related anthrax) with 376 controls with community-acquired pneumonia or influenza-like illness. Nausea, vomiting, pallor or cyanosis, diaphoresis, altered mental status, and raised haematocrit were more frequently recorded in the inhalational anthrax cases than in either the community-acquired pneumonia or influenza-like illness controls. The most accurate predictor of anthrax was mediastinal widening or pleural effusion on a chest radiograph. This finding was 100% sensitive (95% CI 84.6-100.0) for inhalational anthrax, 71.8% specific (64.8-78.1) compared with community-acquired pneumonia, and 95.6% specific (90.0-98.5) compared with influenza-like illness. Our findings represent preliminary efforts toward identifying clinical predictors of inhalational anthrax.
PMID: 15288744 [PubMed - in process]

35: Lancet. 2004 Jul 31;364(9432):393-5.
Anthrax and bioterrorism: are we prepared?
Mogridge J.
Laboratory Medicine and Pathobiology, Medical Sciences Building, University of Toronto, Toronto, Ontario M5S 1A8, Canada. jeremy.mogridge@utoronto.ca
Publication Types: Comment
PMID: 15288719 [PubMed - in process]

36: Lancet Infect Dis. 2004 Aug;4(8):483-4.
SARS, emerging infections, and bioterrorism preparedness.
Weber SG, Bottei E, Cook R, O'Connor M.

Section of Infectious Diseases, Department of Medicine, University of Chicago Hospitals, Chicago, IL 60637, USA. sgweber@medicine.bsd.uchicago.edu
PMID: 15288816 [PubMed - in process]

37: Mil Med. 2004 May;169(5):337-41.
Military medical education: nuclear, biological, and chemical medical defense training as a model for planners.
Cieslak TJ, Pavlin JA, Noah DL, Dire DJ, Stanek SA, Kortepeter MG, Jarrett DG, Pastel RH, Darling RG, Jacocks JM, Hurst CG, Richards BA, Eitzen EM Jr.
San Antonio Military Pediatric Center, San Antonio, TX, USA.
Ted.Cieslak@amedd.army.mil
PMID: 15185995 [PubMed - indexed for MEDLINE]

38: Nature. 2004 Jul 8;430(6996):242-9.
The challenge of emerging and re-emerging infectious diseases.
Morens DM, Folkers GK, Fauci AS.
National Institute of Allergy and Infectious Diseases, National Institutes of Health,
Department of Health and Human Services, Bethesda, Maryland 20892-2520, USA.
Infectious diseases have for centuries ranked with wars and famine as major
challenges to human progress and survival. They remain among the leading causes
of death and disability worldwide. Against a constant background of established
infections, epidemics of new and old infectious diseases periodically emerge,
greatly magnifying the global burden of infections. Studies of these emerging
infections reveal the evolutionary properties of pathogenic microorganisms and
the dynamic relationships between microorganisms, their hosts and the
environment.
Publication Types: Review Review, Tutorial
PMID: 15241422 [PubMed - indexed for MEDLINE]

39: Nature. 2004 Jun 17;429(6993):690.
Bacteria raid may lead to trial for artist tackling biodefence.
Brumfiel G.
Publication Types: News
PMID: 15201878 [PubMed - indexed for MEDLINE]

40: Policy Anal Brief W Ser. 2004 Apr;(4):1-6.
Perspectives of rural hospitals on bioterrorism preparedness planning.
Schur CL, Berk ML, Mueller CD.
Even the smallest, most isolated rural hospitals are now required to have
bioterrorism preparedness plans. From the perspective of many rural hospitals,
however, there is a disparity between Federal expectations and the realities of
small hospitals operating in geographically isolated communities. As part of an
effort to better understand how to close this gap, the Walsh Center for Rural
Health Analysis convened a panel of representatives of rural hospitals who are
responsible for bioterrorism preparedness in their hospitals. Perspectives of
rural hospitals on various aspects of preparedness were discussed, in terms of
workforce and training, physical capacity and supplies, communication, and
coordination with other entities. All of the participants noted the tremendous
progress that has been made in the past two years, but also the distance they
each need to go. Some of the issues raised by the panelists included the dual
benefit of efforts to increase capacity at rural hospitals, the inapplicability
of many federal guidelines and directives for small hospitals because of size
and less sophisticated infrastructure, the burden of geographic isolation
relative to obtaining training and information, and the fragmentation of funding
and directives at both the state and federal levels.
PMID: 15295832 [PubMed - in process]

41: Resuscitation. 2004 Mar;60(3):348; author reply 348.
Comment on: Resuscitation. 2003 Sep;58(3):289-92.
The presentation and management of victims of chemical and biological agents.
Moody-Jones WD.
Publication Types: Comment Letter
PMID: 15050770 [PubMed - indexed for MEDLINE]

42: Toxicol Lett. 2004 Jun 15;151(1):219-33.

Future applications of phosphotriesterases in the prophylaxis and treatment of organophosphorus insecticide and nerve agent poisonings.

Sogorb MA, Vilanova E, Carrera V.

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Organophosphorus compounds (OPs) are being used as insecticides and warfare agents. OP insecticides represent an important problem of public health, causing around 200,000 deaths annually. The World Health Organization has pointed to the necessity to introduce new medical practices that improve the results of classical treatments. Many studies have shown that the administration of phosphotriesterases (enzymes that detoxify OPs through hydrolysis) is a promising treatment of persons poisoned with OPs. Such an enzyme-based treatment

might introduce important improvements in the treatment of patients having ingested large amounts of OPs. Phosphotriesterases might also be suitable for prophylactic treatment of persons at risk to be severely exposed. The new experimental treatments do not exhibit the intrinsic neurotoxicity of the classical prophylaxis based on carbamates and antimuscarinic drugs. Experimental data suggest that it might be time to initiate clinical trials in order to study the efficacy of phosphotriesterases in the therapy and prophylaxis of OP intoxication.

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