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Faculty Publications


V是如何判断？
Dear Colleagues:

Over the last 100 years, the time-honored tradition of Medical Grand Rounds has evolved from an Oslerian, on-the-ward discussion of patients to a formal presentation by experts in a specific discipline. Today an experienced clinician, scientist, or policy analyst offers perspective, insight, and provocative ideas to an academic community. Occasionally someone completely outside of Medicine offers a new lens by which to view our activities. Ideally, there would be a series of debates in the question-answer period, because we often make decisions in Medicine based on limited data. The best speakers will excite the majority of listeners to explore areas – after the talk – that would otherwise go uncharted.

Each Thursday at noon the academic community in the Department of Medicine assembles in the Medical Sciences Building’s beautiful auditorium to listen to selected speakers with creative ideas. It is a unique opportunity for faculty to meet with housestaff, to observe the intellectual interests of the faculty, and for housestaff to observe the spirited exchange of ideas between faculty and speaker. Those in our ranks who attend regularly and participate actively send a message to the housestaff: we value the intellectual climate of the University, we value the education of the housestaff, and we value the pursuit of knowledge.

Our academic mission is comprised of clinical, research, and educational activities. In our increasingly busy week, we face varied competing forces for our time: the assault by managed care, the national emphasis on the improvement of the quality of care, the increasing administrative burdens to stretch the remaining minutes. Yet we who choose careers at a Medical School must teach and learn continually. We need to continue to take advantage of this special opportunity. Surely a broad perspective beyond our specialty is essential in that pursuit of knowledge. Fortunately, our department has one of the best series of Medical Grand Rounds in the country each week.

Richard P. Wenzel, M.D., M.Sc.
William Branch Porter Professor and Chairman

Medical Grand Rounds

April 3  “History of Medicine”
  Michael Bliss, PhD, Professor
  Department of History, University of Toronto, Canada

April 10  “Reducing the Risks of Breast Cancer”
  Mary Helen Hackney, MD, Associate Professor
  Division of Hematology/Oncology, MCV VCU

April 17  “Clinicopathological Conference”
  Medicine/Pathology/Radiology

April 24  “Topics from ‘A Time to Heal’”
  Kenneth M. Ludmerer, MD, Professor, History of Medicine, Washington University School of Medicine, (Author, Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care, Oxford, 1999)
  Location: George Ben Johnston Auditorium

May 1  Annual Charles Thomas Lecture Organized by the Division of Rheumatology, Allergy, Immunology

Upcoming Grand Rounds

Unless otherwise noted, Grand Rounds are held at 12:00 noon in the Medical Sciences Building Auditorium.

January 9  “Medical Malpractice”
  Michael Goodman, Esq., Law firm of Goodman, Allen & Filetti, PLLC
  Richmond, VA

January 16  “Evaluation and Management of the Dizzy Patient”
  Aristides Sismanis, MD, Professor and Chair
  Department of Otolaryngology, MCV VCU

January 23  “Lipid Update”
  Franklin J. Zieve, MD, Associate Professor of Medicine
  Division of Endocrinology And Metabolism, MCV VCU
  Location: George Ben Johnston Auditorium

January 30  “Clinicopathological Conference”
  Medicine/Pathology/Radiology
  (continued on page three)

March 6  “Men’s Health issues”
  Al Rogers, MD, Associate Professor
  Division of General Internal Medicine & Primary Care, MCV VCU

March 13  “Contraception”
  Margaret Roberson, MD, Associate Professor
  Division of General Internal Medicine & Primary Care, MCV VCU

March 20  “Art Medicine”
  Carlos H. Espinel, M.D., Director, The Blood Pressure Center, Washington Clinical Professor of Medicine and Scholar in Bioethics, Georgetown University

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Upcoming Grand Rounds (continued from page two)

February 6  “Update in Psychiatry”
  Bob Schneider, MD, Assistant Professor
  Department of Psychiatry, MCV VCU

February 13  TBA
  Sean Elliott, Former San Antonio Spurs Forward, Spokesman
  National Kidney Foundation 2002 U.S. Transplant Games, AND
  Anton Schoeller, MD, MSHA, Professor and Chair
  Division of Nephrology, MCV VCU

February 20  “Managing Congestive Heart Failure: Tricks of the Trade”
  Mary Ann "Mimi" Pelberdy, MD, Assistant Professor of Medicine
  Division of Cardiology, MCV VCU

February 27  Clinicopathological Conference
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Smallpox Vaccination of Healthcare Workers

On October 17, 2002, the Advisory Committee on Immunization Practices (ACIP) recommended that each acute care hospital in the United States identify a team of personnel to undergo voluntary smallpox vaccination in order to evaluate and care for any initial cases of smallpox that may present to hospitals following an act of bioterrorism. The ACIP recommended that such Smallpox Health Care Teams include: Emergency Department, Intensive Care Unit and General Medical Unit staff, including physicians and nurses, as well as designated subspecialists and other ancillary staff. ACIP’s recommendations are now under consideration by the CDC and Department of Health and Human Services, and a final decision is pending.

Effective smallpox vaccination requires infecting the host with a virus (vaccinia) that must replicate and produce lesions to evoke immunity. Because the vaccine is a live virus serious complications may ensue. These complications are well described and are summarized below:

- **Eczema vaccinatum**: This complication was seen in persons with eczema/atopic dermatitis or a history of eczema/atopic dermatitis. Following vaccination, vaccinia lesions appeared at sites of current or previous skin disease and in some cases spread to normal skin. Severity of the complication was independent of the activity of the eczema/atopic dermatitis, and in most cases eczema/atopic dermatitis was quiescent at the time of infection. Associated constitutional symptoms were severe, and included fever and generalized lymphadenopathy. Case fatality rates varied from 1 to 6%.

- **Progressive vaccinia**: This complication was seen in persons with underlying immune deficiencies, including agammaglobulinemia, defective cell mediated immunity, tumors of the reticuloendothelial system (e.g., leukemia, Hodgkin disease, lymphoma), or in patients receiving immunosuppressive drugs. The local lesion at the vaccine site failed to heal; secondary lesions appeared elsewhere on the body, and lesions typically spread progressively until the patient died. Case fatality rate was 36%.

- **Generalized vaccinia**: This complication manifested as a vesicular rash 6-9 days after primary vaccination and was usually self-limited.

- **Accidental infection**: This was the most common complication of smallpox vaccination, whereby recently vaccinated individuals after touching the vaccine lesion accidentally inoculated vaccinia virus onto the skin of the eyelids, vulva and perineum. Accidental inoculation of the cornea may lead to blindness.

- **Encephalitis**: This complication was manifested by fever, vomiting, headache, malaise, confusion, disorientation, convulsions, and coma, and in some cases, paralysis. The case fatality rate was 35%. Unfortunately, no identifiable risk factors for this complication have been elucidated.

Rates of complications are ten-fold higher in primary vaccines. Because the vaccine has not been used for the general public since 1972 in the United States, 40% of the population has never received the vaccine; thus, more complications are expected due to the large proportion of individuals who will receive the vaccine for the first time.

Contraindications to smallpox vaccination include women who are pregnant or may become pregnant within four weeks of vaccination, patients with immunodeficiency disorders (including HIV infection, solid organ transplant, and bone marrow transplant patients), immunosuppressive therapies (including cancer chemotherapy and high dose corticosteroids), active eczema/atopic dermatitis or history of eczema/atopic dermatitis, and close contacts of any of the previously mentioned individuals.

It must be emphasized that the risk for smallpox vaccination complications today cannot be extrapolated from studies performed in the 1960s. That era predated HIV infection, solid and bone marrow transplantation, and the effective use of many immunosuppressing agents for neoplastic and immunologic disorders. It is estimated that 300,000 persons in the United States are currently unaware that they are HIV-infected. More than 23,000 healthcare workers have developed AIDS. Only one individual with HIV infection is known to have received smallpox vaccine and he developed progressive vaccinia. Nonetheless, the ACIP did not recommend mandatory HIV testing of healthcare workers prior to smallpox vaccination; in addition, the prevalence of atopic dermatitis is now thought to be 2- to 7-fold higher than three decades ago with a prevalence of 10-15%.

In fact, Engler et al estimate that individuals with a history of or active disease with eczematous dermatis combined with their contacts comprise up to one-half of the U.S. population. Importantly, the complications of smallpox vaccination are not limited to those persons who receive the vaccine. The live virus induces an infection in the vaccine recipient and the lesion at the site of the vaccine contains live virus. Thus transmission of vaccine virus may occur from the recently vaccinated individual to others with whom he/she has direct or indirect contact. Vaccinated individuals are infectious from the time of papule development (2-3 days following vaccination) until the lesion has fully scabbed (10-17 days postvaccination). The incidence of complications occurring in contacts of vaccines in a ten-state survey in 1968 was 20 cases of eczema vaccinatum per million primary vaccinees and 45 cases of accidental infection per million primary vaccinees.

In a published analysis it was recently estimated that 15% of the United States population is at risk for an adverse event following smallpox vaccination. An additional 10% are estimated to be close contacts of these high-risk individuals. Thus, 25% of Americans should be excluded from smallpox vaccination. However, it is important to note that this analysis used fewer vaccine exclusion criteria than currently recommended by the CDC, thus underestimating the proportion of the population that should be excluded from vaccination.

Nosocomial transmission of vaccinia from healthcare workers to patients was initially reported in the 1940s. The risk is expected to be higher today since most healthcare workers have received only one dose during their period of infectivity, in the 1960s many hospitals did furlough recently vaccinated healthcare workers.

In summary, on review of the historical data regarding smallpox vaccination, the risk for nosocomial transmission cannot be estimated. Certainly, the proportion of hospitalized persons who are immunosuppressed has markedly increased since the vaccine was last used. The incidence of eczema/atopic dermatitis has also significantly increased over the last 30 years. There is also a sizable contingent of healthcare workers who are immunosuppressed or have other contraindications to smallpox vaccination. Lastly, the expectations of the public for zero-risk in their medical care were not as high when the smallpox vaccine was last used. The historical data are useful, however, in documenting the severity of complications. Although newer antiviral therapies may prove useful in ameliorating the adverse effects, clinical data are lacking.

The VCU Health System policy on smallpox vaccination has been developed and approved by the Infection Control Committee and the Medical Executive Committee. Further discussion, however, is anticipated.

Michael Edmond, MD, MPH  
Hospital Epidemiologist, VCU Health System
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