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COVER

Each of our 1996 issues of Pediatrics in Review will feature a work of art submitted to our cover art contest this past year. We received more than 200 entries and have chosen 12 to appear on our covers—four from each of three age groups: 5 to 7 years, 8 to 10 years, and 11 to 15 years. The entrants were asked to submit a drawing of what they liked to do best. Most entries will be displayed by the American Academy of Pediatrics at various sites.

This month’s work, by 7-year-old Stephanie Kinnard, is of her riding a horse with her “friend.” Stephanie lives in Richmond, Virginia; her pediatricians are Richard Haas, MD, and Robert Leshner, MD.

ANSWER KEY

Molluscum Contagiosum


Molluscum contagiosum is a virally induced, flesh-colored wart that may appear on the face, trunk, or extremities as well as on mucous membranes. Because the course of molluscum is self-limited in healthy individuals, it generally is more of a nuisance than a serious condition. Molluscum warts may appear singly or in crops, with an incubation period of 2 to 7 weeks, and can last from a few weeks to several months and occasionally for years.

The lesions spread easily by auto-inoculation from scratching or trauma. Patients become easily frustrated with molluscum because new lesions keep appearing in different places on the body and take a very long time to resolve. Simple reassurance is not always successful.

The warts characteristically are small, 2- to 5-mm flesh-colored papules that have a central depression or umbilation. They sometimes progress to a waxy, soft, pearly gray color. A pulpy, cheesy core can be extracted from the center via a comedo extractor. When this material is examined under the microscope, it contains the diagnostic “molluscum bodies” or Henderson-Paterson inclusion bodies, which are discrete oval intracytoplasmic inclusion bodies found in infected keratinocytes.

Molluscum lesions are usually asymptomatic but sometimes can be itchy. Occasionally they have a surrounding erythema that may represent a delayed hypersensitivity reaction to the viral antigen. With a severe inflammatory response, patients may experience a generalized fine, papular eruption that can be classified as a dermatophytid reaction.

Infection may occur anywhere on the body except palms, soles, and scalp. The axilla, antecubital, and crural regions should be examined carefully. Lesions found on the eyelid margin or conjunctiva may be complicated by a chronic conjunctivitis or superficial punctate keratitis. The reaction clears spontaneously when the molluscum has been treated.

The differential diagnosis of molluscum contagiosum is limited because the lesion has such a typical appearance. Sometimes a solitary lesion may grow large enough to be confused with basal cell carcinoma. In the genital area, molluscum must be differentiated from venereal warts caused by human papillomavirus. If molluscum appears on the eyelids, it may be mistaken for a chalazion, lid abscess, or granuloma. In immunodeficient patients who develop widespread, persistent lesions, they can appear similar to cryptococcosis.

The virus responsible for molluscum contagiosum, one of the largest viruses known to infect humans, is a double-stranded DNA-containing poxvirus. Specific antibodies against the virus can be detected in infected persons as well as in 90% of adults who have no history of the infection, but the antibodies have not been found to be clinically relevant.

By inference, cell-mediated immunity plays a role in inhibiting the molluscum virus because widespread, severe infections may occur in immunocompromised people whose T-cell function is depressed: human immunodeficiency virus-positive individuals and those receiving corticosteroid or methotrexate.

Molluscum contagiosum is transmitted by fomites, close physical contact, and autoinoculation. It is most prevalent among school-aged children, and although seen worldwide, it is more common in tropical than in temperate climates. In hot countries, close contact among lightly clad children is more frequent and may account for this difference.

Because sexual activity may spread molluscum, genital lesions in a child should raise suspicion of abuse, although lesions appear in this region
be achieved with fewer adverse reactions. Other products essential for the effective control of pertussis are vaccines that can boost the immunity of adults and induce protection in newborns.

CONTROL OF OUTBREAKS
Close contacts younger than 7 years of age who have not been immunized or who are immunized inadequately should receive DPT vaccine. All household and other close contacts, regardless of vaccination status, should be given erythromycin, 40 to 50 mg/kg per day, orally in four doses (maximum 2 g/d for 14 days). Children who have pertussis, if their medical condition permits, may attend school after 5 days of antibiotic treatment. Patients not treated with antimicrobials are considered contagious for 3 weeks after onset of paroxysms. (See the Red Book for further details.)

SUGGESTED READING
Cherry JD. Rubella. In: Feigin RD, Cherry JD. Textbook of Pediatric Infectious Diseases.


PIR QUIZ
5. A true statement about measles is:
A. Immunization of children infected with human immunodeficiency virus should be avoided.
B. Immunization will not prevent disease in exposed individuals.
C. Measles is not contagious after the rash first appears.
D. Otitis is a common complication.
E. Rash is the first symptom.
6. The exposed person(s) who should receive measles vaccine during an outbreak is:
A. A pregnant woman.
B. A susceptible person exposed 4 days ago.
C. A 12-month-old infant.
D. An unimmunized person who has laboratory evidence of immunity.
E. Persons born before 1957.
7. Which one of the following features would be inconsistent with the diagnosis of mumps?
A. Absence of serologic evidence of infection.
B. Findings of aseptic meningitis.
C. History of mumps immunization.
D. Swelling of only one parotid gland.
E. Swelling of the submaxillary glands.
8. A true statement about typical rubella infection is:
A. Discrete rash starts on the extremities.
B. Highest risk of congenital infection by vaccine virus occurs during the first 20 weeks of pregnancy.
C. Inapparent infection occurs rarely.
D. Infants who have congenital infection are not contagious.
E. Transient arthritis occurs, especially in young women.
9. A true statement about pertussis is:
A. Antibiotics do little to alter the clinical course.
B. Healthy carriers have not been found.
C. Immunization is protective for life.
D. Protective antibody crosses the placenta.
E. Whole cell and acellular vaccines are equally immunogenic.
a relatively logical approach to the hypothesis of the child who has malab- sorption. To summarize this approach, the following case histories from recent patients are presented:

1) A 3-month-old male presents with failure to gain weight, reduced muscle tone, and moderate-vomiting soft stools. His prenatal and perinatal histories were unremarkable; his birth weight was normal. Breastfeeding had been supplemented with formula since he was 1 month of age, due to very slow weight gain. He passes three moderate-volume stools daily in the absence of emesis or fever. A fresh stool is found to be negative for polyps, reducing sugars, and blood. Stool and urine cultures are negative. The stool fat stain is positive, and a 72-hour stool reveals 50% loss of ingested long-chain fat.

Surprisingly, the sweat test, repeated twice, is unequivocally normal. The complete blood count reveals a hemoglobin of 8.0 g/dL with normal white blood cells. A review of the peripheral smear reveals acanthocytosis, and the lipoprotein electrophoresis confirms abetalipoproteinemia. The patient responds to the introduction of an MCT-based formula combined with supplemental fat-soluble vitamins, especially E to reverse hypotonia and A to prevent ophthalmologic complications.

2) A 15-year-old girl presents with a 3-year history of impaired height growth, anemia, anorexia, and intermittent diarrhea. Her family history is negative for malabsorption and inflammatory bowel disease. In addition to short stature, her pubertal development is delayed. A bone age reveals a 3-year delay and suggests osteoporosis. The stool examination is negative for blood, polyps, and reducing sugars. The 72-hour fecal fat study reveals 25% steatorrhea.

The initial suspicion is Crohn disease, but the sedimentation rate is 2 and the upper gastrointestinal study with small bowel follow-through is normal. The sweat test also is normal. A lactose breath hydrogen test confirms elevation in hydrogen of 40 ppm. An upper endoscopy is grossly normal, but duodenal and proximal jejunal biopsies reveal severe villus atrophy with no evidence of Giardia. She responds dramatically to a strict gluten-free diet and will not be subjected to gluten challenge until after her pubertal growth is completed.

SUGGESTED READING

PIR QUIZ
14. A 3-month-old white male infant who has been breastfed exclusively has failed to gain weight appropriately. His mother successfully breastfed two previous siblings. The infant has not vomited, but has frequent loose stools since birth. Physical examination, his height is at the 10th percentile and his weight is less than the 3rd percentile. He appears alert, is pale, and has slight edema over the scapulae and pretrilobal areas. Examination otherwise is unremarkable. The most appropriate initial diagnostic test to order is:
   A. D-Xylose absorption test
   B. Fecal content of alpha-1-antitrypsin.
   C. Lactose tolerance test.
   D. Stool culture for pathogens.
   E. Serum sodium determination.

15. A 5-month-old infant girl is in a child care nursery for 3 days of each week. She developed acute diarrhea 4 weeks ago and continues to have 3 to 5 loose watery stools daily. She is afebrile. More Irritable than usual, has a slight decrease in appetite, but no emesis or other symptoms. Physical examination is unremarkable except for a ¼ pound weight loss. She has had no treatment or dietary modifications. The most appropriate initial step in management is to:
   A. Culture the stools for pathogens.
   B. Examine a stool sample and if reducing sugars are noted, switch to a low-lactose formula.
   C. Instruct the mother to withdraw the infant from the child care nursery for a period of 2 to 3 months.
   D. Order a 10-day course of a broad-spectrum antibiotic.
   E. Place the infant on an oral glucose-electrolyte solution until the diarrhea has ceased.

16. The diagnosis of gluten-sensitive enteropathy is suspected in a 2-year-old child who has had a history of failure to thrive and frequent loose stools since 6 months of age. A 72-hour fecal fat analysis reports a loss of 30%. Studies for Giardia lamblia are negative. The most appropriate diagnostic approach is to:
   A. Obtain a d-Xylose absorption test.
   B. Order an upper gastrointestinal radiographic study and small bowel follow-through films.
   C. Refer for a small bowel biopsy.
   D. Request a serum antigliadin antibody measurement.
   E. Use a standard protocol for a gluten challenge test.

17. The most important physiologic characteristic of medium-chain triglycerides in the management of malabsorption diseases is:
   A. Antibacterial activity on small bowel contents.
   B. Direct transport into the portal circulation.
   C. Enhancement of micelle formation in the small bowel.
   D. Promotion of bile acid resorption of bile acids.
   E. Stimulatory effect on intestinal lipase activity.

Match each of the following diagnostic studies with the corresponding function or activity that the study measures:

**Diagnostic Study:**
18. Absolute lymphocyte count in peripheral blood
19. d-Xylose absorption study
20. pH of the stool
21. Red blood cell count with indices
22. Sedimentation rate

**Corresponding Function or Activity:**
A. Carbohydrate absorption.
B. Intactness of intestinal lymphatics.
C. Integrity of intestinal mucosal surface area.
D. Presence of chronic inflammation.
E. Vitamin B12 absorption.