Hypnosis: Teaching Children Self-Regulation — Sugarman

Cold, Cough, and Allergy Medications: Uses and Abuses — Katcher

Leukocyte Disorders: Quantitative and Qualitative Disorders of the Neutrophil, Part 1 — Boxer and Blackwood

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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 of the entries will be displayed by the American Academy of Pediatrics at various sites.

This month’s work, by 5-year-old Daniel E. Laga, is of him drawing at an easel. Daniel lives in Hialeah, Florida; his pediatrician is Robert McKee, Jr, MD.

ANSWER KEY

REFERENCES

27. Kuttner L. No Fears, No Tears. Videotape available from the Association for the Care of Children's Health. 7910 Woodmont Avenue, Suite 300, Bethesda, MD 20814.

SUGGESTED READING

Olness K, Gardner GG. Hypnosis and Hypnotherapy with Children. Philadelphia, Penn: Grune and Stratton; 1988

RESOURCES

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PIR QUIZ

1. For which of the following conditions is hypnosis least effective?
   A. Enuresis.
   B. Migraine headaches.
   C. Noncompliance with medication for asthma.
   D. Pain.
   E. Warts.

2. Effective trance requires that:
   A. More time be expended than on usual patient care.
   B. The child remain seated and still.
   C. The child's eyes remain closed.
   D. The practitioner pay attention to the tone, pace, and semantics of language used.

3. Optimal practitioner phrasing includes:
   A. “I want you to close your eyes.”
   B. “Stop thinking about the pain. Imagine you are somewhere else.”
   C. “When you wake up, your hand will be anesthetized.”
   D. “You might notice how the feeling changes.”

4. The most effective trance induction technique for a normal 5-year-old child is:
   A. Focusing on breathing.
   B. Stroking an arm repetitively.
   C. Using pop-up books.
   D. Using progressive muscle relaxation.

5. Hypnosis is contraindicated in which of the following situations?
   A. Entertainment.
   B. The child already is motivated to solve the problem.
   C. The child is responsive to suggestions.
   D. The practitioner is in a hurry.
Staphylococcal Scalded Skin Syndrome


Staphylococcal Scalded Skin Syndrome (SSSS) is the most severe manifestation in the spectrum of Staphylococcus aureus exotoxin-mediated disease in skin. The disease is characterized by erythema and exfoliation and is mediated by exotoxins elaborated primarily by phage group II S aureus.

SSSS affects children, especially infants. Both sporadic and epidemic cases occur. Older children and adults rarely are affected. Immature renal function, leading to a reduced ability to clear bacterial exotoxin, may account for the increased susceptibility of neonates, according to Elias and Fritsch. Renal and immunologic dysfunction predispose to the disease in older individuals.

SSSS begins abruptly with tender erythema of the skin. Within 12 to 14 hours, the attachment between the stratum corneum and underlying epidermis becomes weak. This weakness can be demonstrated on physical examination as the Nikolsky sign: A shearing force applied to reddened skin produces a blister. Unstable flaccid bullae develop over large areas of skin, sparing mucous membranes. The bullae rupture, revealing a moist red surface. Fluid loss through the skin may be very high.

Recovery from SSSS may be remarkably rapid in children in the absence of secondary infection. Full re-epithelialization occurs within 1 to 2 weeks.

The causative organism in SSSS may be present as a symptomatic localized infection or it may be occult. Intact bullae of SSSS generally are sterile. The cutaneous findings of the disease are mediated by exotoxin elaborated at the site of local infection or colonization. The S aureus responsible are 80% phage group II types 71, 3A, 3C, and 55. The organisms are relatively noninvasive in children. The two major exotoxins—A and B—are proteins. Exotoxin A is encoded chromosomally; exotoxin B is plasmid-mediated. Most cases of SSSS in children are associated with exotoxin A.

SSSS must be distinguished from bullous impetigo, toxic epidermal necrolysis, scarlatiniform eruptions, and mecanobullous disease. Therapy should include penicillinase-resistant, semisynthetic penicillins, fluid support, and isolation.

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Comment: Because SSSS is often difficult to distinguish from a toxic drug reaction, the temptation to use systemic steroids can be quite compelling. Here is one temptation we do well to resist. On their own, the staphylococci responsible for SSSS tend not to be invasive. They cause local disease, if anything, like conjunctivitis or diaper area skin infections, and mortality rates for SSSS, even when it went untreated in the preantibiotic era, were very low (<5%). The administration of systemic steroids in hefty doses to a child who has SSSS has considerably more potential for harm than help.

Henry M. Adam, MD
Associate Editor, In Brief
continues to have fevers exceeding 38°C, antimicrobial therapy should be continued until the neutropenia resolves and the patient becomes afebrile. A large percentage of febrile patients who have neutropenia and receive antibiotics for 7 days develop fungal infections. Thus, some advocate placing these patients on amphotericin B until they become afebrile and are no longer neutropenic. Other studies have demonstrated benefit from rhG-CSF administration in selected patients who have a fever and neutropenia to accelerate the return of the ANC.

CHRONIC NEUTROPENIA

Therapy of chronic neutropenia is dictated by the patient’s history. Patients who have benign neutropenia and no evidence of repeated bacterial infections or chronic gingivitis require no specific therapy. Superficial infections in children who have mild-to-moderate neutropenia may be treated with appropriate oral antibiotics. However, in patients who have life-threatening infections, broad-spectrum intravenous antibiotics should be started promptly. Effective treatment of severe chronic neutropenia encompassing severe congenital neutropenia, chronic symptomatic idiopathic neutropenia, and cyclic neutropenias is now possible. In a randomized trial among patients who had severe chronic neutropenia, using subcutaneously administered rhG-CSF at doses ranging from 3.4 to 11.50 µg/kg per day, led to dramatic increases in the neutrophil counts of patients, resulting in marked attenuation of infection and inflammation. The long-term effects of rhG-CSF therapy remain unknown but include a propensity for the development of moderate splenomegaly. Autoimmune neutropenia may be responsive to intermittent corticosteroids, especially if it is part of a underlying disease process such as systemic lupus erythematosus. Although unproven by controlled studies, use of rhG-CSF has benefited some patients who have immune neutropenia.

SUGGESTED READINGS

Arnaout MA. Dynamics and regulation of leukocyte-endothelial cell interactions. Curr Opin Hematol. 1993;1:113


PIR QUIZ

11. In a 2-year old Caucasian child, neutropenia is defined as an absolute neutrophil count less than:
   A. 500/µL  
   B. 1500/µL  
   C. 2500/µL  
   D. 3500/µL  
   E. 4500/µL

12. Which one of the following is the most common cause of neutropenia in a 4-year old child?
   A. Acute lymphoblastic leukemia
   B. Chronic neutropenia
   C. Intercurrent viral infection
   D. Kostmann syndrome
   E. Nutritional deficiency

13. Cyclic neutropenia is characterized by regularly recurring episodes of neutropenia that last for 3 to 6 days. The interval between the neutropenic phases is most likely to be:
   A. 1 week
   B. 3 weeks
   C. 6 weeks
   D. 12 weeks
   E. 16 weeks

14. Antimicrobial therapy in a patient who has long-standing neutropenia and presents with fever, tachycardia, and poor peripheral perfusion should be directed against:
   A. Cryptococidum sp.
   B. Cytomegalovirus
   C. Pneumocystis carinii
   D. Respiratory tract flora
   E. Skin and bowel flora

15. Which one of the following is the most common presenting feature of neutropenia?
   A. Bacterial meningitis
   B. Bacterial pneumonia
   C. Mucocutaneous candidiasis
   D. Oral mucosal ulcerations and gingivitis
   E. Septic arthritis

16. Which one of the following causes of neutropenia carries the least risk of developing severe systemic bacterial infections?
   A. Chronic neutropenia
   B. Intercurrent viral infections
   C. Kostmann syndrome
   D. Schwachman syndrome
   E. Treatment with antineoplastic drugs
D. Operative intervention is indicated if patient becomes hemodynamically unstable.

Penetrating Trauma

Because gunshot wounds are infrequent in children, we will make only a brief mention of the pathophysiology of penetrating trauma. Virtually all intra-abdominal organs are at risk from penetrating injuries, especially from gunshot wounds. The characteristic presentation is hemorrhagic shock; thus, the initial evaluation must include careful observation, auscultation, and palpation of the abdomen. If there is physical evidence of penetration, the physician must assume intra-abdominal injury until proven otherwise. Thorough inspection for entrance and exit wounds is imperative. The presence or absence of bowel sounds may be useful, but their absence does not reflect the magnitude of the injury. Evidence of peritoneal signs suggests the presence of intra-abdominal blood or bowel contents within the peritoneal cavity. The absolute minimal diagnostic studies required before exploratory surgery include: supine abdominal radiographs, lateral cross-table view, especially to locate a foreign body or diagnose free air; a chest radiograph to exclude penetration through the diaphragm; and a single-injection excretory urogram to evaluate renal injuries.

The initial management includes employing the mandatory ABCs: securing the airway, supplementing oxygen or ventilating mechanically, and gaining large-bore IV access in the upper extremities, including the jugular vein or a percutaneous subclavian line for crystalloid infusion (Ringer lactate). Blood samples must be sent immediately for typing and cross matching and for appropriate laboratory studies. An orogastric tube is placed immediately for decompression of the stomach, both for diagnostic purposes and to prevent esophageal reflux and aspiration. Urinary output monitoring, using a Foley catheter, is mandatory as soon as fluid resuscitation is established. If the formula of 20 mL/kg of Ringer lactate is repeated as a second bolus and blood is available, the child is ready for exploratory abdominal surgery.

SUGGESTED READING


