

UPDATE

Abstracts and news from the medical literature of interest to the primary care physician

Fighting Pain in Children

- **The Issue:** Are physicians doing a good job treating pain in children?
- **The Study:** A recent retrospective study reviewed the charts of children (six months to 10 years old) who presented to a pediatric emergency department between 1999 and 2000 with isolated long bone fractures or second- or third-degree burns. The study enrolled 180 children. The use of analgesics was assessed in two age groups: very young (six to 24 months) and school-aged (six to 10 years) children. More very young children than school-aged children did not receive analgesic agents (64.6% vs. 47.6%). When analgesics were used, very young patients were less likely to receive opioids (16.7% vs. 44.0%) and more likely to receive over-the-counter products. Among children with nondisplaced fractures and among those with third-degree burns, there was no difference in analgesic treatment between the very young and school-aged groups.
- **The Results:** These authors confirm that analgesic agents are underused in children and suggest that the very young are at greatest risk for poor pain management.

Alexander J, Manno M: Underuse of analgesia in very young pediatric patients with isolated painful injuries. *Ann Emerg Med* 2003; 41(5):617-22.

This month:

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- Cultured grafts—p. 59
- Diabetes and diet—p. 62
- Antibiotic resistance—p. 62

Aging Before Your Time

- **The Issue:** To re-epithelialize skin that has suffered extensive third-degree burns, autologous keratinocytes are sometimes taken from unaffected areas, cultured, and transplanted to injured sites. However, expansion in cultures may shorten the telomeres of graft keratinocytes, thus "aging" them more rapidly than the normal surrounding skin?
- **The Study:** Researchers looked at biopsied cultured grafts, uncultured meshed split-thickness skin grafts, and normal skin and compared the telomere lengths in various components of the samples. Long telomeres were found in connective tissue cells in the dermal layers of all the samples and in epidermal cells from unaffected skin and uncultured grafts. In contrast, epidermal cells from cultured grafts had significantly shorter telomeres.
- **The Results:** The clinical implications of this study may be considerable. As the authors note, the cultured grafts may have a reduced survival time compared to surrounding skin. However, telomere length is not the only measure of senescence, and longer followup is necessary to see whether telomere shortening is associated with other signs of senescence.

Counter CM, Press W, Compton CC: Telomere shortening in cultured autografts of patients with burns. *Lancet* 2003; 361(9366):1345-6.

A Fishy Diet Beneficial for Patients With Diabetes



- **The Issue:** Patients with diabetes commonly exhibit high triglyceride levels, which can be lowered by fish oil supplementation.
- **The Study:** In this analysis from the Nurses' Health Study, researchers prospectively examined the effects of consumption of long-chain-omega-fatty acids, fish, and shellfish on the risks for coronary heart disease and all-cause mortality among 5,103 women with diabetes. Compared with women who consumed fish less than once monthly, those who consumed fish once weekly, two to four times weekly, and five or more times weekly significantly lowered their risk for congestive heart disease by 40%, 35%, and 62%, respectively; corresponding risk reductions for all-cause mortality were 33%, 31%, and 51%, respectively.
- **The Results:** The cardiovascular benefit that people with diabetes derive from increased consumption of fish, shellfish, and fish oil may result from reduction of triglyceride levels, inhibition of platelet aggregability, or antiarrhythmic effects. These results support the recommendation that people with diabetes should regularly include fish and shellfish in their diets.

Hu FB, Cho E, Rexrode KM, et al: Fish and long-chain-omega-3 fatty acid intake and risk of coronary heart disease and total mortality in diabetic women. *Circulation* 2003; 107(14):1852-7.

Antibiotic Resistance: A Growing Problem

- **The Issue:** Patients with positive blood cultures should be treated as quickly as possible. However, sometimes the antibiotic susceptibilities of the infecting organism are not reflected in the initial choice of antibiotics, leading to a delay of several days in providing effective treatment. For patients with *Staphylococcus aureus* bacteremia, such a delay could jeopardize clinical outcome.
- **The Study:** Researchers analyzed the outcomes of 167 episodes of nosocomial *S. aureus* bacteremia in a single Detroit hospital over three years. If effective antibiotics were administered within 44.75 hours after positive blood culture results were obtained, clinical outcomes were better than if treatment was delayed longer. Almost all patients whose treatment was delayed had methicillin-resistant *S. aureus* bacteremia and were treated initially as harbouring methicillin-sensitive organisms.
- **The Results:** Clinicians are advised not to overuse vancomycin, both because of its expense and because drug-resistant mutants are evolving continuously. However, the prevalence of methicillin-resistant *S. aureus* is now so high in most hospitals that empirical use of vancomycin for bacteremia might be unavoidable. [Dx](#)

Heuss LT, Schnieper P, Drewe J, et al: Risk stratification and safe administration of propofol by registered nurses supervised by the gastroenterologist: A prospective observational study of more than 2,000 cases. *Gastrointest Endosc* 2003; 57(6):664-71.