

Case Focuses Anesthesiologists on Infection Control

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BANFF, ALTA. — The much publicized death from spinal meningitis of Washington-area resident Julie LeMoult within hours of labor epidural and delivery has focused the attention of many obstetric anesthesiologists on the issue of infection control, according to Dr. Samuel Hughes, professor of anesthesia at the University of California, San Francisco, and director of obstetric anesthesia at San Francisco General Hospital.

"This tragic case was certainly disconcerting and brought many of our patients in to us with questions," said Dr. Hughes, speaking at the annual meeting of the Society for Obstetric Anesthesia and Perinatology. He stressed that the courts have not yet ruled on the source of the infection.

Potential guidelines or a practice advisory regarding neuraxial infection control techniques have been under discussion within the American Society of Anesthesiologists (ASA) since 2005, said Dr. Hughes, who is former chair of the ASA's obstetric anesthesia committee. However, currently, there remains a void, with no standard of care in this area, he said. "We must institute uniform sterile safety practices. I think coming to some sort of broad guidelines would be a purposeful thing," he said.

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But it is unlikely that studies will ever be able to show that more rigid, uniform infection control procedures will reduce the risk of neuraxial infection—because the incidence of such infections is so low, he said. The two most serious complications resulting from neuraxial anesthesia—epidural abscess and meningitis—are both rare and underreported, making determination of their true incidence difficult. The best literature review identified 15 cases of bacterial meningitis and 8 cases of epidural abscess associated with obstetrical regional anesthesia over a 32-year period (1966-1998), with a further five abscesses attributed to spontaneous infection, he said. And a more recent meta-analysis covering 1966-2005 suggested an incidence of deep epidural infection of 7 per million (Anesthesiology 2006;105:394-9).

"We must be cautious in quoting the incidence of such extremely rare events because, in fact, we just do not know and likely will not—not without an extremely large survey with mandatory reporting, even with as many as 2.4 million women per year in the United States having a regional anesthetic!" he wrote in the ASA Newsletter (2007 Feb;71:No 2).

While academics and medical societies debate the intricacies of future infection control guidelines, Dr. Hughes urged clinicians not to forget common sense, and

the most basic of infection control practices, hand-washing. Thorough hand-washing with an alcohol-based antiseptic solution is the first recommendation from the American Society of Regional Anesthesia and Pain Medicine (ASRA), which released recommendations on infection control last year (Reg. Anesth. Pain Med. 2006;31:311-323), although not specifically for obstetric anesthesia, he said. The second and third recommendations are the removal of jewelry and the use of sterile

gloves (after, not instead of, hand-washing). "Now that the ASRA recommendations are out there, they may slowly become the standard of care if nothing else supersedes them," he suggested.

Perhaps the most controversial ASRA recommendation is for the wearing of masks—something Dr. Hughes strongly agrees with. While studies suggest that surgical wound infection is not reduced by mask-wearing, "more than 50% of the cases of meningitis related to anesthesia are

caused by streptococcal organisms which live in the upper airway," he said. "There have been case reports linking practitioners' specific upper airway infections to infections in patients—so anything that reduces bacterial dispersion is a good idea. Certainly masks are a way to protect the practitioner and the patient at very little cost."

Surveys in the United States and around the world underscore the fact that sterile technique varies widely among providers of regional anesthesia, said Dr. Hughes. ■

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References:

1. Centers for Disease Control and Prevention (CDC). Preventing tetanus, diphtheria, and pertussis among adults: use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine: recommendations of the Advisory Committee on Immunization Practices (ACIP) and recommendation of ACIP, supported by the Healthcare Infection Control Practices Advisory Committee (HICPAC), for use of Tdap among health-care personnel. *MMWR*. 2006;55(RR-17):21-22. 2. CDC. Preventing tetanus, diphtheria, and pertussis among adolescents: use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccines: recommendations of the ACIP. *MMWR*. 2006;55(RR-3):22.

* Advisory Committee on Immunization Practices. † Tetanus, diphtheria, and acellular pertussis. ‡ 19-64 years of age. § 11-18 years of age.

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