

2. Young WL, Chien S: Effect of nimodipine on cerebral blood flow and metabolism in rats during hyperventilation. *Stroke* 1989; 20:275-80
3. Young WL, Pile-Spellman J, Prohovnik I, Kader A, Stein BM; Columbia University AVM Study Project: Evidence for adaptive autoregulatory displacement in hypotensive cortical territories adjacent to arteriovenous malformations. *Neurosurgery* 1994; 34:601-10; discussion 610-1
4. Mohr JP: Brain arteriovenous malformations: Children and adults. *Stroke* 2005; 36:2060-1
5. Quest DO, Pool JL: A history of the Neurological Institute of New York and its Department of Neurological Surgery. *Neurosurgery* 1996; 38:1232-6
6. Young WL, Solomon RA, Prohovnik I, Ornstein E, Weinstein J, Stein BM:  $^{133}\text{Xe}$  blood flow monitoring during arteriovenous malformation resection: A case of intraoperative hyperperfusion with subsequent brain swelling. *Neurosurgery* 1988; 22:765-9
7. Kuhn TS: *The Structure of Scientific Revolutions*, 2nd edition. Chicago, University of Chicago Press, 1970
8. Sessler DI: Long-term consequences of anesthetic management. *ANESTHESIOLOGY* 2009; 111:1-4
9. Collins F: Francis Collins interview. Departing U.S. genome institute director takes stock of personalized medicine. Interview by Jocelyn Kaiser. *Science* 2008; 320:1272
10. Reves JG: We are what we make: Transforming research in anesthesiology: The 45th Rovenstine Lecture. *ANESTHESIOLOGY* 2007; 106:826-35
11. Schwinn DA, Balser JR: Anesthesiology physician scientists in academic medicine: A wake-up call. *ANESTHESIOLOGY* 2006; 104:170-8
12. Paik JC, Howard G, Lorenz RG: Postgraduate choices of graduates from medical scientist training programs, 2004-2008. *JAMA* 2009; 302:1271-3
13. Miller RD, Lanier WL: The shortage of anesthesiologists: An unwelcome lesson for other medical specialties. *Mayo Clin Proc* 2001; 76:969-70

## ANESTHESIOLOGY REFLECTIONS

### Churchill Acupuncture Needles



In *A Treatise on Acupuncture* (1821), James Morss Churchill describes how he conducted acupuncture with thick-gauged British sewing needles (above), the ivory finger holds of which he "pressed gently, whilst a rotary motion is given . . . by the finger and thumb." When asked how his acupuncture worked, the English surgeon preferred "preserving a profound silence." Years later, a grateful 3rd Earl of Egremont would reward Churchill's acupuncture prowess (in relieving the Earl's rheumatism and sciatica) with both fame and fortune. The latter the Earl bestowed in pounds sterling; the former, as long-term publicity afforded by dubbing the Earl's most prized racehorse "Acupuncture." (Copyright © the American Society of Anesthesiologists, Inc. This image appears in color in the *Anesthesiology Reflections* online collection available at [www.anesthesiology.org](http://www.anesthesiology.org).)

George S. Bause, M.D., M.P.H., Honorary Curator, ASA's Wood Library-Museum of Anesthesiology, Park Ridge, Illinois, and Clinical Associate Professor, Case Western Reserve University, Cleveland, Ohio. [UJYC@aol.com](mailto:UJYC@aol.com).