Clin Orthop Relat Res (2008) 466:1755–1756 / DOI 10.1007/s11999-008-0257-9

Published online: 22 April 2008

50 Years Ago in CORR

Postspinal Anesthesia Osteomyelitis of the Lumbar Spine

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Infections following spinal anesthesia are rare. In a meta-analysis of 1.37 million women having epidural anesthesia for childbirth, Ruppen et al. [10], estimated a rate of deep infection of 1 in 145,000. Infections following spinal anesthesia have been well recognized for a long time. Day and Hinchey, in Clinical Orthopaedics and Related Research, reported five patients with vertebral osteomyelitis following spinal anesthesia [3]. Four of the five patients had spinal anesthesia and one had multiple diagnostic lumbar punctures. All developed back symptoms within 1–8 weeks. The person performing the punctures did not use gloves in four of the five patients; presumably the extremely low incidence of infections led some to believe rigorous sterile procedures were unnecessary. Also in four of the five cases the symptoms seemingly resolved with nonoperative treatment (followup times were not given in several patients).

Importantly, Day and Hinchey commented, "In each instance the diagnosis was delayed by failure to recognize the condition." They also commented, "It is not our intention to discourage lumbar puncture for any purpose, whether diagnostic or therapeutic, but rather to call attention to the possibility of a serious major complication" [3].

Spinal and epidural anesthesia are widely used today owing to their remarkable safety and efficacy. These two forms of anesthesia are particularly considered and used for total hip and knee arthroplasty not only because they provide effective anesthesia, but also because of evidence they reduce the risk of pulmonary embolus and deep vein thrombosis [12, 13] and evidence some anticoagulants increase the overall death rate [8, 9, 11] even if they reduce the rates of deep vein thrombosis [1, 2, 4–6]. Given the frequency of such anesthetics, it is remarkable we see so few complications, particularly infection. However, isolated cases still do occur [7] and the orthopaedist should be aware of the problem in patients with back pain after surgery in which spinal anesthesia was used. As noted by Day and Hinchey [3], "A diagnosis of postspinal anesthesia osteomyelitis should be considered in any case of persistent pain at the site of a lumbar puncture soon after the puncture."

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