Meningitis associated with spinal anaesthesia: not always bacterial

Meningitis asociada a anestesia espinal: no siempre bacteriana

Sir,

Laguna del Estal et al.\(^1\) have recently reported a series of patients with bacterial meningitis associated with epidural analgesia and anaesthesia, and in their discussion they quite rightly pointed out that the differential diagnosis must include chemical meningitis.\(^1\) It is important to stress that meningitis induced by the local administration of anaesthetics must also be suspected whenever the cultures are negative. The clinical picture produced is indistinguishable from that of bacterial meningitis, but what many clinicians are unaware of is that the cerebrospinal fluid (CSF) may also be negative, revealing intense pleocytosis and polymorphonuclear predominance. These situations are well documented with, for example, bupivacaine, which may trigger pleocytosis of several thousand leukocytes with a percentage of polymorphonuclear cells close to 100%.\(^2−4\) Some important facts may help distinguish between bacterial and aseptic meningitis. First of all, the latency between epidural anaesthesia and the onset of symptoms as a time of less than 6 h suggests that it is chemical meningitis. Second, the presence of eosinophilia in CSF, which is “never” seen in bacterial meningitis but is in drug-induced meningitis, or else that the patient presents atopy. Third, the presence of hypoglycorrachia less than 30 mg/dL, typically occurring in bacterial forms (albeit also described in aseptic cases). And finally, a frank elevation of acute phase reactants, common only in bacterial meningitides.

References


S. Reus Bañuls\(^a\), *, S. Bustos Terol\(^b\), S. Olmos Soto\(^a\), D. Piñar Cabezos\(^a\)

\(^a\) Unidad de Enfermedades Infecciosas, Hospital General Universitario de Alicante, Alicante, Spain
\(^b\) Sección de Neurología, Hospital Clínico de San Juan, Alicante, Spain

* Corresponding author.
E-mail address: reus_ser@gva.es (S. Reus Bañuls)

Please cite this article as: Reus Bañuls S, et al. Meningitis asociada a anestesia espinal: no siempre bacteriana. Neurología. 2011;26:442.

Reply to Meningitis secondary to spinal anaesthesia: not always bacterial meningitis

Respuesta a meningitis asociada a anestesia espinal: no siempre bacteriana

Sir,

We agree with Reus Bañuls et al. about the importance of defining, when evaluating patients with acute meningeval syndrome and negative results in Gram-staining and cerebrospinal fluid (CSF), whether the meningitis is bacterial (MB) or aseptic (MA). This differentiation allows treatment intrathecal administration of 9 although a short latency prior to the onset of symptoms and the observation of eosinophils in the CSF (present in only 22% of the cases reported by Santos et al.5) suggest a chemical origin in cases secondary to the use of drugs delivered through the spine. It might be diagnostically more useful to determine a series of different inflammation/infection markers, which are considerably elevated in severe bacterial infections such as MB, but not in chemical meningitis: reactive C protein in serum,8 pro-calcitonin in serum5 and lactic acid in the CSF.9 However, differentiating them quickly and for sure will not be possible until the techniques for detecting bacterial genome in the CSF through polymerase chain reaction10 are standardized.


P. Laguna del Estal

Servicio de Medicina Interna, Hospital Universitario Puerta de Hierro-Majadahonda, Majadahonda, Madrid, Spain

E-mail address: pld02m@saludalia.com

doi:10.1016/j.nrleng.2011.01.004