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Microembolic signals in subarachnoid hemorrhage

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Abstract

Microembolic signals (MES) detected by transcranial Doppler (TCD) have been reported in subarachnoid hemorrhage (SAH), although their origin and contribution to brain ischemia remain uncertain. We conducted a prospective study to evaluate the frequency of MES among patients with SAH and to determine their origin. Twenty-seven patients with SAH, comprising ١٥ aneurysmal and ١٢ non-aneurysmal patients, participated in the study. TCD evaluation was performed using a ٢ MHz probe. Patients were studied three times per week during their in-patient stay to detect vasospasm, and then each middle cerebral artery (MCA) was monitored for ٣٠ min using the Monolateral Multigate mode to detect MES. Using this method, MES were detected in ٧ out of ١٥ patients (٤٧٪) with aneurysmal SAH and were not seen in non-aneurysmal patients (p = ٠,٠٠٧). Vasospasm occurred in ٥٢٪ (١٤/٢٧) of cases. However, clinical signs and symptoms of vasospasm were identified in only ١٨,٥٪ (٥/٢٧). There was no significant relationship between MES and vasospasm (p = ٠,٢٢٤). Also, no relationship was found between MES and the location of the aneurysm (p = ٠,٦٨٥). Thus, in this study MES were only detected in aneurysmal SAH. However, we did not find a relationship between the location of the aneurysm and MES, or the presence of vasospasm and MES. Therefore, MES in patients with SAH may also originate from vascular pathology other than the aneurysm sac or vascular spasm.

Reaxys Database Information

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Author keywords

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Indexed Keywords

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