Impact Of General Anaesthesia On Treatment Effect In The MR CLEAN Trial

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Background

In patients with acute ischemic stroke treated with intra-arterial therapy (IAT) the effect of general anaesthesia (GA) on clinical outcome is unknown. Usage of GA during IAT is often based on preferences of the interventionist. GA reduces patients' movement during the procedure. It may decrease procedure times and procedure-related complications. However, if local anaesthetics (LA) are used (with or without use of conscious sedation) treatment initiation could be faster, there is no need for intubation, and blood pressure alterations are less severe. We assessed the impact of GA on clinical outcome and safety in MR CLEAN trial.

Methods

MR CLEAN was a randomized clinical trial of IAT versus no IAT in patients with a proximal arterial occlusion in the anterior cerebral circulation demonstrated on vessel imaging, treatable within 6 hours after symptom onset. Primary outcome was the modified Rankin Scale (mRS) at 90 days. Use of GA was prospectively collected in the online database. Patients converted to GA during IAT were scored as LA according to intention to treat principle. In this post-hoc analysis, we defined good clinical outcome as mRS≤2.

Results

Five hundred patients were included in the MR CLEAN trial, 233 were allocated to intervention. Despite being allocated to control, 1 patient received IAT and was included in this analysis. A total of 217 patients had catheter angiography of whom 82/217 (38%) were treated under general anaesthesia. Baseline characteristics balanced between groups. IAT under LA resulted in 38% good outcome (mRS≤2) compared to 23% under GA arm (P;0.026). There was no statistically significant difference in symptomatic intracranial hemorrhage or mortality during follow-up. Conclusion We found a negative association of GA with functional outcome after 90 days in patients treated with IAT.
Disclosure