

Intra operative catheter directed thrombolysis of embolic occlusion of distal ICA & MCA during CEA- Presentation of a unique case and literature review.

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Introduction:

Carotid endarterectomy (CEA) is a common procedure undertaken by vascular surgeons with over 5000 procedures performed in the UK each year. The risk of operative stroke is between 0.5- 0.6% (UK CEA Audit 2012). Timely recognition and treatment is essential with correction of technical or thromboembolic factors.

Case:

An 80 year old lady started to have seizures while undergoing a standard left CEA under local anaesthetic. The patch graft was being put in which was immediately reviewed. No technical problem was detected. After completion of the patch graft, intraoperative duplex was done. There was no detectable diastolic flow in the Internal Carotid artery (ICA). An on-table angiogram showed complete occlusion of the distal ICA and proximal Middle Cerebral artery (MCA).

Catheter directed administration of Recombinant Tissue Plasminogen Activator (rt-PA) (total 35mg given in 5mg bursts every 10 minutes) was done with repeated angiograms to assess progress. The entire ICA and MCA were completely cleared. The patient recovered and was discharged in 3 days with no residual neurology and no evidence of new infarcts on CT of head.

Our literature review revealed only three cases of similar nature reported previously with similar results. Urokinase and Streptokinase are alternative thrombolytic agents.

Conclusion:

We have shown that prompt diagnosis and treatment with intraoperative catheter directed thrombolysis can resolve thromboembolic occlusion of ICA/ MCA with good results.



1: Initial angiogram showing occlusion of ICA.



2: Midway after starting treatment with rt-PA.



3: Isolated ICA angiogram at end of treatment.



4: Completion angiogram after treatment.