

Evaluating rates of recanalization and outcomes in patients receiving full dose of IV tPA followed by IA thrombolytics vs. followed by mechanical intervention



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BACKGROUND & OBJECTIVES

Although interventional management of acute ischemic stroke has been an accepted treatment standard for some time, confrontation between intra-arterial thrombolytics and mechanical thrombectomy when bridged to intravenous thrombolytic therapy has yet to be systematically investigated.

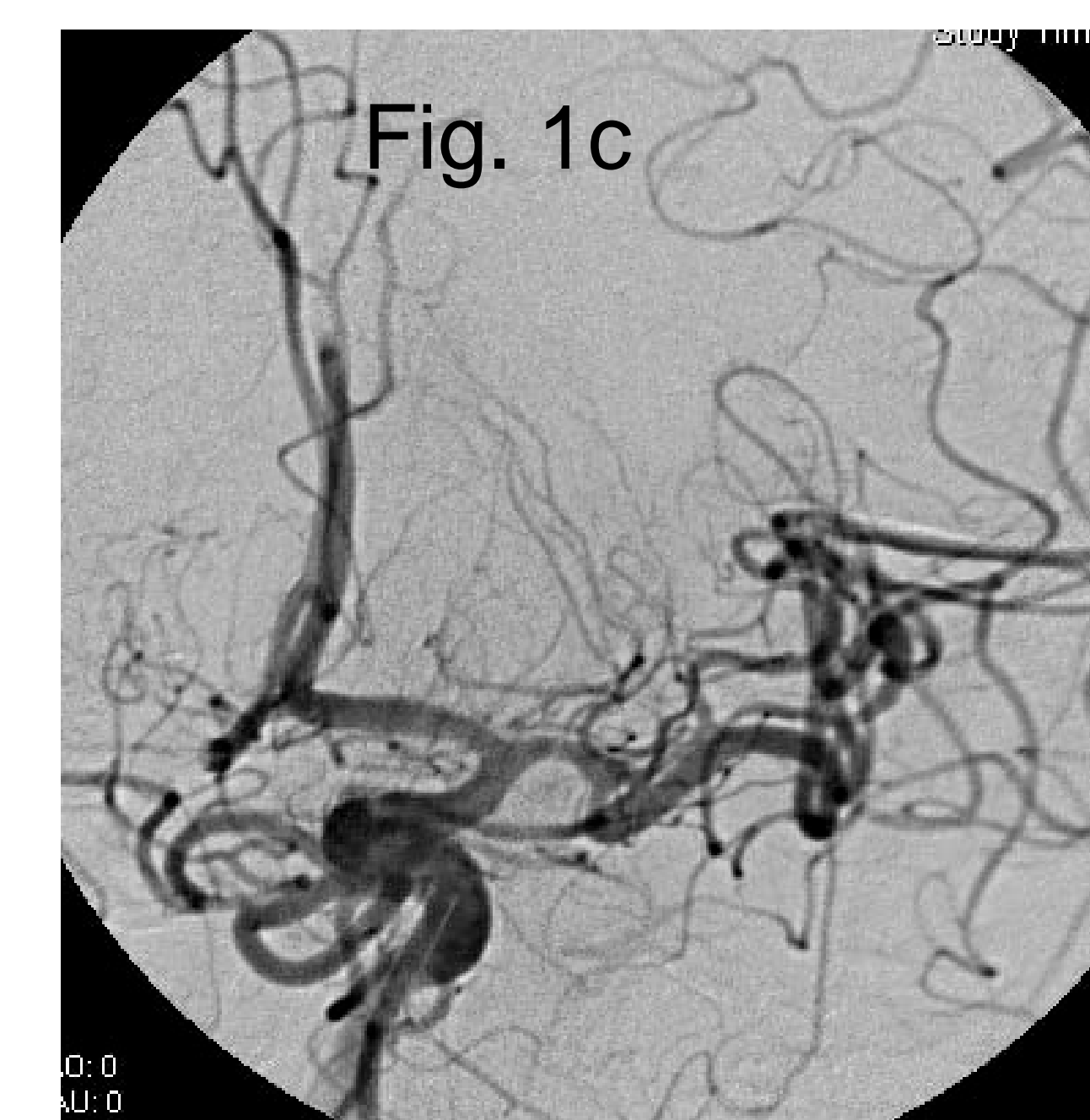
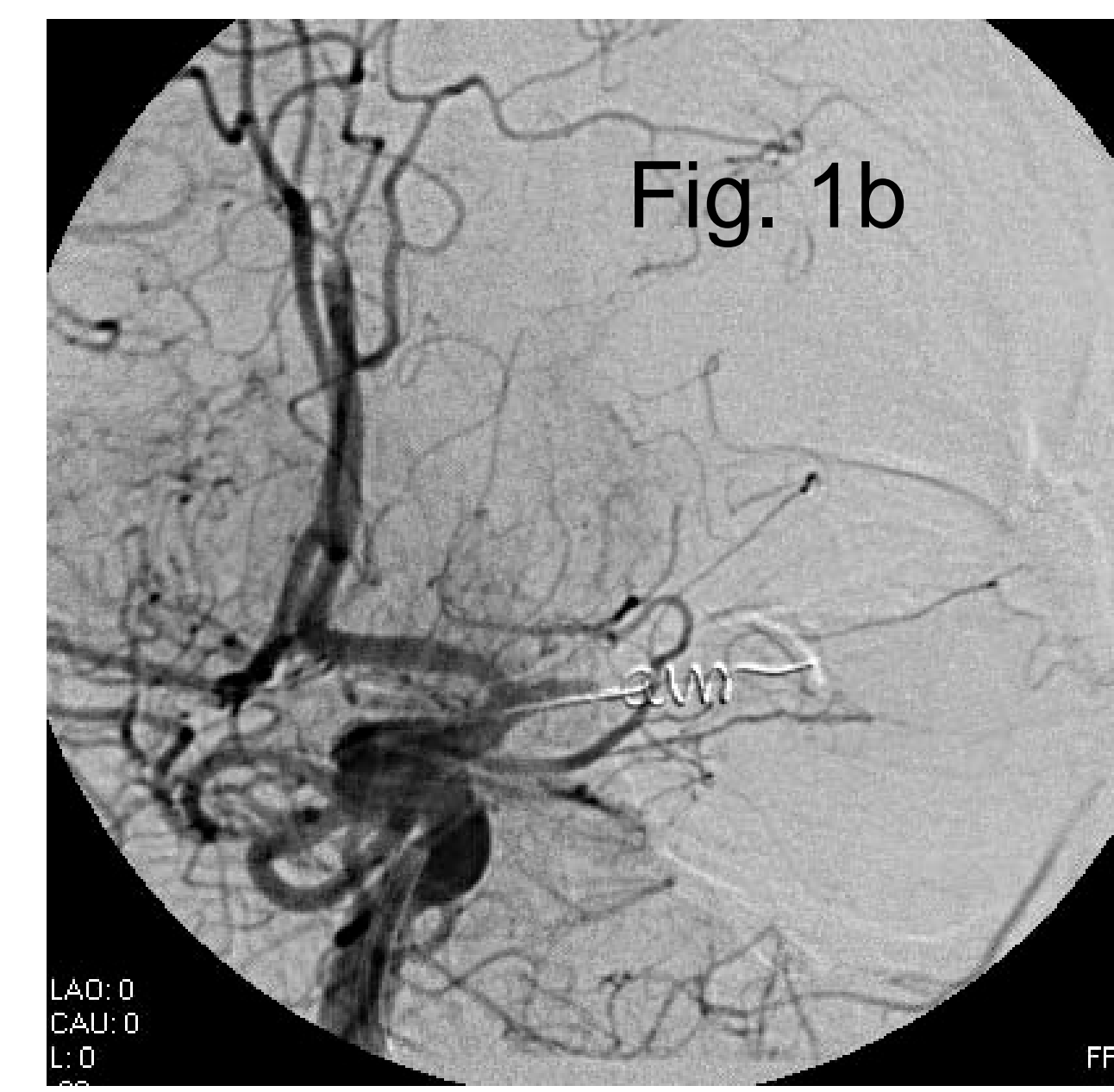
Our goal was to determine any differences in recanalization rates or clinical outcome between the full dose IV treatment followed by additional IA thrombolytics or a combination IA mechanical intervention.

MATERIALS & METHODS

We studied patients presenting at a University Hospital who suffered acute ischemic stroke and were treated with IV tPA and then bridged to either IA thrombolytics alone or IA mechanical intervention alone. Clinical outcomes at discharge, angiographic characteristics, timing of recanalization and initiation of therapy were collected prospectively. Any complications were noted. Results were analysed using SPSS (14.0) software.

RESULTS

Of the total of 133 subjects receiving acute thrombolytic therapy, Ten (8%) underwent subsequent bridging therapy to intra-arterial thrombolytics (IA) alone and fifteen (17%) underwent subsequent bridging therapy to mechanical thrombectomy (MT) alone. Five of the ten IV bridged to IA (50%) had a TIMI improvement of ≥ 1 , while this was observed in seven of the fifteen IV bridged to MT (47%). In addition, five of the ten IV bridged to IA (50%) had an NIHSS improvement of ≥ 4 , while this was observed in nine of the fifteen IV bridged to MT (60%). The differences were not statistically different



Figs. 1 a, b, c

Left ICA runs pre-, peri-, and post-mechanical thrombectomy of an acute left MCA occlusion

DISCUSSIONS & CONCLUSIONS

Based on our results, bridging of acute stroke IV therapy to either IA or MT does not appear to produce significant differences in recanalization or outcome. This suggests a need for further studies to evaluate the risk and benefit of implementing multiple endovascular treatment modalities in one subject to optimize our specific endpoints

References

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