

# Brachial artery embolism: an unusual complication of mechanical thrombectomy for acute basilar artery occlusion in a patient with subclavian steal phenomenon

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## Introduction

Mechanical thrombectomy is used to treat acute ischemic stroke due to arterial occlusions, but complications can include: reperfusion hemorrhage, distal embolization, and vessel dissection.

We present a previously unreported complication of mechanical thrombectomy: brachial artery embolism.

## Methods

Case presentation.

## Results

A 72 year-old woman with recently diagnosed stage 3A lung cancer presented with a basilar stroke syndrome. Examination revealed mild drowsiness, anarthria, bifacial weakness, lower extremity plegia, upper extremity paresis and ataxia, and bilateral upgoing toes. NIHSS was 21.

CT scan of the head showed a hyperdense

CT angiogram revealed a basilar artery occlusion and a lung mass extending into the left subclavian artery, resulting in complete occlusion of the artery proximal to the vertebral artery origin.

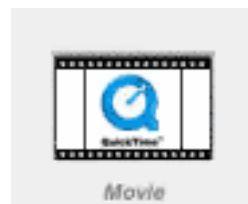


CT angiogram showing left upper lobe mass invading the left subclavian artery

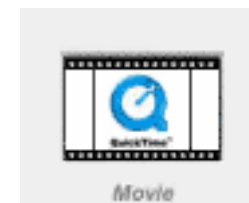
She was treated with IV tPA, after which her NIHSS improved to 7, and subsequently underwent mechanical thrombectomy. Catheter angiography confirmed persistent basilar occlusion:



Solitaire stent retriever was deployed with successful recanalization on 1st pass with no evidence of emboli. However, as no thrombus was found in the stent when it was withdrawn, angiography via the right vertebral was performed:



This demonstrated left subclavian steal phenomenon with retrograde contrast flow down the left vertebral artery into the subclavian artery with no flow beyond the brachial segment:



Arrow showing brachial artery occlusion

Absent left radial pulse was noted. Emergency brachial artery thrombectomy was successful. NIHSS after surgery was 1 for decreased right nasolabial fold. She was discharged home several days later

## Conclusions

To our knowledge, this is the first reported case of brachial artery embolism complicating mechanical thrombectomy. It is important to consider this potential complication in patients undergoing mechanical thrombectomy for posterior circulation stroke with stenosis or occlusion of the subclavian artery.

## Learning Objective

Be aware of the risk of brachial artery embolism in patients undergoing mechanical thrombectomy for posterior circulation stroke who have stenosis or occlusion of the subclavian artery.