

ACUTE MRI SHOULD BE PERFORMED ON ALL TIA PATIENTS? – YES

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We have finally moved to a new tissue-based definition of TIA: "transient episode of neurological dysfunction caused by focal brain, spinal cord, or retinal ischemia, without acute infarction". This means that MRI is required to distinguish between TIA and stroke.

Furthermore, what are the goals of a modern neuroimaging evaluation for TIA:

1. Obtain evidence of a vascular origin for the symptoms either directly (evidence of hypoperfusion and/or acute infarction) or indirectly (identification of a presumptive source 'smoking gun', e.g. large-vessel stenosis)
2. Exclude an alternative non-ischemic origin
3. Ascertain the underlying vascular mechanism of the event (e.g. large-vessel atherothrombotic, cardioembolic, small-vessel lacunar), which, in turn, allows selection of the optimal therapy.
4. Identify prognostic outcome categories - particularly the TIA patient at high-risk of early stroke progression or recurrence.

MRI is superior on all counts. MRI is much more accurate than CT in the diagnosis of acute ischemia, and MRI is much better at identifying stroke/TIA mechanism than CT/clinical assessment. Additionally, MRI is far better than CT at predicting subsequent stroke risk, and adds to clinical risk predictors.

In the 21st century, acute MRI should be performed on all TIA patients.