

**Mechanical Thrombectomy in Acute Ischaemic Stroke – from Science to Service***Lui WM**Department of Neurosurgery, Queen Mary Hospital, Hong Kong*

Intravenous thrombolysis is an effective treatment for acute ischaemic stroke. However, vascular recanalisation rates remain low especially in the setting of large artery occlusion. On the other hand, endovascular intra-arterial therapy addresses this issue with superior recanalisation rates compared with intravenous thrombolysis. Although previous randomised controlled studies of intra-arterial therapy failed to demonstrate its superiority, the failings may be attributed to a combination of inferior intra-arterial devices and suboptimal selection criteria. The recent results of several randomised controlled trials have demonstrated significantly improved outcomes, underpinning the advantage of newer intra-arterial devices and superior recanalisation rates, leading to renewed interest in establishing intra-arterial therapy as the gold standard for acute ischaemic stroke.

In this presentation, the current evidence on endovascular therapy in acute ischemic stroke will be reviewed and the major challenges in the implementation of this therapy will be discussed. We address the challenges of the generalisability of trial results to different patient populations, socio-economic aspect, implementation of endovascular therapy in the acute setting for large populations within various geographical contexts, and approaches to evaluating future innovations in the field of neuroendovascular care.