

### Title:

## Decompressive craniectomy – a single-centre retrospective study

### Authors and Institution:

Dr Sarah Lau

*Department of Neurosurgery, Queen Mary Hospital*

### Abstract:

#### Background

Decompressive craniectomy (DC) increases survival in patients with ischaemic stroke. We evaluated patient outcomes at a university hospital.

#### Methods

This is a retrospective study on 33 patients operated on from 2003 to 2014 with malignant middle-cerebral-artery (MCA) infarction. Data was obtained through Clinical Management System (CMS) and Electronic Patient Records (ePR). Patient outcome was assessed at 6-month after operation using modified Rankin Score (mRS), which ranges from 0 (no symptoms) to 6 (death).

#### Results

Patient age ranged from 7 months to 71 years (mean= 47.8 years). The overall mortality was 15%. The proportion of patients who survived without severe disability (mRS 0-4) was 26%. One patient had mRS score of 0 to 2, 11% had a score of 3 (moderate disability); 13% had a score of 4 (moderately severe disability requiring assistance with most bodily needs); 11% had a score of 5 (severe disability). Focusing on patients aged 61-years or older (n=7), none achieved mRS of 0 to 4; 29% had mRS of 5; with 71% mortality.

#### Conclusions

Decompressive craniectomy increased survival without severe disability among patients younger than 61 years old with malignant MCA infarction. Our results suggest that in patients older than 61 years, survival benefit is minimal. More research is needed to confirm the validity of this hypothesis.