

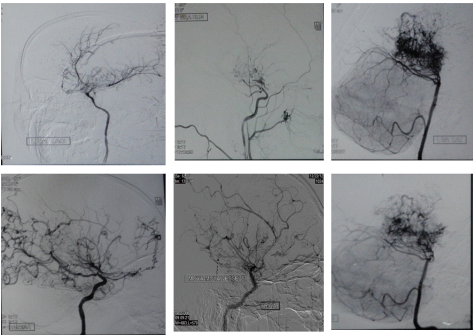
Introduction

Moyamoya disease (MMD) is a progressive occlusive disease of the cerebral vasculature with particular involvement of the circle of Willis. The purpose of this study was to study the clinical profile and effectiveness of surgery in patients of Moyamoya disease.

Methods

The demographic profile, the clinical symptomatology was recorded. Diagnosis was confirmed by CT/ CTAngiography, MRI/ MR angiography and /or DSA. SPECT was done to assess brain perfusion. The effectiveness of revascularization procedures was studied in terms of improvement in clinical profile, angiographic changes, and neuropsychological assessment.

fig 1

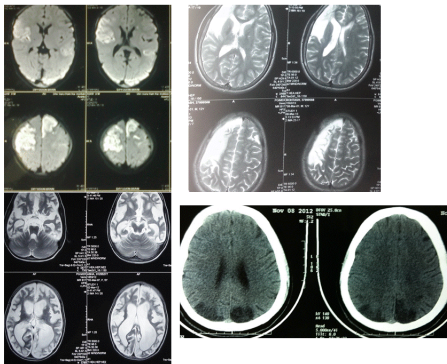


Angiographic presentations of Moyamoya disease

Results

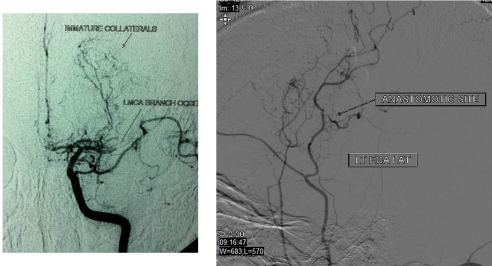
28 patients (32 sides) of Moya-moya disease have been operated. The mean age was 13.7 years. There were 3 adult patients whose presentation was with ICH. Rest all were children whose presentation was ischemia. Seizures were present in 12 patients (57.1%), focal deficit in 18 (85.7%), aphasia in 2 (9.5%) and features of raised intra cranial pressure in 1 patient (4.7%) . Patients were investigated by DSA or MRA. SPECT studies were performed to detect areas of hypoperfusion. STA-MCA anastomosis was done/attempted in all patients. The clinical progression of the disease was halted in almost all patients. One patient developed an additional ischemic event during surgery. Improvement in neuropsychological status was also observed especially in terms of increase in attention span and improved scholastic performance in school. Radiology showed regression in Moya Moya vessels in majority of the patients.

fig 2



Different MRI findings secondary to ischemic events

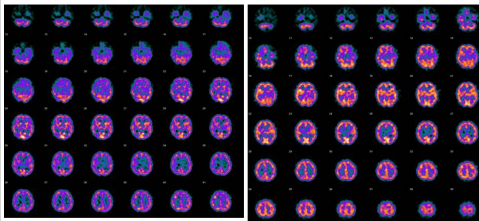
Fig 3



Pre and post operative DSA

Pre and post operative DSA following STA-MCA bypass

fig 4



Pre and post operative SPECT

Pre and post op SPECT showing improved brain perfusion

Conclusions

Surgical revascularization procedures were effective in halting the neurological progression of the disease and also resulted in neuropsychological and radiological improvement.