

Abstract Format Guidelines

Research Study:

ABSTRACT TITLE (BOLD, ALL CAPS, ARIAL 11)

Primary Author, Co Author 1, Co Author 2 (Underlined for presenting author, Arial 11, single spacing)

Affiliation/Institution (Arial 11, single spacing)

Background / Objectives (Arial 11, Bold)

Content (Arial 11, align justify, single spacing)

Methods (Arial 11, Bold)

Content (Arial 11, align justify, single spacing)

Results (Arial 11, Bold)

Content (Arial 11, align justify, single spacing)

Conclusion (Arial 11, Bold)

Content (Arial 11, align justify, single spacing)

Case Report:

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Case (Arial 11, Bold)

Content (Arial 11, align justify, single spacing)

Conclusion (Arial 11, Bold)

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Sample Research Study:

AXIAL-CORONAL NECROTIC ANGLE MEASUREMENT FOR FEMORAL HEAD OSTEONECROSIS: RELIABILITY, FICAT STAGES COMPARISON AND PREDICTION OF TOTAL HIP REPLACEMENT

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Background

Osteonecrosis of the Femoral Head (ONFH) primarily affects young adults and could impair life quality if untreated. Quantitative methods such as Kerboul's Angle and Modified Necrotic Index utilized coronal and sagittal T1-weighted images for measuring necrotic lesion extent. Many centers prefer doing bilateral hip MRI scans using coronal and axial images for faster acquisition. In 2024, new parameter utilizing these views was used by Nawata et al. to predict femoral head collapse with efficacy comparable to existing methods. This study aims to evaluate its reliability, compare angle values across Ficat stages, and prediction of total hip replacement (THR).

Methods

Retrospective study of non-traumatic ONFH patients in Dr. Sardjito Hospital (2022–2024) who underwent MRI (8 patients, 12 hips). Exclusion criteria: incomplete/poor-quality images and congenital hip anomalies. One senior resident measures the necrotic angle; sum of angles from largest necrotic portion of femoral head in mid-axial plus mid-coronal T1W slices, twice and compared with Ficat stages (determined by consultant radiologist) using Kruskal-Wallis test. By adding second reader (senior radiologist), inter-observer reliability was evaluated using intraclass-correlation-coefficient (ICC). Medical records were reviewed over a year to determine THR status (yes/no). ROC-AUC analysis was done to determine the predictive value.

Result

Four hips were Ficat stage 2, 8 were Ficat 3 or 4. Mean angle were 182.9°, 215.7°, 244.9° for Ficat 2,3 and 4 group respectively. Significant difference in necrotic angle value was observed between each Ficat stage (9.85, $p=0.007$). Using cut-off of 198°, accuracy was 91.7% (AUC=0.8) to predict THR in one-year span. Intra-observer and inter-observer reliability were 0.864 and 0.839 respectively.

Conclusion

Necrotic angle measured from axial and coronal T1W images is a promising tool to predict THR in ONFH. Larger angle is associated with advanced stage. Its simplicity and good reliability support its practical reproducibility, though larger studies are recommended.

Sample Case Report:

COMBINATION OF ASPIRATION AND STENT-RETRIEVER THROMBECTOMY FOR PROXIMAL INTERNAL CAROTID ARTERY TO M1 SEGMENT OCCLUSION IN DELAYED-TREATMENT ACUTE ISCHEMIC STROKE

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Objectives

Combination of aspiration and stent-retriever thrombectomy shows favourable outcome in acute large vessel occlusion strokes, although with higher hemorrhage risk. However, evidence on its use in delayed-treatment cases remain limited. This report presents a successful case of combined thrombectomy for a delayed-treatment acute ischemic stroke with extensive occlusion from proximal internal carotid artery (ICA) to M1 segment of middle cerebral artery (MCA), also external carotid artery (ECA).

Case

A 32-year-old HIV-positive young adult presented with right-sided weakness, aphasia, and reduced consciousness 1 hour prior to admission. Non-contrast brain CT on arrival revealed loss of left insular ribbon sign without hemorrhage, with Alberta Stroke Program Early Computed Tomography Score (ASPECTS) estimated of 10. Digital subtraction angiography (DSA) with mechanical thrombectomy was performed around 10 hours later (door-to-needle), which revealed total occlusion from proximal C1 segment of left ICA to M1 segment of left MCA, also left ECA. This finding suggested ASPECTS estimated of 0 during the procedure. A 5.5 mm diameter/50 mm length stent-retriever and a 5.7 F/1.90 mm aspiration catheter was employed in combination for thrombus retrieval. Final angiography confirmed successful recanalization from C1 segment of left ICA to M1 segment of left MCA. Follow-up brain MRI at 2 days post-treatment revealed subacute infarct with surrounding edema in left MCA territory. Post-recanalization DWI-ASPECTS is 5, accompanied by consciousness, motor strength, and speech improvement.

Conclusion

Combination of aspiration and stent-retriever thrombectomy in this patient effectively prevented decline of ASPECTS, which improved from an estimated score of 0 to 5, alongside observable clinical improvement including regained consciousness and reduced aphasia, despite door-to-needle time in this case exceeding 3-6 hours. Further studies are needed to evaluate its efficacy and safety in delayed-treatment acute ischemic strokes.