

急性腦中風電腦斷層影像判讀

Time is brain

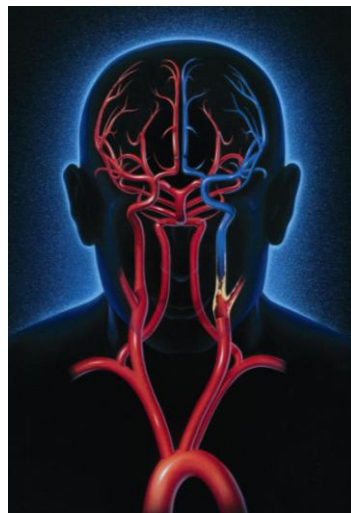
Kaohsiung Chang Gung Memorial Hospital
Department of diagnostic radiology
Division of neuroradiology

王呈綱 醫師 / 陳悅生 醫師 / 陳盟翔 醫師 / 許世偉 主任



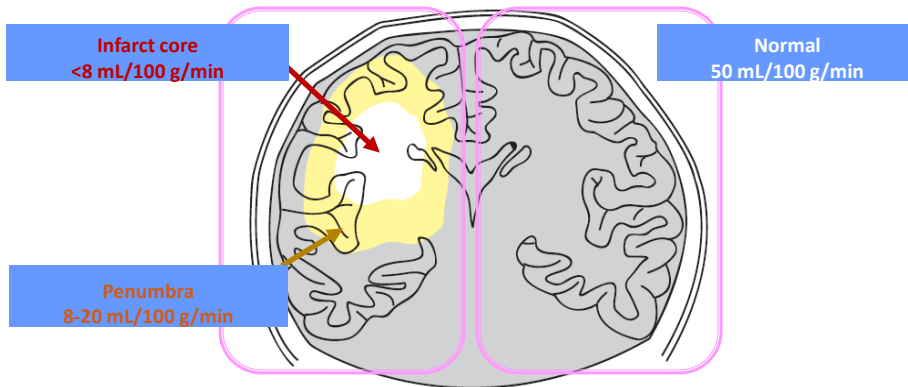
Stroke

- Brain attack
- Infarction
 - Hemorrhagic infarction
 - 20% stroke
 - Bleeding
 - Ischemic infarction
 - 80% stroke
 - Steno-occlusive disease
 - **Thromboembolism**

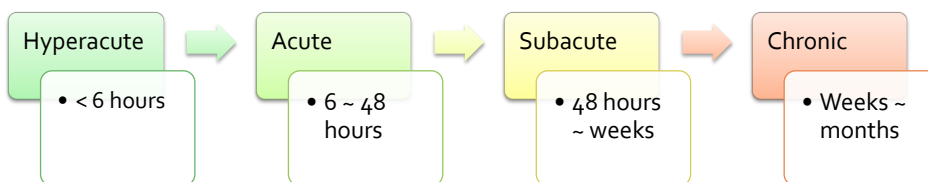


Ischemic Penumbra

- Area of brain with compromised blood supply that can be salvaged by timely intervention



Definition

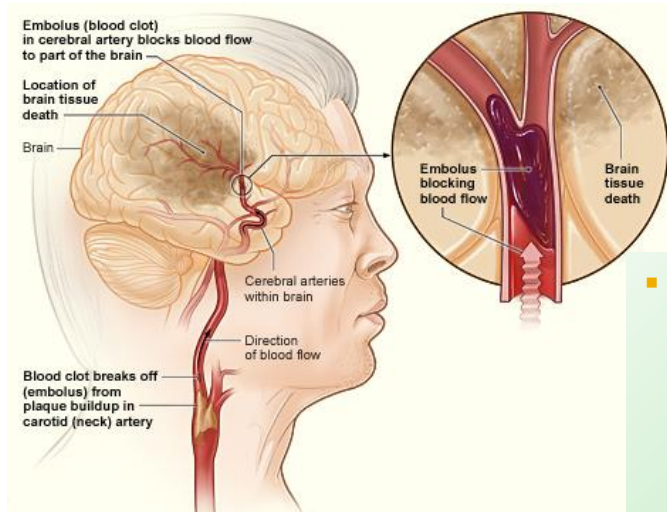


Criterion

- Ischemic stroke, NIHSS 8-30
- *ASPECTS 6-10*
- IV rtPA, attack within **3 hours**
- IA thrombectomy
 - Anterior circulation
 - Attack within **6 hours**
 - Posterior circulation
 - Attack within **24 hours**



Indication

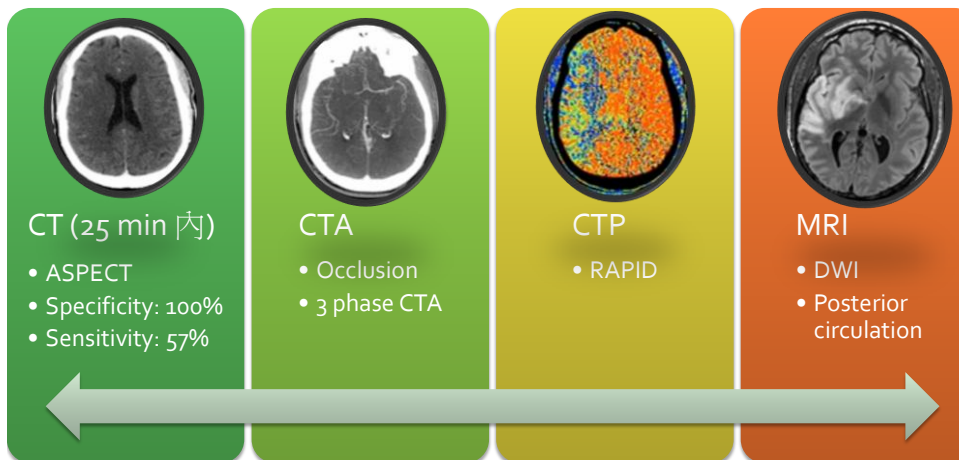


- Large vessel occlusion
 - ICA
 - ACA A1
 - MCA M1/M2*
 - VA/BA/VBA

Management

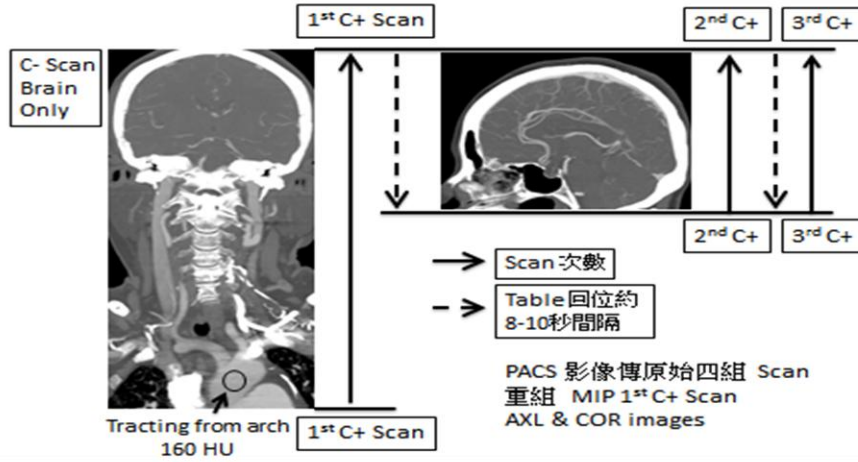
- Hemorrhagic infarction
 - Surgical intervention
- Ischemic infarction
 - Thromboembolism
 - IV rtPA (recombinant tissue plasminogen activator)
 - Within 3 hours
 - IA thrombectomy
 - Within 6 hours in anterior circulation
 - Within 24 hours in posterior circulation

Image tools



3 phase CTA

急性缺血腦中風動脈取栓治療 3 phase CTA protocol



Early sign of hyperacute infarction



Early sign of hyperacute infarction



Early sign of hyperacute infarction



Early sign of hyperacute infarction



ASPECTS (Alberta stroke program early CT score)

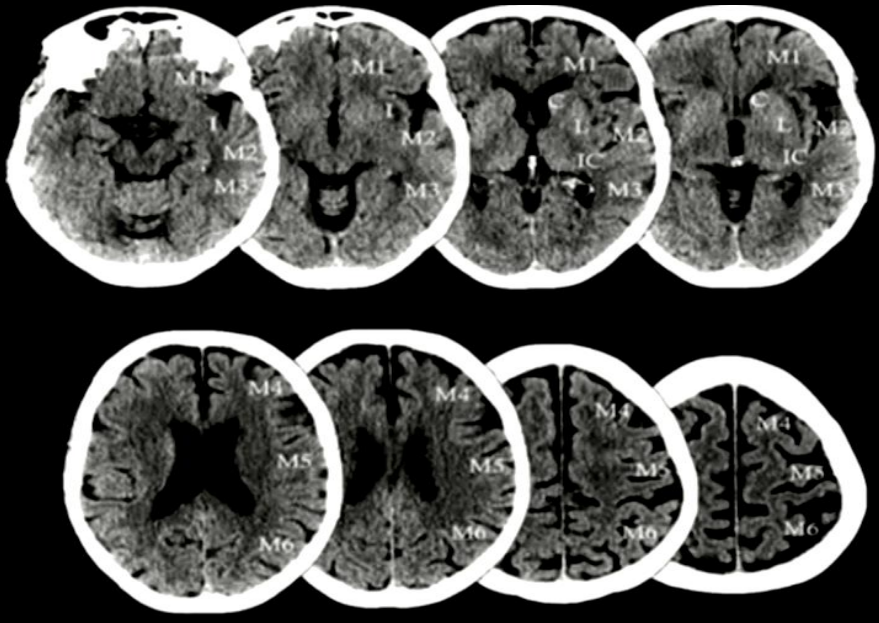
ASPECTS Score

- C- Caudate
- I- Insular ribbon
- IC- Internal Capsule
- L- Lentiform nucleus
- M1- Anterior MCA cortex
- M2- MCA cortex lateral to the insular ribbon
- M3- Posterior MCA cortex
- M4- Anterior MCA superior territory
- M5- Lateral MCA superior territory
- M6- Posterior MCA superior territory

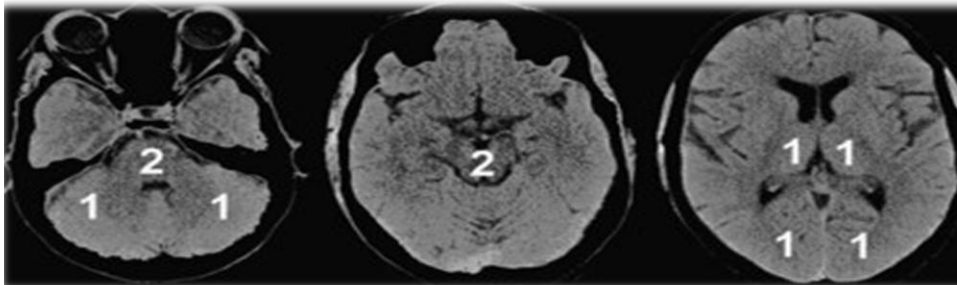
ASPECTS Score = /10

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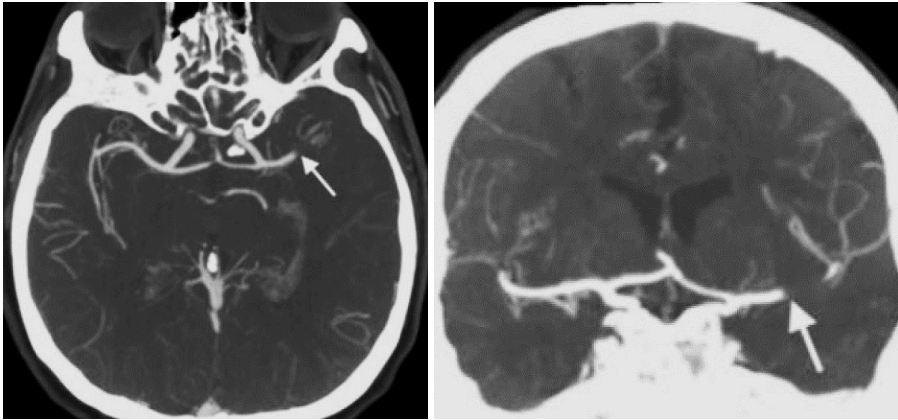
ASPECTS (Alberta stroke program early CT score)



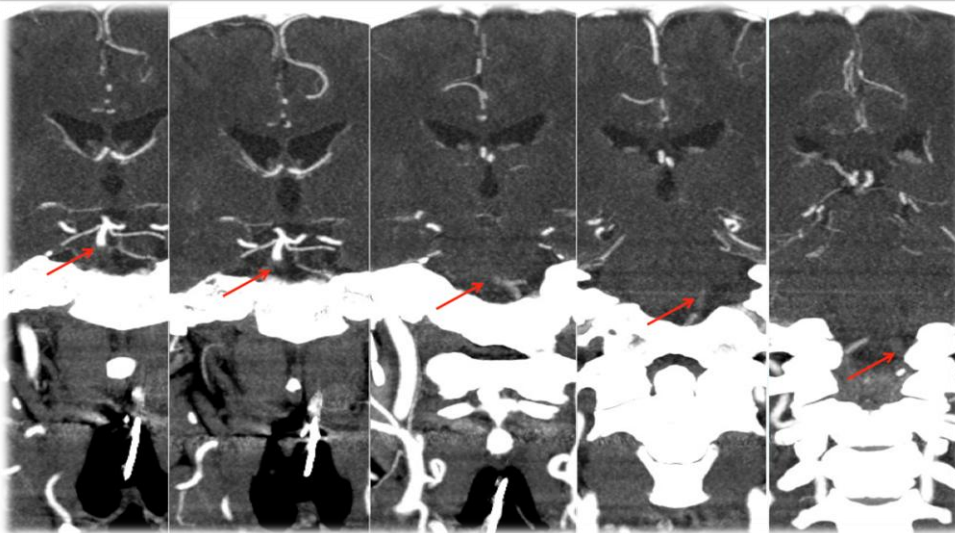
pc-ASPECT



CTA to indentify the target



CTA to indentify the target



Management of Acute Stroke

- *Appropriate patient selection for IV and/or IA thrombolysis*



Acute stroke package

Medical order

- 檢查單
 - X75-852 (S0303)
 - X75-853 (S0305)
 - S55-005-X (S0370)
- 同意書
 - 頸動脈及椎動脈血管攝影檢查同意書 (MR20-3D-024)
 - 介入性動脈溶栓療法同意書 (MR20-23-01101)
- 備品
 - N/S 500mL x 3PC
 - N/S 1000mL x 1PC
 - IV set x 4PC
- 鎮靜評估



Take home message

- Hyperacute ischemic stroke → **Go CT!**
- IV rtPA, attack within 3 hours → **Go CTA!**
- NIHSS 8-30 → **Go IA!**
- Large vessel occlusion → **Go IA!**
- IA thrombectomy
 - Anterior circulation, attack within 6 hours
 - Posterior circulation, attack within 24 hours
- Medical order → **Go 13#!**