

Guidelines for the management of spontaneous intracerebral haemorrhage

ICH is responsible for 9% to 27% of all strokes worldwide. Case fatality at 1 month is 40%, increasing to 45% at 1 year. Optimal management of patients derived from the European Stroke Association guidelines 2014 ¹ and RCP 2012 guidance.

ICH is a medical emergency-patients should be assessed with baseline observations, GCS and basic resuscitation in place ABC. Active management for all patients in first 48 hrs.

Brain imaging should be performed immediately (ideally the next imaging slot and definitely within 1 hour of admission, whichever is sooner) for people with acute stroke if any of the following apply:

- indications for thrombolysis or early anticoagulation treatment
- on anticoagulant treatment
- a known bleeding tendency
- a depressed level of consciousness (Glasgow Coma Score below 13)
- unexplained progressive or fluctuating symptoms
- papilloedema, neck stiffness or fever
- severe headache at onset of stroke symptoms

Urgent bloods including FBC and clotting screen (including INR for patients on known warfarin)

Correct disordered clotting - (discuss with local haematology and consider Vitamin K+ prothrombin complex concentrate)

Admit to a stroke unit

Intermittent pneumatic compression boots to prevent DVT

Reduce blood pressure to systolic target <180mmHg according to local BP management protocols

Consider randomisation to TITCH-2 trial (Tranexamic acid in acute ICH) asap within first 8 hours if local centre participating-contact centre stroke nurse.

www.controlled-trials.com/ISRCTN50867461

Seek advice in working hours from radiology regarding appropriate delayed imaging to investigate cause of ICH eg CTA/MRI/MRA or formal 4 vessel angiography.

Steiner, T., Al-Shahi Salman, R., Beer, R., Christensen, H., Cordonnier, C., Csiba, L., Forsting, M., Harnof, S., Klijn, C. J. M., Krieger, D., Mendelow, A. D., Molina, C., Montaner, J., Overgaard, K., Petersson, J., Roine, R. O., Schmutzhard, E., Schwerdtfeger, K., Stapf, C., Tatlisumak, T., Thomas, B. M., Toni, D., Unterberg, A. and Wagner, M. (2014), European Stroke Organisation (ESO) guidelines for the management of spontaneous intracerebral hemorrhage. *International Journal of Stroke*, 9: 840–855. doi: 10.1111/ij.s.12309

National Clinical Guidelines for Stroke - fourth edition 2012

www.rcplondon.ac.uk/resources/stroke-guidelines

Supratentorial Primary Intracerebral Haemorrhage

Referral **should be** considered for patients with:

- Lobar haemorrhage with progressively deteriorating neurological state or evidence of hydrocephalus (if abrupt deterioration this is either likely to represent a re-bleed or irreversible ICP rise)
- No significant prior co-morbidities
- Patient had GCS > 8 at presentation ²

Referral is **not** usually necessary for patients with:

- Small deep haemorrhages
- Lobar haemorrhages without hydrocephalus whose clinical condition is stable
- Large haemorrhages with significant prior co-morbidities

Infratentorial (including cerebellar) Haemorrhages & Infarcts

Referral **should be** considered for patients with:

- evidence of hydrocephalus or coning
- a large cerebellar haemorrhage (>3cm)
- distortion of the 4th ventricle by a cerebellar haemorrhage or infarct
- AND the patient had a GCS > 8 at presentation ²

Referral is **not** usually necessary for patients :

- brainstem haemorrhages and infarcts with no evidence of hydrocephalus

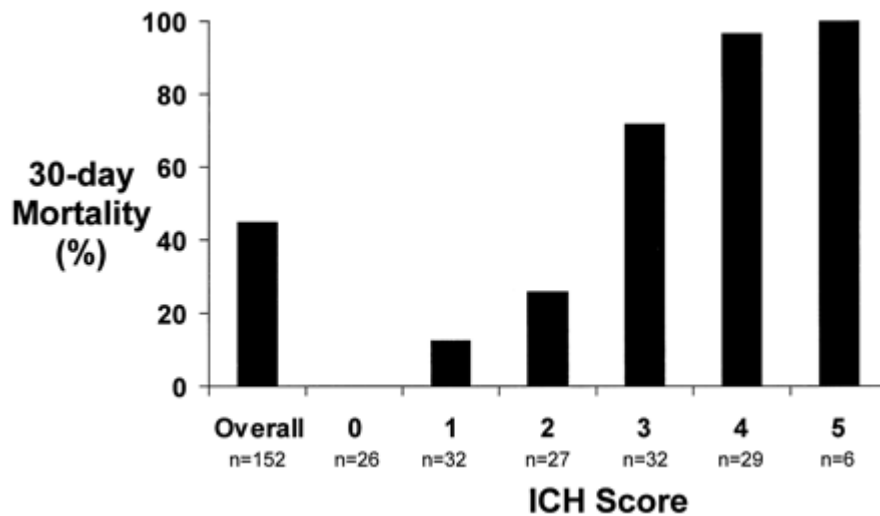
(2) patients whose GCS was < 8 at presentation due to seizures, metabolic disorders etc. should be considered for referral

No evidence for use of steroids and evidence of worse outcome for use of Phenytoin for symptomatic seizures.

Prognostic modelling can be guided by the ICH stroke score:-

The ICH Score. A simple, reliable grading scale for intracerebral haemorrhage.
Hemphill et al. Stroke. 2001;32:891-897

component	ICH Score Points
GCS score	
3-4	2
5-12	1
13-15	0
ICH volume , cm³	
≥30	1
<30	0
Infratentorial origin of ICH	
Yes	1
No	0
Age,y	
≥80	1
<	0
Total ICH score	0-6



ICH score	% 30 day mortality
1	13%
2	26%
3	72%
4	97%