Management of hyperpyrexia, hyperglycaemia, and hypertension in acute ischaemic stroke

Bart van der Worp

Department of Neurology and Neurosurgery, University Medical Center Utrecht, Utrecht, the Netherlands, h.b.vanderworp@umcutrecht.nl
disclosures

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- (co-)Chief investigator PRECIOUS and MR ASAP
learning objectives

- obtain insight in the frequency, causes, and treatment options of frequent medical complications after ischaemic stroke
- obtain knowledge of the evidence underlying suggested or recommended treatment options
- be able to implement recommendations in guidelines in routine clinical practice
medical complications in first days after stroke

- infection 30%
- temperature $> 37.5^\circ C$ $33 - 50$
- hyperglycaemia $30 - 40$
- hypertension 75%

some complications more frequent with
- higher age
- more severe deficit

all associated with poor outcome

American guidelines recommend

- antibiotics for infections
- antipyretic drugs for subfebrile temperatures or fever
- treatment of hyperglycaemia
- treatment of severe hypertension before i.v. thrombolysis

↓
too late?

↓
prevention better?
ESO guidelines

- no recommendation possible for treating hyperthermia as a means to improve functional outcome and/or survival
- routine prevention of hyperthermia not recommended
- new randomised trials warranted

Steiner 2014; Ntaios 2015
conclusions & recommendations

- In patients with fever, the presence of an infection should be assessed and infections should be treated;
- There is no evidence yet that the prevention of dysphagia, infections, or fever or treatment of hyperglycaemia or hypertension improve functional outcome;
- The RCT PRECIOUS assesses whether the prevention of complications improves outcome;
- Early antihypertensive treatment is tested in RCTs
literature

- de Jonge JC, Wallet J and van der Worp HB. Fever worsens outcomes in animal models of acute ischaemic stroke: a systematic review and meta-analysis. European Stroke Journal 2019;