Delayed cerebral ischemia prediction

The strongest predictors were the clinical condition on admission, amount of blood on computed tomography (both cisternal and intraventricular), and age. A model that combined these 4 predictors had an area under the receiver operating characteristic curve of 0.63 (95% confidence interval, 0.57-0.69). This model improved little by including current smoking and hyperglycemia on admission (area under the receiver operating characteristic curve, 0.65; 95% confidence interval, 0.59-0.71). The risk chart predicted risks of delayed cerebral ischemia-related infarction varying from 12% to 61%. Both low risk (<20% risk) and high risk (>40% risk) were predicted in ≈20% of the patients. Validation confirmed that the discriminative ability was adequate (area under the receiver operating characteristic curve, 0.69; 95% confidence interval, 0.61-0.77).

Absolute risks of delayed cerebral ischemia-related infarction can be reliably estimated by a simple risk chart that includes clinical condition on admission, amount of blood on computed tomography (both cisternal and intraventricular), and age [1].

Vasograde

see VASOGRADE

Temperature elevation

Temperature elevation of ≥2.5°C on day 4 or 5 compared with baseline suggests a greater risk of clinical deterioration owing to DCI [2].

Machine learning approaches, of which feedforward artificial neural networks (ffANNs) is the most widely used, could contribute to patient-specific outcome prediction.

Nutshell-Tool

ffANN showed equal performance when compared with VASOGRADE and SAHIT scoring systems while using fewer individual cases. The web interface launched simultaneously with the publication of this manuscript allows for the usage of the ffANN-based prediction tool for individual data (https://nutshell-tool.com/). [3].

1)
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2)
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3)

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