

CLINICAL STROKE UPDATE

STROKE ALERT UP TO 24 HOURS FOR SUSPECTED LARGE VESSEL OCCLUSION

Mechanical Thrombectomy (MT) has become the standard of care for patients presenting within 12 hours with ischemic stroke associated with large vessel occlusion (LVO) (1-7). Recent studies have shown that carefully selected patients can significantly benefit from MT up to 24 hours from when they were last seen normal, with numbers needed to treat between 2-4 for achieving excellent outcomes (8, 9). This benefit is primarily driven by treating patients with "wake-up" strokes with uncertain onset of symptoms, and patients with very good collaterals who can tolerate prolonged periods with LVO before progressing to a completed stroke.

As with any acute stroke therapy, the plain CT scan must show that there is "brain to save," and patients with large completed strokes on CT are not candidates for lytic or endovascular treatment. The concept in evolution is now that the "CT is the clock" in terms of patient selection for MT.

Based on this level 1 evidence, the updated Canadian Stroke Best Practice Recommendations (CSBPR) now suggest that the stroke alert window be extended to 24 hours for those patients suspected of having an LVO (10). This is also supported by the American Heart Association (11).

Recommendations:

- Patients with ischemic stroke due to an LVO can be identified in the pre-hospital setting using the **FAST VAN screen**, a locally developed and prospectively validated screening tool currently used in Saskatchewan and British Columbia.
- Patients found to be FAST VAN positive up to 24 hours from last seen normal should be treated as a stroke alert.
- For patients found to be FAST VAN positive, ground EMS will initiate communication with a transport physician and neurologist to determine the most appropriate destination
- Patients deemed highly likely to have an LVO that can be treated with MT will be redirected to the comprehensive stroke centre.

In summary, the hyper-acute phase of stroke will be extended to 24 hours for patients considered highly likely to have a LVO based on the FAST VAN screening exam. All emergency medicine personnel should be made aware of this change and provided with training to perform the FAST VAN screen. Each primary stroke center should update its stroke alert protocols as required to reflect the extended window. Thank you for your commitment to providing safe, timely and quality care.

The Saskatchewan Stroke Expert Panel strives to optimize stroke care for all patients in Saskatchewan, using evidence based guidelines. The SSEP is co-chaired by Dr. Michael Kelly (clinical) and Ms. Lori Garchinski (SHA).

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