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Pharmacist's Letter
Hospital

Review Data Behind Expanded Thrombolytic Timing for Strokes

Recent evidence is stirring discussion on **whether to reconsider time limits for using thrombolytics (alteplase, etc) after an ischemic stroke**.

We know thrombolytics are typically given within 4.5 hours after stroke symptoms start. But there's interest in using these past this mark for some cases.

For example, this deadline can limit options in cases where stroke onset is unclear, such as patients who awake with symptoms, etc.

Thrombectomy can be an alternative past this window to remove clots...but geographic areas may lack quick access to this procedure. Lengthy transport can take up time and possibly lead to poor outcomes.

Put evolving evidence in perspective to help balance the benefits and risks of using thrombolytics later in certain ischemic stroke cases.

Explain that the recent randomized HOPE trial gave alteplase 4.5 to 24 hours after stroke onset versus standard care (antiplatelets, etc)...in patients who were ineligible or refused thrombectomy.

Note that patients had to be disability-free beforehand...and have brain tissue that could recover based on imaging. Plus most had moderate strokes with a median NIH Stroke Scale (NIHSS) score of 10.

Share the HOPE trial's favorable number needed to treat...giving 8 patients alteplase led to 1 more disability-free outcome at 90 days.

Weigh this benefit against the number needed to harm. Giving 30 patients alteplase led to 1 extra symptomatic intracranial hemorrhage in the first 36 hours.

But the mortality rate was the same at about 11% whether alteplase was given or not after 4.5 hours.

Apply these data when reviewing your hospital's stroke protocols.

Reserve using alteplase between 4.5 and 24 hours after ischemic stroke for select adults where deficits may be disabling AND thrombectomy isn't available...the patient declined the procedure...or they are ineligible due to smaller-vessel occlusions, etc.

If your hospital has tenecteplase, feel comfortable applying this approach...evidence supports similar benefits. But consider the stroke's location...tenecteplase's studies largely involved large-vessel clots.

Continue to confirm patients' NIHSS scores to help guide thrombolytic use. These meds are typically avoided for mild non-disabling strokes (scores below 6), and benefits for scores above 25 are uncertain.

Before administering thrombolytics, use our handy *Ischemic Stroke Checklist* to help identify other exclusions and weigh risks.

Key References:

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Cite this document as follows: Article, Review Data Behind Expanded Thrombolytic Timing for Strokes, Hospital Pharmacist's Letter, October 2025

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Hospital Pharmacist's Letter. October 2025, No. 411025