



# **Thrombolysis and Beyond: New Therapeutic Horizons for Acute Ischemic Stroke Patients**

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## **Learning Objectives**

- Discuss the current literature regarding the optimal use of IV thrombolysis in the ED treatment of acute ischemic stroke patients.
- Determine the role of IA thrombolysis in the treatment of ED acute ischemic stroke patients.
- Explore the role of the neuroprotection strategies in optimal ED stroke patient management.

## **Background**

It has been a decade since the published NINDS trials provided support for the use of thrombolytic therapy for acute ischemic stroke patients. Since that time, there have been multiple phase IV studies that have documented the effective clinical use of this therapy as well as a reanalysis of this data by an independent panel. There have also been publications that describe the use of intra-arterial tPA for patients in whom IV tPA is not clinically indicated. These IA thrombolysis clinical trials have generally been small, and this therapy today is still most often provided only in tertiary centers that can provide advanced interventional radiological techniques.

Although the use of neuroprotectants has failed to demonstrate clinical benefit in most clinical trials, one recent clinical trial has suggested a potential benefit in acute ischemic stroke patients. It remains unclear, however, what might be the optimal use of neuroprotectants by emergency physicians as they treat ED ischemic stroke patients.

Dr. Bunney will discuss the latest literature and controversies in the use of IV and intra-arterial thrombolysis in acute ischemic stroke patients, including the relevant time windows and the potential risk/benefit associated with different approaches to thrombolysis. In addition, he will discuss the latest developments in the search for an effective neuroprotection strategy in the treatment of ischemic stroke patients in the ED.

## **Key Clinical Questions**

Which ischemic stroke patients should receive intra-venous thrombolysis in order to improve outcome?

In which patients should intra-arterial thrombolysis can be used, and during what time period?

What are the attributes of the current neuroprotection strategies in the management of acute ischemic stroke patients?