

REAL WORLD EXPERIENCE OF THROMBOLYSIS IN PATIENTS WITH MINOR STROKE:

DATA FROM THE UK NATIONAL STROKE REGISTRY (SSNAP)

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BACKGROUND & AIMS

There is debate whether thrombolysis should be considered in patients with minor stroke. This study explores the process of care, safety, and outcome data for patients with minor stroke receiving thrombolysis in the UK.

METHODS

Data were collected from the National Stroke Registry for England, Wales, and Northern Ireland (The Sentinel Stroke National Audit Programme: SSNAP) through a continuous clinical audit. Results were analysed for patients admitted to hospital with minor stroke (NIHSS 0-4) and non-minor stroke (NIHSS >4) receiving thrombolysis between January 2019 and December 2025. Chi-squared analysis was performed to compare the minor stroke and non-minor stroke groups.

RESULTS

	NIHSS 0-4		NIHSS >4	
	N	%	N	%
Total=82,672	15,792	19.1%	66,880	80.9%
Exended Hours	1,112	7.0%	4,621	6.9%
Prestroke mRS 0-2	14,931	94.6%	56,476	84.4%
Prestroke mRS 3-5	861	5.5%	10,404	15.6%
AF	937	5.9%	7,526	11.3%
Congestive Heart Failure	541	3.4%	3,608	5.4%
Diabetes	2,849	18.0%	13,874	20.7%
Hypertension	7,925	50.2%	35,921	53.7%
Stroke/TIA	2,723	17.2%	12,756	19.1%
Discharge mRS 0-2	11,872	75.2%	27,904	41.7%
Discharge mRS 3-5	3,480	22.0%	29,813	44.6%
Death at discharge	440	2.8%	9,163	13.7%
Cerebral Haemorrhage on imaging (post thrombolysis)	845	5.4%	7,310	10.9%
Cerebral Haemorrhage AND worsening NIHSS (post thrombolysis)	295	1.9%	2,305	3.5%

All chi-squared p values <.05

Table 1: Safety and outcomes for patients with minor stroke (NIHSS 0-4) and non-minor stroke (NIHSS>4) who underwent thrombolysis between 2019 and 2025.

	NIHSS 0-4			NIHSS >4			P-value
	Median	Q1	Q3	Median	Q1	Q3	
DoorToNeedle (mins)	58	41	86	53	38	76	<.05
OnsetToArrival (mins)	107	75	153	100	72	144	<.05
NIHSS improvement 24Hrs post thrombolysis	1	0	3	5	2	12	<.05

Table 2: Median door-to-needle time and onset-to-arrival time was longer in patients with minor stroke (NIHSS 0-4) compared to non-minor stroke (NIHSS >4). NIHSS improvement 24 hours after thrombolysis vs arrival was also lower in patients with minor stroke compared to non-minor stroke.

Of 82,672 patients who received thrombolysis, 15,792 (19.1%) had an NIHSS 0-4, while 66,880 (80.9%) had an NIHSS>4 (Table 1).

- Door to needle times were longer in patients with minor stroke (58 minutes, IQR: 41-86 vs 53 minutes, IQR: 38-76, P<0.05) (Table 2).
- Time from onset to arrival in hospital was also longer in patients with minor stroke (107 minutes, IQR: 75-153 vs 100 minutes, IQR: 72-144, P<0.05) (Table 2).
- Fewer patients with minor stroke experienced symptomatic intracranial haemorrhage (1.9% vs 3.5%, P< 0.05) (Table 1).
- Median improvement of NIHSS after 24 hours of thrombolysis was greater in patients with non-minor stroke (5, IQR: 2-12 vs 1, IQR: 0-3, P<0.05) (Table 2).
- A higher proportion of patients with minor stroke were independent at discharge (modified Rankin Score 0-2; 75.2% vs 41.7%, P<0.05) (Table 1).
- Lower inpatient mortality was seen in patients with minor stroke compared to non-minor stroke (2.8% vs 13.7%, P< 0.05) (Table 1).

CONCLUSION

Although there were delays in processes of care for patients with minor stroke receiving thrombolysis, real world safety data for this group of patients is reassuring in light of recent published trial evidence.

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