

5 Things Solicitors Should Know About *Stroke Negligence Claims*

What can turn an apparently straightforward stroke claim into a viable case, and where can the real causation issues be missed?

Drawing on 14 years as a Consultant in Stroke Medicine, 11 years' medico legal experience and several hundred expert reports, Dr Kayvan Khadjooi shares the issues he believes warrant closer scrutiny when assessing stroke negligence claims.

Based on his recent INNEG webinar, this guide explores five practical issues for solicitors, including why a normal CT may not exclude an acute ischaemic stroke, how an apparently minor neurological deficit can have significant functional consequences, when a missed TIA may raise questions around preventability, and the less obvious failures that can arise around hypertension and atrial fibrillation.

You'll gain practical insight into what to look for in the records, where breach and causation arguments may arise, and what a practising stroke expert considers when determining whether a different course of treatment could realistically have changed the outcome.

*This eBook has been produced by INNEG and is based on key clinical insights shared during our webinar, **Stroke Negligence Claims**, presented by Dr Kayvan Khadjooi, Consultant in Stroke Medicine*

1 - A normal CT does not rule out an acute ischaemic stroke

Stroke is primarily a clinical diagnosis, meaning that the patient's history, symptoms and neurological examination remain central to deciding whether a stroke is likely. Imaging is important, but Dr Khadjooi explains that it is used to support the diagnosis, identify the location of the stroke and, crucially in the acute setting, exclude findings such as intracranial bleeding that may affect treatment decisions.

An early CT scan can be completely normal in a patient who is nevertheless experiencing an acute ischaemic stroke. In fact, Dr Khadjooi explains that clinicians may initially hope to see a normal CT because this can indicate that significant irreversible damage has not yet become established. The absence of visible infarction

on the first scan therefore does not, by itself, exclude stroke.

This is particularly important where the history contains characteristic features such as a sudden onset of focal neurological symptoms.



These may include unilateral weakness, facial weakness, speech disturbance, visual symptoms, loss of coordination or other neurological deficits. In those circumstances, the clinical presentation may remain strongly suggestive of stroke even where the initial CT does not show an obvious abnormality.

Dr Khadjooi also makes the point that MRI can identify some smaller or earlier infarcts that are not visible on CT, but urgent MRI is not routinely available in the acute setting. A missed-stroke claim should therefore not be approached on the assumption that a normal CT, or the absence of an immediate MRI, necessarily resolves the diagnostic question. The more important issue is whether the symptoms, examination findings and overall presentation should reasonably have prompted clinicians to continue treating stroke as a possible diagnosis.

What this means for you:

When reviewing a potential missed-stroke claim, “the CT was normal” should not automatically end the enquiry. The more useful questions may be what symptoms were reported, whether they were sudden and focal, what neurological findings were documented, what alternative diagnosis was reached, and whether the clinical picture remained consistent with stroke despite apparently normal early imaging.



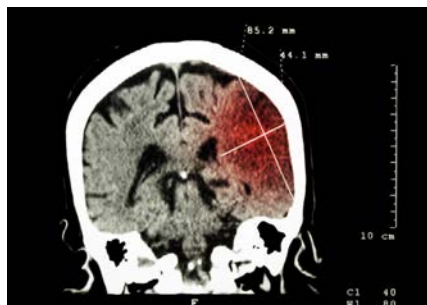
2 - A low stroke severity score can still represent a disabling injury

The NIHSS (National Institutes of Health Stroke Scale) is commonly used to describe the severity of neurological impairment following a stroke. It scores a range of functions including consciousness, eye movements, facial weakness, limb weakness, coordination, sensation, speech and language. In general, the higher the score, the more severe the neurological deficit.

However, Dr Khadjooi stresses that the numerical score does not always reflect the true functional impact of the injury. Some strokes can produce relatively subtle neurological deficits and still have a profound effect on a patient's ability to work, communicate or live independently. A low NIHSS score should therefore not automatically be interpreted as

evidence of a minor or insignificant stroke.

He gives two useful examples. A patient with isolated expressive dysphasia may score only one point, but if that person is a university lecturer, even a relatively mild language deficit could significantly affect their ability to continue working. Similarly, isolated weakness in one hand may also produce a very low score, but for a guitarist whose dominant hand is affected, the consequences may be substantial.



This becomes especially relevant when considering whether a neurological deficit was genuinely “non-disabling”, whether treatment such as thrombolysis should have been considered, and how the eventual injury should be assessed in terms of prognosis and loss. The clinical score gives a useful snapshot of neurological impairment, but it does not capture the individual importance of a particular function to that patient.

What this means for you:

When reviewing a stroke claim, the NIHSS should be considered alongside the claimant’s actual functional loss. Occupation, dominant-hand use, communication demands, independence and day-to-day activities may all be relevant. A low score on paper can still translate into a significant injury, particularly where the affected function is central to the claimant’s work or normal life.



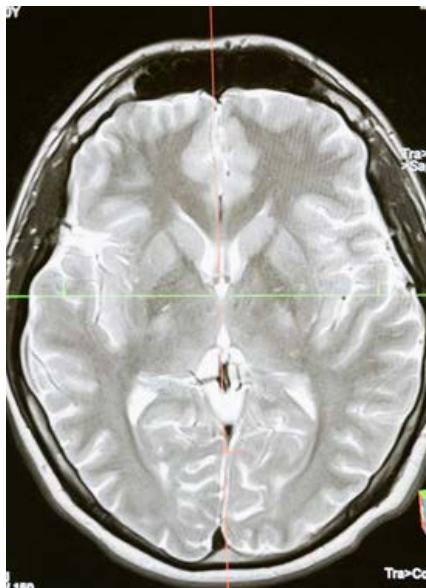
3 - In delayed-treatment claims, timing is often the central causation issue

In acute ischaemic stroke, time to treatment is critical because brain tissue can move from being potentially salvageable to irreversibly damaged as the period of reduced blood flow continues. Dr Khadjooi explains this using the concept of the ischaemic penumbra: tissue surrounding the core infarct may still be viable for a period of time, but the longer blood flow remains interrupted, the greater the risk that this tissue will also be lost.

That makes the timing of diagnosis, imaging and treatment central in delayed-treatment claims. For intravenous thrombolysis, the usual treatment window is within 4.5 hours of symptom onset, subject to the patient being clinically suitable and having no relevant

contraindications.

Thrombectomy is available only to a smaller group of patients, typically those with a disabling neurological deficit and a large vessel occlusion, and is generally considered within six hours of onset in the anterior circulation.



However, the existence of a treatment window does not mean that every patient who arrives within it would automatically have been eligible for treatment. Dr Khadjooi emphasises that clinicians must also consider factors such as the nature and severity of the neurological deficit, the exact time of onset, blood pressure, anticoagulant use, contraindications and the findings on brain imaging.

From a medico-legal perspective, Dr Khadjooi places particular emphasis on the first three hours after symptom onset when considering thrombolysis. He explains that the effectiveness of treatment decreases as time passes, and that the key question in a negligence claim is whether thrombolysis was indicated, whether it could realistically have been administered earlier and whether that earlier treatment would have made a material

difference to the patient's outcome.

The same principle applies when considering a missed opportunity for thrombectomy. Establishing causation requires more than showing that there was delay.



The expert may need to consider the timing of symptom onset, when the patient first presented, what the early imaging showed, whether a treatable large vessel occlusion was present and whether treatment could realistically have taken place before irreversible infarction became established.

What this means for you:

The key question is not simply “Was treatment missed?” It is “Could this patient realistically have received effective treatment earlier, and would that earlier treatment probably have produced a better outcome?” Building an accurate chronology of symptom onset, presentation, imaging, escalation and potential treatment is therefore often central to assessing causation in a delayed-stroke claim.



4 - Posterior circulation strokes are particularly vulnerable to misdiagnosis

Posterior circulation strokes can be particularly difficult to recognise because they do not always present with the more familiar features associated with anterior circulation stroke, such as obvious unilateral weakness or speech disturbance. Dr Khadjooi explains that symptoms can instead be relatively non-specific, including dizziness, vertigo, nausea, vomiting, visual disturbance and poor balance, which can overlap with a range of other diagnoses.

The webinar illustrates this through a case involving a 46-year-old man with paroxysmal atrial fibrillation who presented with headache, vomiting, unsteadiness and a transient episode of double vision. Although some of his symptoms initially appeared non-specific,

he remained unable to walk and required a wheelchair. He also had vascular risk factors and later developed intermittent drowsiness and further neurological deterioration.

Several hours later, his level of consciousness dropped significantly. Urgent imaging then showed a basilar artery thrombus and extensive infarction of the pons. Dr Khadjooi identifies the central



issue as a missed opportunity to recognise a posterior circulation stroke earlier and consider hyper-acute treatment before extensive irreversible injury had developed.

What makes these cases difficult is that an isolated symptom such as dizziness or nausea may have several possible explanations. The medico-legal question is therefore less about whether one symptom should automatically have triggered a stroke diagnosis, and more about whether the overall clinical picture should have kept stroke within the differential diagnosis.

In this case, the combination of continuing inability to walk, visual symptoms, vascular risk factors, elevated blood pressure and subsequent changes in consciousness provided a progressively more concerning neurological picture. Dr Khadjooi's analysis was that earlier recognition could have

created an opportunity for treatment with thrombolysis, with possible thrombectomy, and that the patient would probably have achieved a better outcome had treatment been given.

What this means for you:

When reviewing a possible missed posterior circulation stroke, it is important to look beyond apparently non-specific symptoms in isolation. Persistent inability to walk, visual disturbance, neurological deterioration, altered consciousness and relevant vascular risk factors may become particularly significant when considered together. The chronology of those symptoms can be crucial when assessing whether stroke should reasonably have remained within the differential diagnosis and whether an earlier opportunity for treatment was lost.

5 - Some stroke claims begin days or even months before the stroke itself

Not every stroke negligence claim centres on what happened during the acute hospital admission. In some cases, the more important question is whether there were earlier opportunities to identify and manage a stroke risk before the disabling event occurred.

Dr Khadjooi gives several examples where the alleged negligence arose before the eventual stroke. One involved a patient whose transient neurological symptoms were diagnosed as migraine despite features that were consistent with a possible TIA. The patient was discharged without aspirin and suffered a stroke five days later. Dr Khadjooi explains that, where a patient presents with suspected TIA, early aspirin and urgent specialist assessment can

be important because the risk of recurrent stroke is highest in the early period after the initial event.

The webinar also explores claims involving hypertension. Dr Khadjooi describes situations where raised blood pressure was identified but not followed up, or where known hypertension was not adequately monitored after a change in treatment. In these cases, the key questions include whether hypertension was relevant to the mechanism of the eventual stroke, whether there were reasonable opportunities to diagnose or control it earlier, and whether better management would probably have prevented the event.

Atrial fibrillation is another recurring theme. Dr Khadjooi explains that patients with AF should be assessed for their stroke risk and, where indicated, offered anticoagulation. He gives an example of a patient with newly diagnosed AF whose risk factors meant anticoagulation should have been considered, but who later suffered a disabling stroke after treatment was not commenced.

Importantly, stroke risk is not static. A patient who was previously considered low risk may later develop additional factors such as hypertension or diabetes, meaning their risk should be reassessed. Dr Khadjooi describes a case where a patient's risk profile changed over several years, but the assessment was not repeated. The patient subsequently suffered multiple embolic strokes.

These examples show why the relevant chronology in a stroke claim may need to extend well beyond the final hospital attendance. GP records, previous emergency presentations, medication history, blood pressure readings, AF reviews and earlier neurological symptoms may all become important when identifying whether an opportunity for prevention was missed.

What this means for you:

The relevant breach may not sit in the acute stroke admission at all. It may lie days, weeks or even months earlier, in a missed TIA, failure to prescribe preventative treatment, inadequate monitoring of hypertension, or failure to reassess stroke risk in a patient with atrial fibrillation. Reviewing the wider medical history can therefore be just as important as analysing the final stroke presentation.

About the Author

Dr Kayvan Khadjooi has worked as a medico-legal expert witness since 2015, providing opinions on breach of duty, causation, condition and prognosis in clinical negligence claims involving stroke. His medico-legal work covers the full spectrum of stroke medicine, including thrombolysis, thrombectomy, TIA, stroke prevention, rehabilitation, atrial fibrillation and stroke in younger patients.

Alongside his expert witness work, Dr Khadjooi is a Consultant in Stroke Medicine at Addenbrooke's Hospital, Cambridge, where he has held a substantive consultant post since 2012. His clinical practice includes acute stroke diagnosis and treatment, rehabilitation, secondary prevention, TIA and stroke mimics.



Dr Kayvan Khadjooi, Consultant in Stroke Medicine

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In stroke negligence claims, the central issue is often not simply whether diagnosis or treatment was delayed, but whether earlier recognition, treatment or prevention would probably have changed the patient's outcome.

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