**Pre-hospital detection of post-stroke visual impairment**

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**Introduction**

Visual impairment following stroke is common. There is currently no standardised screening for visual impairment by paramedic services. A particular issue is posterior stroke circulation stroke in which visual impairment frequently occurs. Missed diagnosis could affect the care given, including missing out on time sensitive treatments such as thrombolysis. We aimed to identify the types of visual impairment currently missed during paramedic assessment of posterior circulation stroke.

**Method**

Retrospective cross sectional case notes comparison study. An existing database of acute stroke survivors receiving visual assessment was searched for all posterior circulation strokes identified to have a visual impairment. The corresponding case notes were examined for attendance by ambulance, presence of visual impairment documented by paramedics and presence of visual impairment documented on admission using the NIHSS.

**Results**

167 stroke survivors were identified as having posterior circulation stroke and verified visual impairment. Comparison was possible for 84 of these stroke survivors. Visual impairment was reported by paramedics in 22 (26.2%) cases. When visual impairment was not reported by paramedics an additional 31 (36.9%) cases of stroke related visual impairment was detected on admission in A&E. An NIHSS was not available for 20 cases. Eleven (13.1%) cases were not diagnosed until later in their hospital stay.

**Discussion**

Stroke-related visual impairment is frequently missed by paramedics and within A&E. In order to improve identification of posterior circulation stroke and provide best possible care, it is important that visual impairment is identified as soon as possible in the care pathway by paramedic services.