There is good evidence that pupil reactivity is useful for prognostication in acute head injuries. Despite this, most pupil assessments are subjective and are performed by physicians who may not be experts. They can therefore be unreliable. We present a case of a patient with seemingly irreversible demise from an acute traumatic subdural haematoma. This was determined by assessment of his pupils, which were non-reactive to light at the time of arrival to the neurosurgical theatre. He was transferred to the neurointensive care for brainstem death testing, where assessment by objective pupillometry determined that his pupils were in fact reactive. He made a good recovery following subsequent surgery to evacuate his subdural haematoma. We propose the widespread adoption of objective pupillometers in the assessment of acute head-injured patients and offer our case as an example of how an objective and accurate assessment can make a difference to patients' outcome ¹⁾.

Automated, handheld pupillometers have been commercially available for 20 years, and several studies suggest that their use may facilitate early recognition of worsening injury and intracranial hypertension. The use of pupillometry as a bedside tool in the routine care of patients with severe TBI (Glasgow Coma Scale score \leq 8) has not been described.

Anderson et al. performed a quality improvement project to implement routine use of quantitative pupillometry in the neurotrauma intensive care unit. Nursing staff were trained on device use and the project's aims in a 30-minute in-service session. Nurses caring for severe TBI patients completed standard pupil assessments using (a) a flashlight and (b) a pupillometer to quantify pupil size and reactivity (Neurological Pupil index) every hour. Abnormal results were reported to on-call providers. We administered surveys to evaluate knowledge, practical use of the pupillometer data, and satisfaction with the device every 3 months. Data were available for 22 nurses at 4 separate time points. Staff were positive about their ability to use and understand the device ($\mu = 8.7$ and 9.1, respectively, on a 10-point scale) and reported that it added value to patient care and critical decision-making. Use of automated pupillometry is acceptable to nursing staff in a neurotrauma intensive care unit, and staff believed that pupillometry results enhanced clinical decision-making².

1)

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