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Transcranial doppler scan implementation in sickle cell patients at a paediatric hospital in South East London

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Sickle cell disease (SCD) is a chronic condition associated with a plethora of complications, with stroke being one of the most prevalent. By the age of 20, 11% of patients with homozygous SCD will have suffered a stroke secondary to their condition. Transcranial doppler scans (TCD) can be used to assess the risk of this complication by measuring cerebral artery blood flow velocity. The objective of this audit was to assess uptake of TCD scans in a sickle cell patient cohort, and to investigate adherence to repeat TCD scans at the Evelina Children's Hospital. A total of 166 patients fulfilled the inclusion criteria, and TCD outcomes yielded 93% with normal results, 6% with conditional results, and 1% with an abnormal result. Patient adherence across all patients under investigation was less than 60%; an underwhelming figure compared to the 90% recommendation set by national guidelines. Reasons proposed for this disparity may include outside commitments of older patients, the inconvenience of taking time out of work for parents/guardians, and potentially a lack of understanding regarding the significance of TCD scan results. All can invariably have a negative impact on scan adherence. The proposed intervention includes a mobile phone texting service one week before scans; alerting patients of the upcoming appointment. It may also be beneficial to implement leaflet distribution to parents/guardians, to outline the importance of scans and the value of ongoing management and prophylaxis. Such interventions aim to ameliorate TCD scan adherence, and thus improve ongoing management of SCD. Management of patients with chronic conditions is a constant challenge, but must be overcome to ensure long term patient safety through monitoring of baselines, predicting complications, and preventing them from occurring.

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