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USE OF INITIATION CHECKLIST TO IMPROVE COMPLIANCE WITH BPAP & CPAP

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Introduction: Studies have shown that processes used during initiation of non-invasive respiratory (NIV) therapies (including CPAP and BPAP) for children, can influence subsequent compliance with therapy.
Methods: We implemented a structured checklist as a way of standardising a number of the steps during initiation of NIV in our paediatric sleep medicine service. This study retrospectively reviewed the medical records of children initiated on NIV between Nov 2018 and Dec 2020. We hypothesised that our use of a structured approach to the initiation process, with electronic documentation, would indicate areas in the initiation process that are associated with improved compliance with the therapy, in the long term.
Results: Initial results revealed that 220 children were commenced on therapy during the 2-year study period (51 BPAP & 169 CPAP). Total numbers with forms present 136 (62%) and complete forms 56 (41%). Forty-six (90%) children commenced on BPAP had forms present and 34 (74%) were completed. Ninety (53%) children commenced on CPAP had forms present and 22 (25%) were completed. Further analyses will evaluate whether sections of the initiation process and checklist (day (of week) of discharge, in-patient vs HITH, attendance at 1st follow-up appointment, financial assistance, severity of disease, eligibility for government-funded equipment) influence compliance when monitored by download at the first, subsequent sleep study.
Discussion: Use of standardised processes during initiation of NIV therapies can aid in evaluation of the factors that positively influence subsequent compliance with therapy.

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MEASURES OF OVERNIGHT SLEEP STABILITY IN PATIENTS WITH HYPERSOMNOLENCE

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Introduction: Hypersomnolence causes significant impairment of daytime functioning. The multiple sleep latency test (MSLT) measures objective hypersomnolence (OH). Patients with hypersomnolence with a normal MSLT are said to have subjective hypersomnolence (SH). The mechanisms of hypersomnolence in such patients is uncertain. This study describes differences in measures of sleep stability derived from the overnight polysomnography (PSG) in patients with OH and SH.
Methods: A retrospective analysis of 100 patients undergoing PSG/MSLT for investigation of hypersomnolence was performed. Patients were classified as OH (MSLT≤8 min) or SH (MSLT>8min). Sleep stage distribution and PSG-derived markers of sleep stability including cardiopulmonary coupling (CPC), cyclic alternating pattern (CAP) and sleep stage shifts were compared between the two groups.
Results: When compared to OH patients (N=50), SH patients (N=50) had significantly more sleep stage shifts, more shifts to stage N1 and longer PSG sleep latency. Small but significantly lower sleep efficiency, higher stage N1 and N3 proportions were also observed in SH patients. OH patients had a small but significantly higher CAP rate and CAP index compared to SH patients. There were no significant differences in CPC metrics between the two groups.
Conclusion: Several PSG-derived markers of sleep stability indicated that patients with SH experienced more unstable sleep than OH patients. This may provide insight into the underlying pathophysiological mechanisms which differentiate these patient groups and may serve as a future therapeutic target.