

ANS/BSCN Guidelines for use of Melatonin to induce sleep for paediatric EEG

Sleep EEGs can add diagnostically useful information for the identification and classification of seizures and epileptic syndromes. Natural sleep may be achieved unaided, but sleep promotion is often required: sleep deprivation and administration of Melatonin are methods commonly used, sometimes in combination.

In the 2013 National Audit Project, departments across the UK were surveyed about their current practice in performing paediatric sleep EEGs. A prospective service evaluation was performed to assess the efficacy of Sleep deprivation and Melatonin in inducing sleep and eliciting EEG abnormalities and seizures.

An unselected population of 711 patients from 51 participating Neurophysiology centres were included in the study.

The findings from the prospective study showed that sleep was achieved in 79% of all patients. Melatonin combined with sleep deprivation proved to be more effective in promoting sleep in comparison with either melatonin or sleep deprivation alone.

Sleep effectively improved diagnostic yield with unequivocally epileptiform activity not seen in the routine records of 20% of patients becoming apparent in their sleep records. There was no major difference in yield between the sleep methods used.

The following standards have been developed from the evidence obtained from this prospective study together with findings from the UK survey of current practice and other published literature.

Standard 1: Patients (parent/guardians) receive clear information about the sleep test by post

Guideline: The department liaises with parents/guardians by telephone

Standard 2: There is provision of sleep friendly premises appropriate to the age of the child/parents needs

Guideline: There is sensory soothing lighting or audio equipment to aid the sleep process

Standard 3: A minimum of 90 minutes is available for the appointment

Standard 4: Melatonin is prescribed by the referring Paediatrician or by the Consultant Neurophysiologist at the request of the referring Paediatrician

Standard 5: There is awareness of the BNF guidance when melatonin is to be used to induce sleep

Standard 6: If melatonin is to be given it is available at the time of the appointment and either stored in a locked medicine cupboard in line with local Trust policy or parents/nursing staff may bring it with them

Standard 7: Melatonin is given in the department by either a parent/guardian, a Clinical Physiologist trained to give melatonin, Nurse or other HCP

Standard 8: Melatonin is given at the start of the appointment (Usually around 20–30 minutes before the expected start of the recording)

Guideline: Up to 6mg may be given as first dose up to 5 years. Up to 12mg may be given in older children

Guideline: A second dose may be given after 45 minutes if the first is unsuccessful

Standard 9: Protocols for dealing with seizures are in place