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Polysomnography and bruxism

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ABSTRACT

Introduction: Bruxism is a parafunctional oral activity that includes tightening, grinding and clapping teeth during sleep or wakefulness. Sleep bruxism (BS) is detected by electromyography (EMG) through the recording of masticatory muscle function during sleep. The EMG should be part of a more comprehensive examination, the polysomnography (PSG). **Objectives:** To analyze the polysomnographic aspects of bruxism and its relation to sleep disorders. **Methodology:** An integrative review was carried out in MEDLINE, LILACS, BDNF and SCIELO databases, with publications between 2012 and 2017, in Portuguese and English, using the descriptors: “Bruxism” and “Polissonography”. **Result:** 83 related articles were found, of which 3 served as theoretical basis. **Discussion:** PSG records the main nocturnal physiological events through electrodes and sensors arranged along the skull, which allows the identification of disorders, such as BS. In addition to the EMG there is the use of electrocardiogram, electroencephalogram, electro-oculogram and respiratory activity. PSG characterizes bruxism as abnormal continuous or intercalated peaks of temporo-massetric activity. During sleep, in normal individuals, physiologically, there are up to two mandibular movements per hour, but in the pathological state this happens four to twelve times an hour. Bruxism events occur mainly during light sleep (non-REM) and are usually associated with brief non-periodic body movements and micro-awakenings, which generate sleep fragmentation. It is believed that BS is one of the last events following brain and cardiac activations of micro arousers in response to respiratory obstruction. **Conclusion:** The aetiopathogenesis of BS is multifactorial, covering hereditary factors, disorders of the nervous system, micro-arousals, stress and anxiety. Thus the treatment is based on the signs and symptoms presented by the patients. Measures such as placement of stabilizing plaques, relaxation strategies and some drugs are proposed for therapy.

Keywords: Bruxism; Polysomnography; Sleep

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