Background and purpose of the study:
Sleep bruxism is defined as a stereotyped movement disorder characterized by tooth grinding during sleep and has been placed in the parasomnia section according to the international classification of sleep disorders. Bruxism is characterized by stereotypical rhythmic movement of muscles of mastication leading to grinding and clenching of teeth. It is commonly aggravated by stress, sleep disorders, gastroesophageal reflux disease and medications. Sleep bruxism has been associated with arousal response and has been reported to overlap with gastroesophageal reflux disease in many patients.

Materials and methods:
Bruxism has also been considered to be a parafunction because it affects approximately 10% of the general population, causing abnormal tooth wear, fracture, and hypersensitivity; masticatory muscle discomfort; and pain or temporomandibular disorders (Lavigne GJ, Montplaisir J. Restless legs syndrome and sleep bruxism: prevalence and association among Canadians. Sleep 1994;17:739-43. Lavigne GJ, Manzini C. Bruxism. In: Kryger MH, Roth T, Dement W, eds. Principles and Practice of Sleep Medicine. Philadelphia: WB Saunders; 2000:773-85). In addition, it has been recently reported that rhythmic masticatory muscle activity is secondary to micro-awakenings; rhythmic masticatory muscle activity often occurs in the supine position and is often associated with swallowing during sleep. Among various phenomena occurring during sleep in humans, nocturnal gastroesophageal reflux has been found to be closely associated with sleep arousal such as micro-arousal supine position, and swallowing for esophageal lubrication (e.g., acid clearance). Furthermore, sleep bruxism and gastroesophageal reflux are known to have several common features.

Results:
We have dealt with 8 cases presenting both day heartburn and night heartburn. They were in treatment either with H2 blockers or PPI with poor results, if any. After a long assessment for each patient common causes were found: in 5 cases the patients were used to eat a heavy meal for dinner and then lie on their back; in 2 cases the patients were found with chronic obstructive pulmonary disease; 1 patient was a postmenopausal woman who was receiving hormone replacement therapy; in 6 cases the patients were smokers. All presented either a very stressful life or a previous very stressful situation (1 had lost her mother few months before the heartburn showed up; 3 had lost their job; 1 had divorced). Major lifestyle changes were applied to each patient (diet, no smoking, psychological help, constant gym attendance) and a re-education of the masticatory pattern and muscles was highly recommended to the patients. Only 5 out of 8 decided to accept both the lifestyle changes and the re-education process. The 3 patients that did not accept the re-education had some benefit from the lifestyle changes but some PPI were needed from time to time. Among those who accepted the re-education 4 totally resolved the problem within 24 weeks and 1 was addressed to a specialist for evaluation in suspect of hiatal hernia.

Conclusions:
In patients with bruxism, approximately 90% or more of sleep bruxism episodes are rhythmic masticatory muscle activity episodes and sleep bruxism and nocturnal gastroesophageal reflux disease are common in patients with obstructive sleep apnoea, though gender and ethnic differences in the prevalence and clinical presentation have not been well documented. Rhythmic masticatory muscle activity is also commonly observed in normal healthy subjects, but its frequency in normal subjects is significantly lower than in patients with bruxism. Regardless the drugs used, a reassessment of lifestyle is mandatory in order both to solve the problem and contain the costs for the NHS.

Per corrispondenza: simonetta.vernocchi@email.it