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Relationship between sleep spindles and hypersomnia

Cette étude s'intéresse à la densité des éléments caractéristiques du sommeil de stade 2, à savoir les fuseaux de sommeil (Sleep spindles = SS) et les complexes K (K complexes). La densité de ces marqueurs lors du sommeil de stade 2 a été calculée dans un groupe de témoin, un groupe de patients narcoleptiques et un groupe de patients atteints d'hypersomnie idiopathique. Les résultats montrent que la densité en fuseaux de sommeil est plus importante dans les 2 groupes de patients (dans les 2 hémisphères cérébraux à la fois) et encore plus fortement pour les patients hypersomniaques. Ces résultats sont donc en accord avec la plainte des patients et la notion que les fuseaux de sommeil (générés par des structures thalamiques) ont une fonction de "maintenance/persistance" du sommeil. Bové A, Culebras A, Moore JT, Westlake RE.

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Sleep. 1994 Aug;17(5):449-55. Résumé en anglais Sleep spindles (SS) and K complexes constitute the physiological markers of stage 2 sleep. Because sleep allows a spontaneous thalamic manifestation in the form of SS, one could hypothesize that there is some kind of relationship between SS and the complaint of hypersomnia. To investigate this possible relationship we compared nonhypersomnolent subjects with hypersomnolent patients who carried a diagnosis of narcolepsy or idiopathic hypersomnia. SS were counted in well-defined nocturnal stage 2 sleep segments, and the average SS density (number of SS in stage 2/minute stage 2) was tabulated for the entire night. Agreement between two independent scores was higher than 95%. The results show that the average SS density is higher in both cerebral hemispheres in the hypersomnolent group, especially in the idiopathic hypersomnia patients. At the beginning and at the end of the nocturnal sleep time, SS density is increased in this group compared with the normal one. These findings support the complaint of hypersomnia, mainly in idiopathic hypersomnia patients. This is in agreement with the notion that SS are generated by thalamic structures that serve a gatekeeping function during nonrapid eye movement sleep, and further suggests that their relative abundance expresses the power of that control.