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Epworth 嗜睡量表和微觉醒指数在单纯鼾症患者病情评估的价值

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摘要:目的 探讨 Epworth 嗜睡量表(ESS)和微觉醒指数在单纯鼾症患者病情评估的价值。**方法** 经多导睡眠监测(PSG)确诊的358例单纯鼾症患者,按嗜睡程度分为3组,即嗜睡轻度组(ESS≤12)、中度组(13≤ESS≤17)、重度组(18≤ESS),分别对各组间微觉醒指数(MAI)、睡眠呼吸暂停低通气指数(AHI)、呼吸暂停指数(AI)、低通气指数(HI)、最低血氧饱和度($LSaO_2$)、体质量指数(BMI)进行比较。ESS与MAI进行相关性分析。**结果** 轻度嗜睡组286例,中度嗜睡组43例,重度嗜睡组29例,3组间 AHI、AI、HI、$LSaO_2$、BMI 差异无统计学意义($P>0.05$),轻度组与重度组、中度组与重度组间微觉醒指数差异有统计学意义($U=-8.030$, -5.604, $P<0.05$),轻度组与中度组微觉醒指数差异无统计学意义($U=-1.623$, $P>0.05$),ESS与MAI呈正相关($r=0.331$, $P<0.05$)。**结论** Epworth 嗜睡量表和微觉醒指数对单纯鼾症患者病情评估有重要价值。

关键词: Epworth 嗜睡量表;微觉醒指数;单纯鼾症
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The significance of Epworth sleepiness scale and micro-arousal index in simple snoring. CHEN Xi, ZHANG Rong, WANG Honghong, LI Jinrang, SUN Jianjun. Center of Diagnosis and Treatment for Sleep-Disordered Breathing & Otorhinolaryngology Head and Neck Surgery of PLA, Navy General Hospital, Beijing 100048, China

Abstract: Objective To explore the significance of Epworth sleepiness scale (ESS) and micro-arousal index in simple snoring. **Methods** Polysomnography (PSG) recordings of 358 adults with simple snoring were divided into 3 groups according to ESS: mild group ($n=286$, ESS≤12), moderate group ($n=43$, 13≤ESS≤17) and severe group ($n=29$, 18≤ESS). The apnea hypopnea index (AHI), apnea index (AI), hypopnea index (HI), the lowest oxygen saturation ($LSaO_2$), micro-arousal index (MAI), and body mass index (BMI) were compared. **Results** The differences in AHI, AI, HI, $LSaO_2$ and BMI were not significant among the 3 groups ($P>0.05$). Significant differences were observed in MAI between mild and severe groups, moderate and severe groups ($U=-8.030$, -5.604, $P<0.05$, respectively). ESS was significantly correlated to MAI ($r=0.331$, $P<0.05$). **Conclusion** MAI and ESS are important to evaluate the severity of simple snoring.

Key words: Epworth sleepiness scale; Micro-arousal index; Snoring

目前进行睡眠监测的人群数量逐渐增多,监测报告中许多患者的结果不符合阻塞性睡眠呼吸暂停低通气综合征(obstructive sleep apnea-hypopnea syndrome, OSAHS)的诊断标准[1],但有些患者的主观临床症状却非常明显,如嗜睡、记忆力下降、头痛、乏力等,故除了将睡眠呼吸暂停低通气指数(apnea hypopnea index, AHI)作为指标外,有必要采用更多的临床指标来评估患者的病情程度。我们研究按 Epworth 嗜睡量表(Epworth sleepiness scale, ESS)将单纯鼾症患者分组,分别比较各组间各项睡眠参数,来探讨微觉醒指数和 ESS 对单纯鼾症患者病情的评估价值。

1 资料与方法

1.1 研究对象 2000年1月至2016年5月,在我院睡眠中心共开展睡眠监测8 097人次,其中有临床症状、经多导睡眠监测证实不符合 OSAHS 诊断标准[1]、有 ESS 评分和微觉醒指数的单纯鼾症358例患者,其中男266例,女92例。

1.2 研究方法 将患者按嗜睡程度分为三组,即轻

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度嗜睡组(ESS≤12),中度嗜睡组(13≤ESS≤17),重度嗜睡组(18≤ESS),分别对各组间微觉醒指数(micro-arousal index, MAI)、睡眠呼吸暂停低通气指数(apnea hypopnea index, AHI)、低通气指数(hypopnea index, HI)、呼吸暂停指数(apnea index, AI)、最低血氧饱和度(the lowest oxygen saturation, $LSaO_2$)、体质量指数(body mass index, BMI)进行比较。ESS 与 MAI 进行相关性分析。

1.3 统计学处理 采用 SPSS 16 软件,检测数据以 $\bar{x} \pm s$ 表示。计量资料因个别组患者人数相对较少,故采用非参数 Kruskal-Wallis H 检验及 Mann-Whitney U 检验,Pearson's 相关分析用于相关性评价,$P<0.05$ 为差异有统计学意义。

2 结 果

2.1 一般情况 轻度嗜睡组 286 例患者,平均微觉醒指数(6.60±3.24)次/h,中度嗜睡组 43 例患者,平均微觉醒指数(8.18±5.26)次/h,重度嗜睡组 29 例患者,平均微觉醒指数(17.08±5.19)次/h。中度以上嗜睡者占 20.11%(72/358),重度嗜睡者占 8.10%(29/358)。

2.2 Kruskal-Wallis H 检验结果 三组间只有 MAI 比较有意义($P<0.05$),而 AHI、AI、HI、$LSaO_2$、BMI 差异无统计学意义($P>0.05$),说明上述睡眠参数对单纯鼾症患者嗜睡程度无明显影响,也不能根据体质量指数来预测嗜睡的严重程度。见表 1。

表 1 按嗜睡程度分组,各组间各项参数比较结果

Tab. 1 The comparison of parameters among the groups according to ESS

分组	AHI	AI	HI	$LSaO_2$	MAI	BMI
轻度与中度组	-0.036	-0.036	-0.073	-0.313	-1.623	-1.007
轻度与重度组	-0.573	-0.573	-0.612	-1.011	-8.030*	-1.614
中度与重度组	-0.564	-0.564	-0.625	-0.901	-5.604*	-1.020
χ^2	3.873	1.973	2.583	0.893	65.558	3.661
P	0.144	0.373	0.275	0.640	0.000	0.160

*$P<0.05$。

2.3 Mann-Whitney U 检验结果 轻度嗜睡组与重度嗜睡组、中度嗜睡组与重度嗜睡组间微觉醒指数差异有统计学意义($U=-8.030$, -5.604, $P<0.05$),轻度嗜睡组与中度嗜睡组微觉醒指数差异无统计学意义($U=-1.623$, $P>0.05$)。ESS 与 MAI 呈正相关($r=0.331$, $P<0.05$)。反映频繁的微觉醒可导致嗜睡,且嗜睡程度与微觉醒频率正相关。见表 1。

3 讨 论

目前 AHI 指标是睡眠呼吸暂停低通气综合征诊断的金标准,也是疗效评估的唯一指标,即使许多外科手术可明显改善患者主观临床症状,但因疗效达不到 AHI 下降标准[1-2],仍不能作为一线治疗方法。但临床上发现该指标并不能全面反映患者病情程度,尤其不能反映患者主观临床症状的严重程度及其治疗前后的变化。如本研究对象是 AHI<5 次/h的单纯鼾症患者,本应属病情极其轻微者,但中度以上嗜睡者占 20.11%(72/358),重度嗜睡者占 8.10%(29/358),故需要结合其它指标辅助诊断才比较全面。

微觉醒在 OSAHS 患者的致病作用越来越受到重视。微觉醒对睡眠的影响存在双重作用。一方面微觉醒可以引起吸气运动神经元兴奋,进而加强咽部扩张肌兴奋性,从而开放气道终止呼吸事件[3]。但另一方面,频繁微觉醒可导致睡眠片断过多,深睡眠减少[4],而引发诸多不良反应。2016 年美国胸科学会(ATS)会议上总结了微觉醒对 OSAHS 患者的致病作用。主要是频繁微觉醒可导致患者体内儿茶酚胺激增引发心血管并发症,并可导致咽部扩张肌肌力下降,损伤患者记忆力等。而是否造成损伤及损伤程度与患者微觉醒阈值有关[5]。研究显示正常人 80% 以上是低阈值者,OSAHS 患者属低觉醒阈值者比例从 33% 到 50% 不等,其中重度 OSAHS 患者只有 22% 属低觉醒阈值者[6]。以上研究可以解释本研究中的患者虽然 AHI 都低于 5 次/h,但因各人微觉醒阈值不同,即使气道内压力变化、气流变化未达到低通气或呼吸暂停标准,但仍可刺激上气道压力感受器引发微觉醒,导致有 20.11% 的患者因睡眠时反复出现微觉醒而出现中、重度嗜睡症状。

目前国外有学者针对微觉醒的不良反应开展了药物研究。有多项临床研究显示,应用快速短效非苯二氮卓类镇静安眠药,如右旋佐匹克隆(eszopiclone),可提高患者微觉醒阈值,进而减少微觉醒次数,提高睡眠效率即入睡后觉醒时间(wake time after sleep onset, WASO)和睡眠期间觉醒时间(wake time during sleep, WTDS),同时并不增加 AHI 程度,甚至可减轻 AHI[7-8]。但因多数研究样本很小,

且药物只应用1~2 d,无长期应用的研究,故仍处探索中。

总之,频繁的微觉醒同样对患者身心健康造成很大影响,对于单纯鼾症患者需采用多种指标进行全面评估,才能给出合理的诊断及治疗方案。

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