

· 基础研究 ·

强直性脊柱炎患者生活质量的影响因素分析

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【摘要】目的 探讨影响强直性脊柱炎(AS)患者生活质量的相关因素。方法 选取2017—2019年在本院治疗的AS患者为研究对象。采集患者空腹静脉血,检测人类白细胞抗原B27(HLA-B27)、C反应蛋白(CRP)、红细胞沉降率(ESR)。采用AS疾病活动评分-CRP指标(ASDAS-CRP)评估患者疾病活动情况,改良Stoke AS脊柱评分系统(mSASSS)评估脊柱病变情况,AS生活质量问卷(ASQoL)评估患者生活质量。结果 共纳入患者206例,中位年龄37.4岁,男性患者占75.2%(155/206),HLA-B27阳性患者占59.2%(122/206)。Kendall'相关分析结果显示,与ASQoL评分相关的因素有年龄、体质指数(BMI)、学历、工作状况、病程、婚姻状况和HLA-B27,其中年龄与ASQoL的相关系数最大($r=0.815$),其次为病程($r=0.786$)。多重线性回归分析显示,影响ASQoL评分的因素为年龄、HLA-B27、工作状况、学历和婚姻状况,其中影响最大的因素为年龄($\beta=0.654$),其次为HLA-B27($\beta=0.335$)。结论 年龄、HLA-B27、工作状况、学历和婚姻状况是AS患者ASQoL评分的影响因素。在AS的长期治疗中需要积极干预,以提高患者生活质量。

【关键词】脊柱炎,强直性;生活质量;因素分析,统计学

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Analysis of factors influencing quality of life in patients with ankylosing spondylitis

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【Abstract】Objective To explore the factors influencing quality of life in patients with ankylosing spondylitis (AS). Methods The AS patients who were treated in our hospital in 2017–2019 were selected as the research objects. The fasting venous blood samples were collected to detect human leukocyte antigen B27 (HLA-B27), C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR). The ankylosing spondylitis disease activity score-C-reactive protein index (ASDAS-CRP) was used to assess the patient's disease activity. The modified stoke ankylosing spondylitis spine score (mSASSS) was used for spinal lesions; the Ankylosing Spondylitis Quality of Life (ASQoL) was used to assess the patient's quality of life. Results A total of 206 patients were enrolled in the study, with the median age of 37.4 years old, 75.2% (155/206) being male, and 59.2% (122/206) being HLA-B27 positive. Kendall' correlation analysis showed that ASQoL was correlated with age, body mass index, education, work status, duration of disease, marital status and HLA-B27, among which the correlation coefficient between age and ASQoL was the largest ($r=0.815$), followed by disease course ($r=0.786$). Multiple linear regression analysis showed that age, HLA-B27, work status, education and marital status were the factors influencing ASQoL, among which the most influential factor was age ($\beta=0.654$), followed by HLA-B27 ($\beta=0.335$). Conclusion Age, HLA-B27, work status, education and marital status have a greater impact on ASQoL in AS patients. Active intervention in long-term treatment of AS is needed to improve quality of life in AS patients.

【Key Words】Spondylitis, ankylosing; Quality of life; Factor analysis, statistical

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强直性脊柱炎(AS)是一种常见的炎性关节炎,发生率约为0.5%^[1],其中遗传因素是疾病风险和严

重程度的主要决定因素^[2]。AS轴外表现包括急性葡萄膜炎、外周关节炎、附着点炎(肌腱插入骨骼的炎症)、主动脉根部和肠道炎症^[3],引起一系列关节症状及关节外症状,严重影响患者的生活质量^[4]。近年来,随着临床研究的深入和生物医学模式的转

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变, AS患者的生活质量引起临床广泛关注, 针对生活质量进行有效干预被认为是AS治疗的重要组成部分^[46]。本研究通过临床检查资料和问卷调查相结合的方法, 分析影响AS患者生活质量的危险因素, 为AS的治疗提供依据, 现报告如下。

1 资料与方法

1.1 研究对象

选取2017—2019年本院收治的AS患者为研究对象。纳入标准: 所有患者均经过专业的影像科医师阅片(X线、CT), 符合AS诊断标准; 所有患者均知情同意, 并签署知情同意书。排除标准: ①患有抑郁症或其他严重心理和精神疾病; ②患有严重心脏病、脑部疾病、肺部疾病、肿瘤等影响生命质量的疾病; ③临床资料不完整; ④不能配合研究。

AS诊断参照美国风湿病学会2009年推荐的轴型脊柱关节病(SpA)分类标准^[7]。患者起病年龄<45岁且腰背痛≥3个月, 并符合下述标准中的1项: ①影像学提示骶髂关节炎(MRI提示骶髂关节活动性/急性炎症, 或根据1984年修订的纽约标准^[8]有明确的骶髂关节炎影像学改变), 且具有至少1个SpA特征; ②人类白细胞抗原B27(HLA-B27)阳性, 且具有至少2个SpA特征。SpA特征: ①炎性背痛; ②关节炎; ③起止点炎(跟腱); ④眼葡萄膜炎; ⑤指(趾)炎; ⑥银屑病; ⑦克罗恩病(溃疡性结肠炎); ⑧对非甾体抗炎药反应良好; ⑨SpA家族史; ⑩HLA-B27阳性; ⑪C反应蛋白(CRP)升高。

1.2 资料收集

采集患者来院当天或入院后第2天清晨空腹静脉血, 检测HLA-B27、CRP和红细胞沉降率(ESR)。采用AS疾病活动评分-CRP指标(ASDAS-CRP)评估患者疾病活动情况^[9-10], 改良Stoke AS脊柱评分系统(mSASSS)^[11]评估脊柱病变情况, AS生活质量问卷(ASQoL)^[12](0~18分, 分数越高代表生活质量越差)评估患者生活质量。量表评估和审核由经过培训的研究者完成。

1.3 统计学处理

采用SPSS 25.0软件对数据进行统计学分析。符合正态分布的计量资料以 $\bar{x} \pm s$ 表示, 不符合正态分布的计量资料以中位数(0.25百分位数, 0.75百分位数)表示。相关性分析采用Pearson和Kendall分析法, 多重线性回归分析采用逐步向前法; 以 $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 一般资料

共206例患者纳入本研究。患者中位年龄为37.4(24.93, 42.70)岁; 男性155例(75.2%), 女性51例(24.8%); 体质量指数(BMI)≤18.5 kg/m² 11例(5.3%), 18.5 kg/m²<BMI<24 kg/m² 99例(48.1%), BMI≥24 kg/m² 96例(46.6%); 90例(43.7%)有吸烟史, 116例(56.3%)无吸烟史; 109例(52.9%)为初中及以下学历, 43例(20.9%)为高中学历, 52例(25.2%)为本科学历, 2例(1.0%)为研究生及以上学历; 132例(64.1%)有工作, 74例(35.9%)无业; 中位病程6.40(2.66, 10.83)年; 141例(68.4%)已婚, 65例(31.6%)未婚; HLA-B27阳性122例(59.2%), 阴性84例(40.8%); 中位CRP为23.70(12.85, 31.73) mg/L; 中位ESR为31.00(17.00, 46.00) mm/h; 中位ASDAS-CRP为3.10(2.00, 4.00); 中位mSASSS为2.98(1.30, 4.80); 中位ASQoL为8.15(4.90, 11.00)。

2.2 各变量与ASQoL评分的相关性

Kendall相关分析结果显示, 与ASQoL相关的因素有年龄($r=0.815$, $P<0.05$)、BMI($r=0.672$, $P<0.05$)、学历($r=-0.566$, $P<0.05$)、工作状态($r=-0.239$, $P<0.05$)、病程($r=0.786$, $P<0.05$)、婚姻状况($r=-0.565$, $P<0.05$)和HLA-B27($r=0.699$, $P<0.05$), 其中年龄与ASQoL的相关系数最大, 其次为病程。性别($r=-0.037$, $P>0.05$)、吸烟($r=0.024$, $P>0.05$)、CRP($r=0.041$, $P>0.05$)、ESR($r=0.112$, $P>0.05$)、ASDAS-CRP($r=0.043$, $P>0.05$)、mSASSS($r=0.046$, $P>0.05$)与ASQoL无相关性。

2.3 ASQoL评分影响因素的多重线性回归分析

多重线性回归分析结果显示, 年龄、HLA-B27、工作状态、学历及婚姻状况被纳入到回归模型中, 是影响ASQoL评分的因素, 其中影响最大的因素为年龄, 其次为HLA-B27(表1)。

3 讨论

AS患者除了典型的关节症状, 亦常并发骨质疏松、疲劳、焦虑抑郁、睡眠障碍及生育力可能降低等关节外症状, 极大地影响了患者的身心健康, 降低了常规治疗效果^[3-4]。这些症状与AS本身导致的炎症、疼痛及功能障碍有关, 亦与性别、年龄及社会心理因素密不可分^[6]。关注AS患者的关节外症状, 探寻影响AS患者生活质量的相关因素并采

表1 ASQoL评分影响因素的多重线性回归分析

Tab. 1 Analysis of related factors on ASQoL score using multiple linear regression

变量 Variable	回归系数(B) Regression coefficient(B)	标准误 Standard error	95% 置信区间 95% confidence interval	标准化回归系数(β) Standardized regression coefficient(β)	t	P
常量 Constant	15.225	0.416	(14.512, 16.133)	—	31.552	0.000
年龄 Age	0.254	0.005	(0.221, 0.392)	0.654	31.124	0.000
HLA-B27	2.121	0.164	(1.672, 2.341)	0.335	12.311	0.000
工作状态 Work condition	-0.922	0.126	(-1.164, -0.669)	-0.105	-7.382	0.000
学历 Education	-0.285	0.065	(-0.428, -0.164)	-0.063	-4.365	0.000
婚姻状况 Marital status	-0.338	0.165	(-0.674, -0.013)	-0.036	-2.036	0.042

取针对性干预措施,对于进一步提升AS的整体诊治水平具有重要意义。

ASQoL是基于需求的生活质量模型,内容源自对AS患者的访谈。根据基于需求的模型,生活质量被定义为个人能够满足其基本需求的程度。当满足这些需求时,生活质量很高,而不满足这些需求时,生活质量很差^[13]。该模型已被用于包括风湿性疾病(如类风湿关节炎、骨关节炎、银屑病性关节炎和系统性红斑狼疮)在内的多种免疫系统疾病中,并已经过验证可用于AS患者^[14]。此外,ASQoL已被证明符合Rasch模型,提供了其单维度和构造有效性的证据^[15]。本研究选择ASQoL作为评价生活质量的工具,分析了影响AS患者生活质量的相关因素。Piekutis等^[16]的研究发现,随着年龄的增加,AS患者对疾病的适应性更差、患抑郁症的风险更高。Yildirim等^[17]的研究发现,AS患者存在焦虑和抑郁等负面情绪,影响其生活质量,年龄高、学历低和婚姻不幸福可能进一步加剧AS患者的负面情绪。一般认为,AS与HLA-B27有直接关系,HLA-B27阳性者AS发生率为10%~20%,并且AS的严重程度及生活质量与HLA-B27有相关性^[18]。还有研究发现,AS与代谢综合征密切相关,病程、高尿酸血症和高BMI是AS患者的独立危险因素^[19]。在本研究中,相关分析结果表明,与ASQoL相关的因素有年龄、BMI、学历、工作状态、病程、婚姻状况和HLA-B27($P<0.05$),其中年龄与ASQoL的相关系数最大($r=0.815$),其次为病程($r=0.786$)。多重线性回归分析结果显示,影响ASQoL评分的因素为年龄、HLA-B27、工作状态、学历和婚姻状况,其中影响最大的因素为年龄

($\beta=0.654$),其次为HLA-B27($\beta=0.335$)。

除了常规的药物治外,针对上述影响生活质量的因素,AS患者的治疗还应当注意护理干预、运动干预等辅助治疗,以改善患者生活质量,提高总体治疗效果。研究发现,适当的运动和心理干预能明显改善AS患者的生活质量^[17,20]。还有研究表明,采取积极的护理干预(心理干预、饮食干预、睡眠干预和功能训练等)能有效地提高AS非手术治患者的脊柱活动度、睡眠质量及生活质量^[21]。此外,Pécourneau等^[22]通过荟萃分析发现,运动干预能明显改善AS患者的生活质量,促进机体功能恢复。因此,医务人员应积极与病患家属沟通,指导其给予患者更多的关心,及时采取有针对性的干预措施,提高患者生活质量。

综上所述,本研究评估了影响AS患者生活质量的非关节症状因素,发现年龄、HLA-B27、工作状态、学历和婚姻状况对AS患者生活质量影响较大,在AS的长期治疗中要积极干预以提高患者生活质量。

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