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急性脑梗死患者并发医院肺部感染的影响因素分析

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摘要 目的:探讨急性脑梗死患者并发医院肺部感染的相关影响因素,为临床的预防与治疗提供指导依据。**方法:**回顾性分析我院神经内科 2011 年 1 月~2013 年 8 月收治入院的 526 例急性脑梗死患者的临床资料。**结果:**在全部 526 例急性脑梗死患者中,并发医院肺部感染的有 79 人,占 15.0%。分析显示,高龄、吸烟史、糖尿病、意识障碍、吞咽困难、低蛋白血症等原因是并发肺部感染的危险因素。而从这些感染者的痰液中共分离出病原菌 98 株,包括铜绿假单胞菌、鲍曼不动杆菌、肺炎克雷伯菌、金黄色葡萄球菌、表皮葡萄球菌、大肠埃希菌、白假丝酵母菌等。**结论:**急性脑梗死患者易并发医院肺部感染,其危险因素主要有高龄、吸烟史、糖尿病、意识障碍、吞咽困难、低蛋白血症等。

关键词:急性脑梗死;肺部感染;危险因素

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The Risk Factors of Nosocomial Pulmonary Infection in Patients with Acute Cerebral Infarction

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ABSTRACT Objective: To investigate the factors associated with hospital in patients with acute cerebral infarction associated with infection of lung, provide guidance for prevention and treatment of clinical. **Methods:** A retrospective analysis of the clinical data of 526 cases of acute cerebral infarction patients in our hospital in 2011 January-2013 year in August the Department of neurology was admitted to hospital. **Results:** In all 526 cases of patients with acute cerebral infarction complicated with pulmonary infection in hospital, there are 79 people, accounting for 15%. Analysis showed that age, smoking, diabetes, history, disturbance of consciousness, difficulty swallowing, hypoproteinemia and other reasons were the risk factors of pulmonary infection. From these infected sputum isolated 98 strains of pathogenic bacteria, including Pseudomonas aeruginosa, Acinetobacter, Bauman, Klebsiella pneumoniae, Staphylococcus aureus, Staphylococcus epidermidis, Escherichia coli, Candida albicans etc. **Conclusion:** Acute cerebral infarction patients complicated with pulmonary infection in hospital, the main risk factors are age, smoking history, diabetes, disturbance of consciousness, difficulty swallowing, and hypoproteinemia.

Key words: Acute cerebral infarction; Pulmonary infection; Risk factors

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前言

急性脑梗死是临床常见的疾病,其发病急、病情重,致死率和致残率都较高,且由于患者病程迁延、长期卧床等因素易出现各种并发症^[1]。而其中肺部感染是其最常见的并发症之一,也是急性脑梗死患者死亡的主要原因之一,并且直接影响患者的愈后^[2]。为了探讨急性脑梗死患者并发医院肺部感染的相关影响因素,回顾性分析了本院 526 例急性脑梗死患者的临床资料。现将研究结果报道如下:

1 资料与方法

1.1 一般资料

选取本院神经内科 2011 年 1 月~2013 年 8 月收治入院的 526 例急性脑梗死患者,其中男 312 例,女 214 例,年龄 36~87 岁,平均年龄(61.5±13.7)岁。所有患者均在入院后经过 CT 或者 MRI 扫描确诊,符合全国脑血管学术会议制定的急性脑梗死的诊断标准^[3]。在全部患者中,并发肺部感染的一共有 79 人,分离出病原菌 98 株。当出现以下任意 3 点并排除原有肺部感染,即可诊断为并发医院肺部感染:①咳嗽、咳痰等呼吸道症状;②体温≥38.5℃,伴有外周血白细胞计数≥10×10⁹/L;③双肺听诊干湿啰音;④痰培养分离出致病菌;⑤胸部 X 线呈现炎性改变。

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1.2 方法

回顾性分析我院科 2011 年 1 月~2013 年 8 月收治入院的 526 例急性脑梗死患者的临床资料, 调查内容包括病原菌、年龄、吸烟史、饮酒史、糖尿病、高血压、心脏病、慢阻肺、意识障碍、吞咽困难、低蛋白血症等项目。

1.3 统计学方法

本研究采用的是 spss19.0 软件进行数据的统计与分析, 计量资料采用 t 检验, 定性资料采用卡方检验, 当 $P < 0.05$ 时表示差异具有统计学意义。

2 结果

2.1 肺部感染患者病原菌分布情况

痰培养的结果提示, 共分离出病原菌 98 株(部分患者为混合感染), 其中铜绿假单胞菌 27 株、鲍曼不动杆菌 10 株、肺炎克雷伯菌 23 株、金黄色葡萄球菌 12 株、表皮葡萄球菌 7 株、大肠埃希菌 13 株、白假丝酵母菌 3 株、其它病原菌 3 株。具体结果见表 1。

表 1 MRSA 基因分型分析[n(%)]

Table 1 Analysis of MRSA genotype [n(%)]

pathogenic bacteria	Numble (n)	percentage (%)
Pseudomonas aeruginosa	27	27.6
Klebsiella pneumoniae	23	23.5
Escherichia coli	13	13.3
Staphylococcus aureus	12	12.2
Bauman Acinetobacter	10	10.2
Staphylococcus epidermidis	7	7.1
Candida albicans	3	3.1
Other	3	3.1

2.2 单因素结果分析

年龄、吸烟史、饮酒史、糖尿病、高血压、心脏病、慢阻肺、意识障碍、吞咽困难、低蛋白血症等项目进行统计分析, 其中高龄、吸烟史、糖尿病、意识障碍、吞咽困难、低蛋白血症几个项目差异具有统计学意义($P < 0.05$), 具体结果见表 2。

表 2 患者并发医院肺部感染单因素分析

Table 2 Analysis of patients with nosocomial pulmonary infection of single factor

project	number(n)	infection(n)	incidence(%)	P value
Age				
≥ 60y	328	67	20.4	< 0.05
< 60y	198	12	6.1	
Smoking history				
Yes	217	52	24.0	< 0.05
No	309	37	12.0	
Drinking history				
Yes	314	50	15.9	> 0.05
No	212	29	13.7	
Diabetes				
Yes	97	32	33.0	< 0.05
No	429	47	11.0	
Hypertension				
Yes	367	56	15.3	> 0.05
No	159	23	14.7	
Heart disease				
Yes	199	31	15.6	> 0.05
No	327	48	14.8	
COPD				
Yes	72	12	16.7	> 0.05
No	454	67	14.8	
Disturbance of consciousness				
Yes	33	13	39.4	< 0.05
No	493	66	13.4	
Dysphagia				
Yes	52	15	28.8	< 0.05
No	474	64	13.5	
Hypoproteinemia				
Yes	67	17	25.4	< 0.05
No	459	62	13.5	

2.3 肺部感染影响因素 logistic 回归分析

几个因素进行 logistic 回归分析,得出结果见表 3。

对高龄、吸烟史、糖尿病、意识障碍、吞咽困难、低蛋白血症

表 3 肺部感染影响因素 logistic 回归分析

Table 3 Regression analysis of the factors affecting logistic pulmonary infection

factor	regression coefficient	OR	95%CI	P value
Advanced age	0.625	1.031	0.362~14.232	0.236
Smoking history	0.732	2.083	0.276~18.386	0.582
Diabetes	1.206	1.527	0.236~10.297	0.412
Disturbance of consciousness	0.826	1.286	0.998~2.385	0.523
Dysphagia	0.762	1.923	0.472~1.829	0.495
Hypoproteinemia	1.957	1.024	0.497~1.724	0.489

3 讨论

有研究显示,我国急性脑梗死的发病率和死亡率都较高^[4],发生急性脑梗死后,患者的身体免疫力下降,并常伴有吞咽困难、咳嗽反射障碍、咽喉分泌物难以有效排出等情况发生,这使得一些条件致病菌非常容易发生机会感染^[5]。革兰阴性菌是引起医院肺部感染最为主要的病原菌^[6],并且随着现在抗生素的滥用,使得耐药菌大量出现,这对于并发的肺部感染的治疗是相当大的考验^[7]。

在本研究中,60 岁以上患者并发肺部感染的发生率明显的高于 60 岁以下的患者,这与 Katzan IL 等人的研究相符合^[8]。这可能是由于老年患者器官以及组织会发生较为明显的退行性改变,体制较弱,抵抗力低下,因此容易并发肺部的感染^[9]。长期的吸烟史是也是并发肺部感染的危险因素之一^[10],这是由于吸烟会引起肺通气功能的障碍,使得支气管纤毛缺损以及功能的下降,从而导致肺分泌物增加,易发生细菌的感染^[11],同时香烟中含有大量的尼古丁、亚硝酸胺、一氧化碳、苯并芘等多种有毒物质,长期吸烟者,这些有毒物质在体内长期积累,使得患者的自身免疫力显著下降,从而会导致患者的感染加重^[12]。本研究显示,合并有糖尿病的患者并发肺部感染的发生率远高于无糖尿病的患者,这与赫丹丹等人的研究结果相符合^[13]。考虑原因可能是由于高血糖可直接引发免疫功能下降,如 CD4⁺/CD8⁺下降,与此同时高血糖还可以抑制单核-吞噬细胞系统的功能,使得肺部对于病原菌的清除能力下降;此外糖尿病患者的代谢酶功能及结构的异常以及肺部微血管病变可以导致肺组织的缺氧,使得粒细胞趋化、黏附功能降低,携氧能力减弱,致使微循环障碍,从而增加了患者的感染机会。有研究显示,吞咽障碍是急性脑梗死患者最为常见的并发症之一^[14],其所并发的吸入性肺炎也是患者死亡的重要原因之一,吞咽困难会使得患者出现明显的营养不良,导致口咽部菌群的易位和定植,使得身体抵抗力下降,当喂食时患者的体位不当或者喂食方法不正确很可能造成食物的反流以及误吸的产生,这也会使得胃内及口咽部的细菌在气道内定植并繁殖,从而出现感染症状,并发肺炎^[15,16]。在国内,有研究证实,生活自理能力低下以及认知功能低下的阿尔茨海默症(老年性痴呆)患者并发肺部感染的概率高^[17,18],研究认为,随着老年性痴呆的不断进展,患者意识

障碍不断加深、生活自理能力下降,呼吸道和口咽部内的分泌物难以有效的排出,使得细菌的繁殖相应增多,与此同时,患者也会较容易出现误吸的情况,从而加重了细菌的感染,并发肺部感染的机率大大增加。此外,患者的营养状况也是诱发肺部感染的重要因素,营养低下,白蛋白含量低会导致人体免疫力的下降,易发生感染^[19,20]。

综上所述,当高龄(≥ 60 岁)、长期吸烟史、糖尿病、吞咽障碍、意识障碍、脑卒中次数多、低蛋白血症等因素存在时,急性脑梗死的患者并发医院肺部感染的可能性会明显的增高。在急性脑梗死患者患者的诊断治疗中,需要我们早期预防,积极避免诱发因素,合理使用抗生素,控制感染,一旦出现感染,早期积极治疗,降低患者的死亡率,提高治疗效果。

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