系统最基本的功能是促进觉醒,我们进而推测,Orexin和其他相关觉醒递质在觉醒时可以选择性提高学习记忆相关脑区神经元的兴奋性,最终增加突触传递效率,易化信息编码和传递,为正常觉醒条件下学习记忆等高级认知功能的实现提供背景兴奋水平[15]。

**参考文献:**


[1] Berridge C W, Espana R A, Vittoz N M. Hypocretin/Orexin in arousal and stress[J]. Brain Res, 2010, 1314: 91-102.

[2] Sakurai T M, Mieda M, Tsujino N. The Orexin system: roles in sleep/wake regulation[J]. Ann N Y Acad Sci, 2010, 1200: 149-161.

[3] Akbari E, Naghdi N, Motamedi F. Functional inactivation of Orexin 1 receptors in CA1 region impairs acquisition, consolidation and retrieval in Morris water maze task[J]. Behav Brain Res, 2006, 173(1): 47-52.

[4] Fyhn M, Molden S, Witter M P, *et al*. Spatial representation in the entorhinal cortex[J]. Science, 2004, 305(5688): 1258-1264.

[5] Steffenach H A, Witter M, Moser, M B, *et al*. Spatial memory in the rat requires the dorsolateral band of the entorhinal cortex[J]. Neuron, 2005, 45(2): 301-313.

[6] 寸艳萍,夏建霞,李洋,等. 外侧下丘脑Orexin能神经元区微注射腺苷对大鼠睡眠-觉醒周期的影响[J]. 第三军医大学学报, 2010, 32(8): 767-769.

[7] Zheng Y, Hamilton E, Begum S, *et al*. The effects of acoustic trauma that can cause tinnitus on spatial performance in rats[J]. Neuroscience, 2011, 186: 48-56.

[8] Tsuneki H, Wada T, Sasaoka T. Role of Orexin in the regulation of glucose homeostasis[J]. Acta Physiol (Oxf), 2010, 198(3): 335-348.

[9] Teske J A, Billington C J, Kotz C M. Hypocretin/Orexin and energy expenditure[J]. Acta Physiol (Oxf), 2010, 198(3): 303-312.

[10] Sharf R, Sarhan M, Dileone R J. Role of Orexin/hypocretin in dependence and addiction[J]. Brain Res, 2010, 1314: 130-138.

[11] Smith H R, Pang K C. Orexin-saporin lesions of the medial septum impair spatial memory[J]. Neuroscience, 2005, 132(2): 261-271.

[12] Witter M P, Moser E I. Spatial representation and the architecture of the entorhinal cortex[J]. Trends Neurosci, 2006, 29(12): 671-678.

[13] Li B, Chen F, Ye J, *et al*. The modulation of Orexin A on HCN currents of pyramidal neurons in mouse prelimbic cortex[J]. Cereb Cortex, 2010, 20(7): 1756-1767.

[14] Aou S, Li X L, Li A J, *et al*. Orexin-A (hypocretin-1) impairs Morris water maze performance and CA1-Schaffer collateral long-term potentiation in rats[J]. Neuroscience, 2003, 119(4): 1221-1228.

[15] 胡志安,夏建霞. 觉醒系统的活动对学习记忆的影响[J]. 第三军医大学学报, 2011, 33(11): 1091-1094.


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# 个案与短篇

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## 特殊类型的T1a期肺癌1例

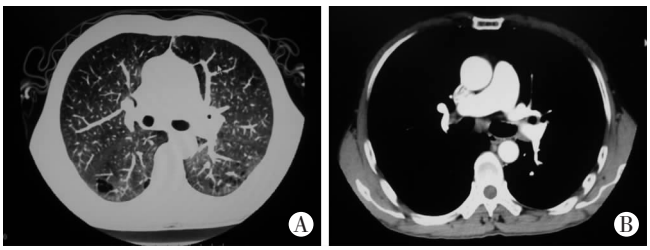
戴富强,邓 波,周景海,王如文 (400042 重庆,第三军医大学大坪医院野战外科研究所全军胸外科中心)

[**关键词**] 支气管内;肺癌;诊断

[**中图法分类号**] R734.2 [**文献标志码**] B

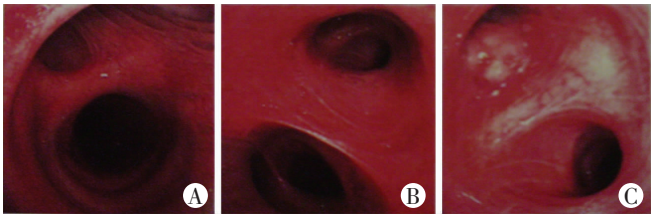
### 1 临床资料

患者,男性,51岁。因"咳嗽、咯血1个月"入院。入院前1个月,患者无明显诱因出现咳嗽,咯白色粘痰,并咯血或痰中带血,晨起明显。无气紧、胸痛等症状。体格检查中,双肺呼吸音清晰,未闻及明显的干湿罗音。既往吸烟史30年,吸烟指数>400支/年。外院以"肺炎"治疗1周,症状无缓解。行胸部CT检查:双侧肺野清晰,双肺纹理增多、紊乱,气管及叶、段支气管未见狭窄、闭塞等,未见肺部及纵隔区块影(图1)。遂继续抗炎、止血等对症处理,患者症状仍未见缓解。行纤支镜检查发现:左肺上叶尖后段支气管开口见菜花样新生物,附着于管壁,大小约1.5 cm,取活检病理提示为鳞状细胞癌(图2)。进一步实验室检查,白细胞$10.73\times10^9$/L,中性粒百分数为75.3%,CRP 2.0 mg/L,但血清TSGF、CA125、CA199、AFP等肿瘤标志物未见升高。完善术前准备后,全麻下行全电视胸腔镜下左肺上叶切除、肺门纵隔淋巴结清扫术。术中见肿块位于左上叶尖后段支气管开口,大小约1.5 cm×1.0 cm×0.5 cm,未穿透支气管壁。术后病理结果为左上肺中分化鳞癌。术后恢复顺利,于第7天拔出胸腔闭式引流管,康复出院。



A:左尖后段开口平面肺窗;B:左尖后段开口平面增强纵隔窗

**图1 左上肺中分化鳞癌患者左肺上叶切除、肺门纵隔淋巴结清扫术前胸部CT表现**



A:右上叶支气管开口;B:左上下叶支气管开口;C:左尖后段支气管开口

**图2 左上肺中分化鳞癌患者左肺上叶切除、肺门纵隔淋巴结清扫术前纤支镜观察**

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there a sensible link ? [J]. Arterioscler Thromb Vasc Biol, 2007, 27(4): 698 - 700.
[4] de-Haas C J, Poppelier M J, van-Kessel K P, *et al*. Serum amyloid P component prevents high-density lipoprotein-mediated neutralization of lipopolysaccharide [J]. Infect Immun, 2000, 68(9): 4954 - 4960.
[5] Elahi M M, Cagampang F R, Anthony F W, *et al*. Statin treatment in hypercholesterolemic pregnant mice reduces cardiovascular risk factors in their offspring[J]. Hypertension, 2008, 51(4): 939 - 944.
[6] Soma M, Tamaoki T, Kawano H, *et al*. Mice lacking serum amyloid P component do not necessarily develop severe autoimmune disease[J]. Biochem Biophys Res Commun, 2001, 286 (1): 200 - 205.
[7] Rudolph T K, Rudolph V, Edreira M M, *et al*. Nitro-fatty acids reduce atherosclerosis in apolipoprotein E-deficient mice[J]. Arterioscler Thromb Vasc Biol, 2010, 30 (5): 938 - 945.
[8] Saely C H, Drexel H, Sourij H, *et al*. Key role of postchallenge hyperglycemia for the presence and extent of coronary atherosclerosis: an angiographic study [J]. Atherosclerosis, 2008, 199(2): 317 - 322.
[9] Devaraj S, Rogers J, Jialal I. Statins and biomarkers of inflammation [J]. Curr Atheroscler Rep, 2007, 9(1): 33 - 41.
[10] Meurs I, Van-Eck M, Van-Berkel T J. High-density lipoprotein: key molecule in cholesterol efflux and the prevention of atherosclerosis [J]. Curr Pharm Des, 2010, 16(13): 1445 - 1467.
[11] Wang Y, Guo Y, Wang X, *et al*. Human serum amyloid P functions as a negative regulator of the innate and adaptive immune responses to DNA vaccines [J]. J Immunol, 2011, 186(5): 2860 - 2870.
[12] Bharadwaj D, Mold C, Markham E, *et al*. Serum amyloid P component binds to Fc gamma receptors and opsonizes particles for phagocytosis [J]. J Immunol, 2001, 166(11): 6735 - 6741.
[13] Tennent G A, Dziadzio M, Triantafillidou E, *et al*. Normal circulating serum amyloid P component concentration in systemic sclerosis [J]. Arthritis Rheum, 2007, 56(6): 2013 - 2017.
[14] Stewart C R, Haw A 3rd, Lopez R, *et al*. Serum amyloid P colocalizes with apolipoproteins in human atheroma: functional implications [J]. J Lipid Res, 2007, 48(10): 2162 - 2171.
[15] Lee-Rueckert M, Kovanen P T. Mast cell proteases: physiological tools to study functional significance of high density lipoproteins in the initiation of reverse cholesterol transport [J]. Atherosclerosis, 2006, 189 (1): 8 - 18.
[16] Judstrom I, Jukkola H, Metso J, *et al*. Mast cell-dependent proteolytic modification of HDL particles during anaphylactic shock in the mouse reduces their ability to induce cholesterol efflux from macrophage foam cells *ex vivo* [J]. Atherosclerosis, 2010, 208(1): 148 - 154.

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## 2 讨论

本例肿瘤位于段支气管,向管腔内生长,未穿透管腔,其肿瘤大小为 1.5 cm,根据国际肺癌分期,T 分期为 T1a(Superficial spreading tumor of any size but confined to the wall of the trachea or mainstem bronchus is classified as T1)[1]。本例属少见的、特殊类型的 T1a 期肺癌,不同于既往的肺叶外周小结节。那么位于支气管腔内的肺癌,即使是包块(大于 3 cm),并且侵及支气管壁,仍然是 T1 期肿瘤(我们称之为 S 肿瘤)。而肺癌分期的意义在于指导临床手术的方式或者帮助临床医生判断患者的 5 年生存率[2],S 肿瘤适合行支气管袖式切除,而不同于常规意义上外周型肺癌的手术方式。但是 S 肿瘤与 T1 期外周型肺癌术后的 5 年生存率一致吗,它们之间有没有统计学的差异,值得我们去进一步研究证实。

支气管起源的肿瘤有良性肿瘤(如支气管乳头状瘤、炎性假瘤、支气管内血管瘤、平滑肌瘤等)和恶性肿瘤(如黏液表皮样癌、支气管腺样囊性癌、支气管癌等)。对于恶性支气管肿瘤不能手术患者的治疗方案,有经纤维支气管镜介入治疗气管腺样囊性癌[3],氩气刀联合二氧化碳冷冻治疗等,对改善患者呼吸窘迫、提高生存质量具有重要意义。对于能够明确的支气管恶性肿瘤,仍是以外科手术为主的综合治疗。我们常见的起源于支气管黏膜的肺癌,其病理特征为在肺内形成肿块(以肺门区多见)并合并不同程度的支气管堵塞,所以通过影像学检查,诊断并不困难。而即使是肿块尚较小的时候,中心型肺癌易阻塞管腔,临床以阻塞性肺炎为主要表现(是由于支气管或腔内肿瘤影响支气管引流引起的继发性感染,在相应的肺段或叶内表现为肺炎),依然能够通过 CT 影像学显示的支气管壁增厚、支气管狭窄与阻断等改变达到诊断的目的。本病例的肺癌位于尖后段支气管腔内,沿着管壁生长,管腔无阻塞,无阻塞性肺炎的表现,如斑片及条索状阴影,亦无肺门区的块影,所以胸部 CT 未发现肿瘤。但患者有不能解释的反复的咳嗽、咯血及痰中带血,进一步的纤支镜检查证实了肿瘤的存在。但是如果癌肿的位置位于段支气管以下的管腔更小的各级细支气管时,纤支镜由于管径及操作的限制,难以到达病变部位,诊断困难。

所以,对于难治性、经久不愈的呼吸道症状,我们应当引起重视。在常规的 X 线片、CT 及增强 CT 检查仍不能明确病变时,需行进一步的纤支镜检查(包括刷片、活检、细胞学等),甚至是薄层扫描。这就需要我们进一步提高临床能力,加强实验室诊断技术,甚至是通过细胞、蛋白、基因层面的研究,来提高肺癌的早期诊断率。

## 参考文献:

[1] Detterbeck F C, Boffa D J, Tanoue L T. The new lung cancer staging system[J]. Chest, 2009, 136(1): 260 - 271.
[2] Boffa D J. The revised stage classification system for primary lung cancer[J]. Clin Chest Med, 2011, 32(4): 741 - 748.
[3] 商艳, 李强, 白冲, 等. 纤维支气管镜介入技术在气管腺样囊性癌治疗中的应用[J]. 中国实用内科杂志,2006,26(1): 41 - 42.

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