·临床病理报告·

梭形细胞嗜酸细胞瘤

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【摘要】 **目的** 总结梭形细胞嗜酸细胞瘤的临床表现、影像学和病理学特点、诊断与鉴别诊断要点。**方法与结果** 男性患者，59岁，主诉双眼视物模糊1年余伴反应迟钝、易疲劳；头部MRI显示鞍区占位性病变。组织学形态，肿瘤组织由梭形细胞构成，呈束状或不规则排列，肿瘤细胞胞质丰富、呈嗜酸性颗粒样，胞核呈卵圆形或短梭形、无明显核分裂象，间质内可见散在淋巴细胞浸润。免疫组织化学染色，部分肿瘤细胞胞核甲状腺转录因子-1阳性，胞质抗线粒体抗体、S-100蛋白、半乳糖凝集素-3和波形蛋白阳性，Ki-67抗原标记指数约3%。最终病理诊断为（鞍区）梭形细胞嗜酸细胞瘤。患者术后2个月出现视力急剧下降，复查MRI显示鞍上占位性病变，遂予放射治疗。随访10个月，视力无好转，肿瘤无明显改变。**结论** 梭形细胞嗜酸细胞瘤是临床罕见的发生于鞍区的肿瘤，属WHO Ⅰ级，应注意与发生于鞍区的其他肿瘤相鉴别，治疗以手术全切除为主，部分切除患者术后辅以放射治疗。

【关键词】 腺瘤，嗜酸粒细胞； 蝶鞍； 免疫组织化学； 病理学

Spindle cell oncocytoma in sellar region

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【**Abstract**】 **Objective** To study the clinical manifestations, imaging and pathological features, diagnosis and differential diagnosis of spindle cell oncocytoma. **Methods and Results** A 59-year-old man presented with one year history of blurred vision, lags in response and fatiguability. Head MRI showed a mass at the sellar region. Histological examination showed the tumor was mainly composed of spindle cells arranged in fascicularis or irregularity with abundant eosinophilic granular cytoplasm and oval or short spindle nuclei without typical mitotic activity. Infiltration of scattered lymphocytes was observed in the stroma. Immunohistochemical staining showed partial tumor cells were immunoreactive to thyroid transcription factor-1 (TTF-1) in nuclei, anti-mitochondria antibody (AMA), S-100 protein (S-100), Galectin-3 and vimentin (Vim) in cytoplasm. Ki-67 labeling index was 3%. The final diagnosis was spindle cell oncocytoma in sellar region. The patient presented rapid loss of vision 2 months after surgery. Reexamined MRI showed a mass at the sellar region, and the patient was treated by radiotherapy. During the 10-month follow-up, the vision was not recovered, and the tumor was still existed. **Conclusions** Spindle cell oncocytoma is a rare benign tumor in the sellar region, which is considered as WHO grade Ⅰ tumor. It should be considered in the differential diagnosis of various sellar region lesions. Complete removal of tumor is important to prevent tumor recurrence. For patients who achieved partial resection, postoperative adjuvant radiotherapy is necessary.

【**Key words**】 Adenoma, oxyphilic; Sella turcica; Immunohistochemistry; Pathology

Conflicts of interest: none declared

梭形细胞嗜酸细胞瘤（SCO）是发生于鞍区的中枢神经系统肿瘤，占鞍区肿瘤的0.1%～0.4%[1]，最早由Roncaroli等[2]于2002年报告。2007年世界卫生组织（WHO）中枢神经系统肿瘤分类将其新增为独立的肿瘤实体[3]，2016年WHO中枢神经系统肿瘤分类修订版将其归为WHO Ⅰ级肿瘤[4]。梭形细胞嗜酸细胞瘤临床罕见，迄今国外文献报道38例、国内文献报道3例，其中2例患者国内、国外均有报道。本文报道1例发生于鞍区的梭形细胞嗜酸细胞

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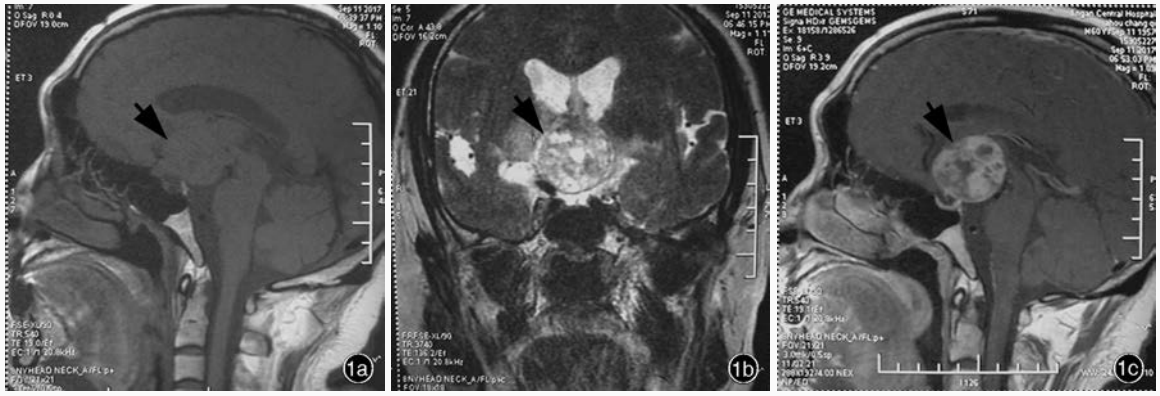

图1　头部MRI检查所见　1a　矢状位T_1WI显示，鞍上类圆形异常低信号影，直径约3.60 cm，边界清楚（箭头所示）　1b　冠状位T_2WI显示，病灶呈高或低混杂信号（箭头所示）　1c　矢状位增强T_1WI显示，病灶呈不均匀强化（箭头所示）

Figure 1　Head MRI findings　Sagittal T_1WI showed a well-defined circular hypointensity signal in the suprasellar region, with diameter 3.60 cm (arrow indicates, Panel 1a). Coronal T_2WI showed a mixed singal (arrow indicates, Panel 1b). Sagittal contrast-enhanced T_1WI showed obvious heterogenous enhancement of the lesion (arrow indicates, Panel 1c).

瘤，总结其临床表现、影像学和病理学特点、诊断与鉴别诊断要点，并复习相关文献，以期提高对该肿瘤的认识。

病历摘要

患者　男性，59岁，主诉双眼视物模糊1年余伴反应迟钝、易疲劳，于2017年9月13日入院。患者1年余前无明显诱因出现双眼视物模糊，无法看清2 m外的32寸电视屏幕，无视物成双，伴反应迟钝、易疲劳，无头晕、头痛，无恶心、呕吐，无肥胖、尿量增多、性欲减退；当地医院行头部MRI检查显示鞍区占位性病变，可疑颅咽管瘤。为求进一步诊断与治疗，遂至我院就诊。患者自发病以来，精神、睡眠、饮食尚可，大小便正常，体重无明显变化。

既往史、个人史及家族史均无特殊。

入院后体格检查　体温37 ℃，呼吸18次/min，脉搏80次/min，血压120/70 mm Hg（1 mm Hg=0.133 kPa）；神志清楚，可简单对答，计算力略有下降；双侧瞳孔等大、等圆，直径约3 mm，直接和间接对光反射存在，辐辏反射正常，各向眼动充分，无眼震、复视，右眼视力0.12、左眼0.25，双眼颞侧视野缺损，无眼球突出或下陷、上睑下垂、眼睑闭合障碍、水肿等；双侧鼻唇沟对称，伸舌居中，无口角歪斜；四肢肌力5级，肌张力正常；共济运动和深浅感觉未见明显异常；生理反射对称存在，病理反射未引出，脑膜刺激征阴性。

辅助检查　实验室检查：血常规均正常；血清催乳素（PRL）0.79 nmol/L（0.11～0.55 nmol/L），其余各项垂体激素均于正常值范围；血清总胆固醇（TC）为9.10 mmol/L（< 5.20 mmol/L），甘油三酯（TG）为6.92 mmol/L（< 1.70 mmol/L），低密度脂蛋白胆固醇（LDL-C）5.59 mmol/L（< 2.60 mmol/L），γ-谷氨酰转移酶（GGT）58 U/L（5～50 U/L），余血液生化指标均于正常值范围；未行肿瘤标志物筛查。眼科检查：裂隙灯检查双眼眼前节正常；眼底镜检查显示，视盘边界清晰，色淡红，颞侧视盘色淡，视网膜血管无明显改变，未见出血渗出灶。影像学检查：头部MRI显示，垂体形态无明显异常，垂体柄居中，鞍隔未见明显膨隆，鞍上可见类圆形异常信号影，直径约3.60 cm，边界清楚，T_1WI呈低信号（图1a）、T_2WI呈高或低混杂信号（图1b）、扩散加权成像（DWI）呈低信号，增强扫描病灶呈不均匀强化（图1c）；鞍上池无明显异常，其内可见异常信号影，视交叉受压；双侧海绵窦未见明显异常；鞍底无明显下陷，蝶窦顶壁骨质完整，蝶窦腔内未见明显异常信号影。

诊断与治疗经过　临床诊断为鞍区占位性病变，考虑颅咽管瘤可能。遂于2017年9月20日于全身麻醉下行前中颅底肿瘤切除术联合Ommaya球囊植入术。术中取右侧改良翼点切口，可见位于前中颅底的肿瘤，大小约4 cm×4 cm，突向鞍区生长，边界清楚，质地较韧，血供丰富，分块切除肿瘤，由于肿瘤与视交叉和垂体柄黏连紧密，于手术显微镜下部分切除肿瘤，行HE染色和免疫组织化学染色。（1）大体标本观察：手术切除标本为不规则破碎组织块儿，大小约1.00 cm×1.00 cm×0.50 cm，暗红色，质地柔软，无包膜。经体积分数为10%中性甲醛溶

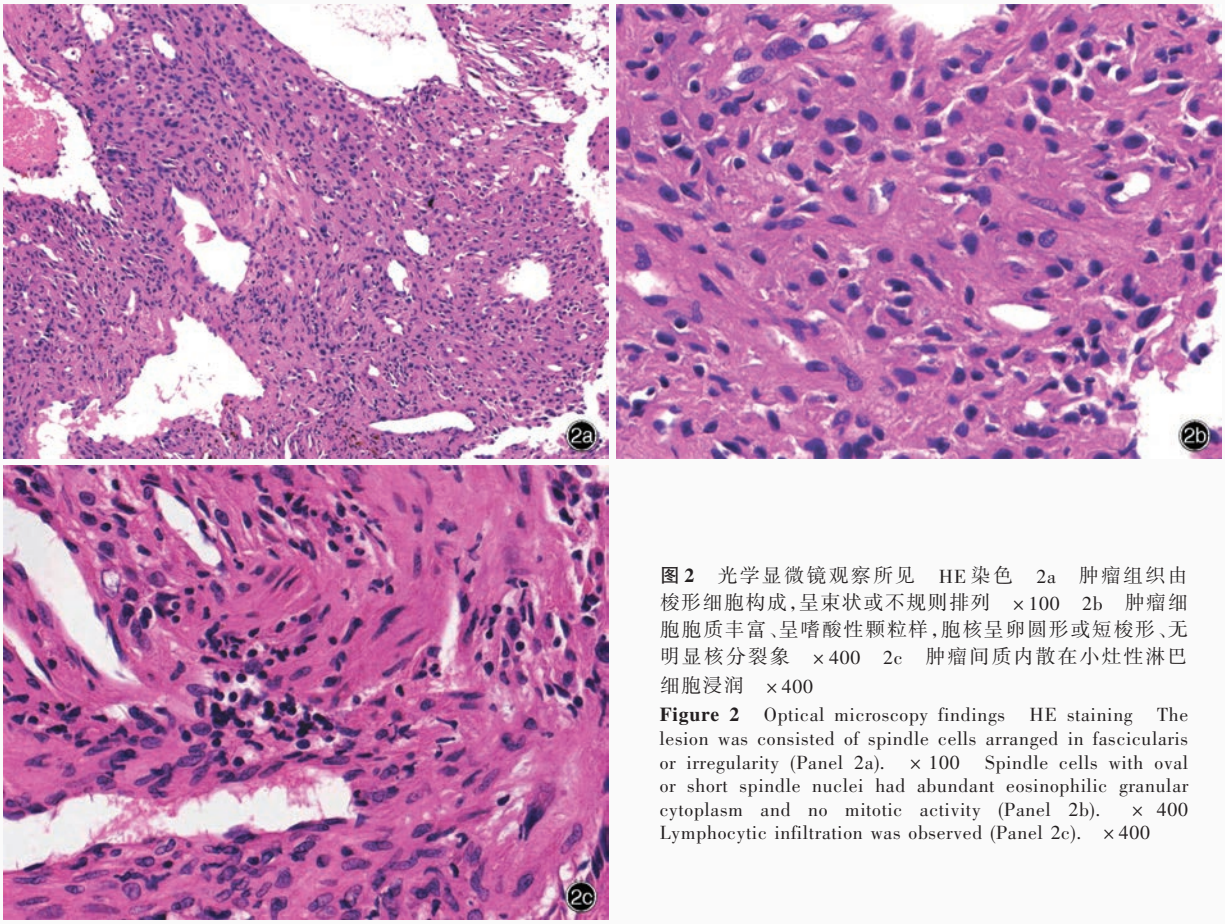

图2 光学显微镜观察所见 HE染色 2a 肿瘤组织由梭形细胞构成，呈束状或不规则排列 ×100 2b 肿瘤细胞胞质丰富、呈嗜酸性颗粒样，胞核呈卵圆形或短梭形、无明显核分裂象 ×400 2c 肿瘤间质内散在小灶性淋巴细胞浸润 ×400

Figure 2 Optical microscopy findings HE staining The lesion was consisted of spindle cells arranged in fascicularis or irregularity (Panel 2a). ×100 Spindle cells with oval or short spindle nuclei had abundant eosinophilic granular cytoplasm and no mitotic activity (Panel 2b). ×400 Lymphocytic infiltration was observed (Panel 2c). ×400

液固定，常规脱水、石蜡包埋，制备4 μm层厚组织切片。(2)HE染色：光学显微镜观察显示，肿瘤组织由梭形细胞构成，呈束状或不规则排列(图2a)，肿瘤细胞胞质丰富、呈嗜酸性颗粒样，胞核呈卵圆形或短梭形、染色质深染、核仁不明显，未见明显核分裂象(图2b)，肿瘤间质内可见散在小灶性淋巴细胞浸润(图2c)。(3)免疫组织化学染色：采用EnVision二步法，检测用试剂盒购自基因科技(上海)股份有限公司。检测用抗体包括甲状腺转录因子-1(TTF-1)、S-100蛋白(S-100)、半乳糖凝集素-3(Galectin-3)、波形蛋白(Vim)、广谱细胞角蛋白(PCK)、胶质纤维酸性蛋白(GFAP)、突触素(Syn)、嗜铬素A(CgA)、垂体激素[包括催乳素、生长激素(GH)、促卵泡激素(FSH)、黄体生成素(LH)、促甲状腺激素(TSH)、促肾上腺皮质激素(ACTH)]和Ki-67抗原，均为即用型工作液，由基因科技(上海)股份有限公司提供；抗线粒体抗体(AMA，1∶800)检测用试剂盒为美国Fitzgerald公司产品。免疫组织化学检测结果显示，部分肿瘤细胞胞核TTF-1呈阳性(图3a)，肿瘤细胞胞质AMA(图3b)、S-100(图3c)、Galectin-3和Vim阳性，PCK、GFAP、Syn、CgA和各项垂体激素均阴性，Ki-67抗原标记指数约3%(图3d)。最终病理诊断为(鞍区)梭形细胞嗜酸细胞瘤。术后继发脑积水，于首次术后21 d行双侧脑室-腹腔分流术。患者共住院38 d，住院期间未行放射治疗或药物化疗。出院后1个月(2017年11月15日至12月5日)自觉视力急剧下降，当地医院复查MRI显示鞍上占位性病变，大小约29 mm×35 mm。遂于当地医院接受放射治疗(具体剂量不详)。至今随访10个月，患者反应能力较术前改善，但视力无好转，复查MRI显示病灶大小无明显变化。

讨　论

梭形细胞嗜酸细胞瘤是临床罕见的发生于鞍区的良性肿瘤，肿瘤组织主要由呈束状排列的梭形细胞构成，胞质呈嗜酸性颗粒样，根据其缺乏间变

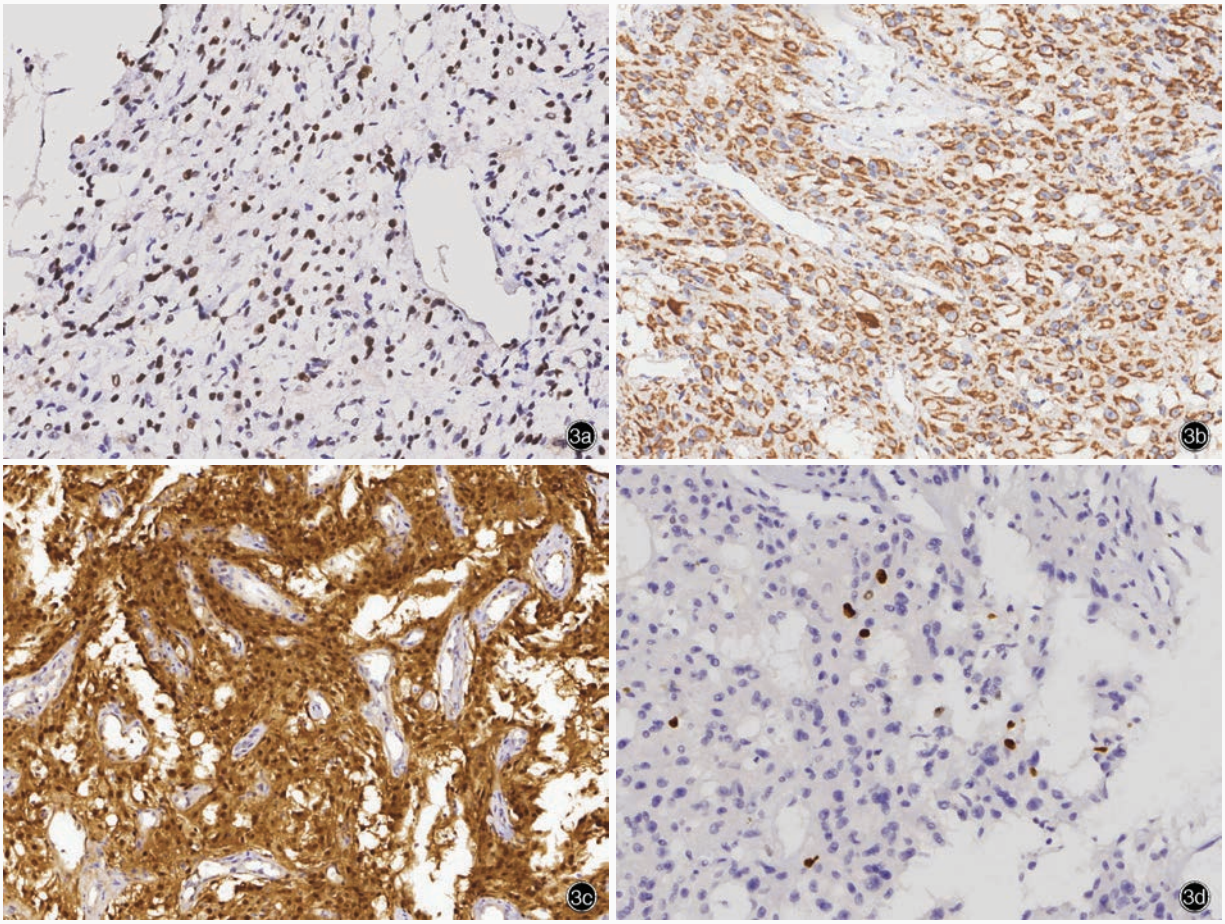

图3 光学显微镜观察所见 免疫组织化学染色(EnVision二步法) ×200 3a 肿瘤细胞胞核TTF-1阳性 3b 肿瘤细胞胞质AMA阳性 3c 肿瘤细胞胞质S-100阳性 3d Ki-67抗原标记指数约3%

Figure 3 Optical microscopy findings Immunohistochemical staining (EnVision) ×200 The nuclei of tumor cells was positive for TTF-1 (Panel 3a). The cytoplasm of tumor cells was positive for AMA (Panel 3b). The cytoplasm of tumor cells was intensely positive for S-100 (Panel 3c). Ki-67 labeling index was 3% (Panel 3d).

性,无核分裂象和坏死,结合Ki-67抗原标记指数较低,将其归为良性肿瘤。

梭形细胞嗜酸细胞瘤的发病机制尚未明确。既往认为肿瘤来源于腺垂体的滤泡旁卫星细胞[5],然而Yoshimoto等[6]和Mete等[7]的研究显示,TTF-1表达于梭形细胞嗜酸细胞瘤、神经垂体颗粒细胞瘤、垂体细胞瘤和正常神经垂体,而不表达于腺垂体滤泡旁卫星细胞,不支持肿瘤来源于腺垂体滤泡旁卫星细胞的理论。目前尚未对梭形细胞嗜酸细胞瘤的起源达成共识。

梭形细胞嗜酸细胞瘤临床罕见,迄今仅文献报道39例,连同本文报道的1例,共计40例,其临床病理学特征参见表1,2[1-2,5,8-34]。主要好发于中老年人群,平均发病年龄为55.90岁,男女各20例(男女比例1∶1)。临床症状与无功能性垂体腺瘤相似,取决于肿瘤部位和大小。通常以头痛为首发症状(45%,18/40);随着肿瘤侵犯海绵窦和蝶窦,逐渐压迫视交叉和视神经,可导致复视、眼动受限、视野缺损和视力下降(62.50%,25/40);肿瘤压迫和(或)侵犯腺垂体可以导致垂体功能下降或激素分泌紊乱(50%,20/40)。肿瘤血供丰富,故常因垂体卒中或急性脑室出血而急诊就医;加之肿瘤易侵犯周围脑组织,故常无法手术全切除[8,20,30-31]。

梭形细胞嗜酸细胞瘤的影像学表现无特征性,通常显示鞍区实性占位性病变,呈等T_1、等T_2信号,增强扫描病灶呈均匀强化。血管丰富是梭形细胞嗜酸细胞瘤的特征性影像学征象,表现为T_1WI和T_2WI显示病灶内极细小的点状低信号区和线状空白区,动态增强扫描可见线状空白区在注射对比剂早期即强化,而部分点状低信号区则无强化[35]。

表1 国内外文献报道的40例梭形细胞嗜酸细胞瘤患者的社会人口学资料

Table 1. Sociodemographic data of 40 cases of spindle cell oncocytoma reported in literatures

Study	N	Sex [case (%)]		Age (year)	Study	N	Sex [case (%)]		Age (year)
		Male	Female				Male	Female	
Roncaroli, et al [2] (2002)	5	3 (3/5)	2 (2/5)	53–71 (mean 61.6)	Alexandrescu, et al [21] (2012)	1	0 (0/1)	1 (1/1)	24
Kloub, et al [8] (2005)	2	1 (1/2)	1 (1/2)	76–71	Singh, et al [22] (2012)	1	1 (1/1)	0 (0/1)	68
Dahiya, et al [9] (2005)	2	1 (1/2)	1 (1/2)	26–55	Rotman, et al [23] (2014)	1	1 (1/1)	0 (0/1)	80
Vajtai, et al [10] (2006)	1	0 (0/1)	1 (1/1)	48	Mu, et al [24] (2015) Bie, et al [25] (2013)	2	0 (0/2)	2 (2/2)	35–62
Farooq, et al [11] (2008)	1	1 (1/1)	0 (0/1)	76	Zygourakis, et al [26] (2015)	2	0 (0/2)	2 (2/2)	31–53
Borota, et al [12] (2009)	1	0 (0/1)	1 (1/1)	55	Mansour, et al [27] (2015)	1	1 (1/1)	0 (0/1)	59
Coiré, et al [13] (2009)	1	0 (0/1)	1 (1/1)	63	Ryu, et al [28] (2015)	1	1 (1/1)	0 (0/1)	49
Matyja, et al [1] (2010)	2	0 (0/2)	2 (2/2)	63–65	Vuong, et al [5] (2016)	1	1 (1/1)	0 (0/1)	70
Demssie, et al [14] (2011)	1	1 (1/1)	0 (0/1)	59	Custodio, et al [29] (2016)	1	1 (1/1)	0 (0/1)	60
Borges, et al [15] (2011)	1	0 (0/1)	1 (1/1)	70	Billeci, et al [30] (2017)	2	1 (1/2)	1 (1/2)	61–65
Millka, et al [16] (2011)	1	0 (0/1)	1 (1/1)	45	Osman and Wild [31] (2017)	1	1 (1/1)	0 (0/1)	56
Romero-Rojas, et al [17] (2011)	1	0 (0/1)	1 (1/1)	42	Kong, et al [32] (2017)	1	1 (1/1)	0 (0/1)	30
Ogiwara, et al [18] (2011) Recurring case	1	1 (1/1)	0 (0/1)	39	Sali, et al [33] (2017) Recurring case	1	1 (1/1)	0 (0/1)	64
Vajtai, et al [19] (2011)	1	0 (0/1)	1 (1/1)	55	Zhao, et al [34] (2009)	1	0 (0/1)	1 (1/1)	26
Fujisawa, et al [20] (2012)	1	1 (1/1)	0 (0/1)	68	Present case (2017)	1	1 (1/1)	0 (0/1)	59

组织病理学检查是明确诊断梭形细胞嗜酸细胞瘤的“金标准”。典型组织形态学表现为梭形或上皮样肿瘤细胞呈束状或片状排列，偶可见立方体状或柱状上皮样肿瘤细胞呈乳头状和（或）梁状排列[28]；肿瘤细胞胞质丰富，呈嗜酸性颗粒样；胞核呈圆形或卵圆形，染色质深染，可见小核仁；肿瘤间质有淋巴细胞浸润。复发或恶性变的梭形细胞嗜酸细胞瘤细胞呈多形性，胞核呈轻至中度异形性，可见核分裂象[8,32]。免疫组织化学染色对梭形细胞嗜酸细胞瘤的诊断与鉴别诊断十分重要，部分肿瘤细胞胞核表达TTF-1，肿瘤细胞胞质AMA、S-100和Vim阳性，不表达GFAP、CD68、Syn、CgA和各项垂体激素。上皮样肿瘤细胞表达PCK和上皮膜抗原（EMA）等上皮组织标志物[28]。Ki-67抗原标记指数较高常提示高复发风险和恶变可能[8,32]。超微结构观察可见肿瘤细胞呈梭形，胞质内可见大量有层状嵴的线粒体[36]，未见分泌颗粒。

目前，基因检测对疾病的病理诊断意义有限。由于梭形细胞嗜酸细胞瘤临床罕见，所报道的文献中关于基因检测的资料极为有限，但仍可为新的治疗方向提供参考依据。Mete等[7]报告7例梭形细胞嗜酸细胞瘤患者，基因检测显示，异柠檬酸脱氢酶1（*IDH1*）*R132H*基因突变特异抗体阴性，无*BRAF*基因突变证据（*BRAF V600E*基因突变与*BRAF KIAA*基因突变融合）[5]。Alexandrescu等[21]报告1例梭形细胞嗜酸细胞瘤患者，肿瘤细胞表达磷酸化蛋白激酶B[PKB，亦称丝氨酸/苏氨酸激酶（AKT）]、磷酸化哺乳动物雷帕霉素靶蛋白（mTOR）提示AKT/mTOR信号转导通路激活。锌指蛋白（ZFP）Gli2作为Shh信号转导通路的重要转录因子表达于所有肿瘤细胞胞核，提示Shh信号转导通路激活。

梭形细胞嗜酸细胞瘤应注意与其他鞍区占位性病变相鉴别。（1）垂体细胞瘤：与梭形细胞嗜酸细胞瘤同为新增的鞍区肿瘤类型；二者临床表现、影像学和组织学形态相似，但垂体细胞瘤细胞胞质缺乏明显嗜酸性；免疫表型二者均表达TTF-1、S-100和Vim，均不表达CD68、Syn、CgA和各种垂体激素，但垂体细胞瘤不同程度表达GFAP而不表达AMA；超微结构观察，梭形细胞嗜酸细胞瘤细胞胞质内含大量特征性肿胀的线粒体。因此，组织学形态、免疫组织化学染色和超微结构观察有助于鉴别诊断。（2）神经垂体颗粒细胞瘤：肿瘤细胞体积较大，富含嗜酸性胞质，呈明显颗粒状；肿瘤细胞胞质高碘酸-雪夫染色（PAS）阳性，AMA阴性；超微结构观察，胞质内含大量溶酶体。因此，免疫表型和超微结构观察可资鉴别。（3）无功能性垂体腺瘤和嗜酸

表2 国内外文献报道的40例梭形细胞嗜酸细胞瘤患者的临床特征

Table 2. Clinical features of 40 cases of spindle cell oncocytoma reported in literatures

Study	Presentation	Radiology	Ki-67 labeling index	Treatment	Follow-up
Roncaroli, et al [2] (2002)	Panhypopituitarism, visual field defects	Sellar mass	1%–5% (mean 3%)	Gross total resection	No recurrence at 2–68 months (mean 35)
Kloub, et al [8] (2005)	Epistaxis (male)	A large mass involved the pituitary fossa and base of the skull with extension into the nasopharynx and nasal cavity	20%	Not described	Recurrence after 3 years from initial surgery treated with sugery and radiotherapy, third surgery performed 10 years after initial surgery
	Visual loss (female)	Sellar mass with optic pathways compression	18%	Subtotal resection	Recurrence after 3 years from initial surgery, performed 11 years later and third surgery 1 year thereafter
Dahiya, et al [9] (2005)	Progressive headache, blurred vision in the right eye, nausea, vomiting and impotence (male)	Mass in the pituitary region, which involved the right cavernous sinus, impinged on the temporal lobe and expanded the sella	1%	Subtotal resection + radiotherapy	Radiotherapy after initial surgery, no growth at 7 years
	Headache, visual loss (female)	Sellar mass	8%	Gross total resection	No recurrence at 6 months
Vajtai, et al [10] (2006)	Visual loss	Sellar/suprasellar mass with suprasellar extension	< 1%	Gross total resection	No recurrence at 16 years
Farooq, et al [11] (2008)	Headache, weakness	Sellar/suprasellar mass	Low (not described)	Subtotal resection + radiotherapy	Radiotherapy after surgery, no growth at 2 years
Borota, et al [12] (2009)	Headache, panhypopituitarism	Sellar/suprasellar mass with optic chiasm compression	2%	Subtotal resection + radiotherapy	Growth at 1 year, received radiotherapy, further growth after 10 months, stable afterwards
Coiré, et al [13] (2009)	Visual field defects, headache, panhypopituitarism	Sellar/suprasellar mass with optic chiasm compression	9% 13%–15%	Subtotal resection + radiotherapy	Growth at 5 months after initial surgery, reoperation followed radiotherapy
Matyja, et al [1] (2010)	Visual field defects, headache, panhypopituitarism	Sellar/suprasellar mass	5% with focal increase	Gross total resection	No recurrence at 28 months
	Visual field defects, headache, panhypopituitarism	Sellar/suprasellar mass	1%	Gross total resection	Recurrence at 3 years, then second surgery with no recurrence 20 months after
Demssie, et al [14] (2011)	Visual field defects, weight loss, vomiting, panhypopituitarism, fatigue	Sellar/suprasellar mass	1%	Subtotal resection + radiotherapy	Growth at 9 months
Borges, et al [15] (2011)	Visual loss	Sellar mass with heterogeneous signals	3%	Gross total resection	Recurrence at 13 years
Millka, et al [16] (2011)	Visual loss, headache	Sellar/suprasellar mass	Not described	Gross total resection	No recurrence at 3 months
Romero-Rojas, et al [17] (2011)	Oligomenorrhea	Sellar mass	2%	Subtotal resection	No follow-up mentioned
Ogiwara, et al [18] (2011) Recurring case	Headache, visual loss, panhypopituitarism	Sellar/suprasellar mass	5%	Subtotal resection + radiotherapy	Followed by radiotherapy with recurrence at 4 months, then total resection with no recurrence at 1 year
Vajtai, et al [19] (2011)	Not described	Sellar/suprasellar mass	1.5%–2.0%	Not described	Not described
Fujisawa, et al [20] (2012)	Visual field defects, panhypopituitarism	Sellar/suprasellar mass	3%	Subtotal resection + radiotherapy	Growth at 1.50 years followed by radiotherapy
Alexandrescu, et al [21] (2012)	Headache, amenorrhea, visual field defects in left eye	Sellar/suprasellar mass	5%	Gross total resection	No growth at 6 months
Singh, et al [22] (2012)	Visual loss, headache	Sellar/suprasellar mass	< 1%	Subtotal resection	No growth at 6 months
Rotman, et al [23] (2014)	Syncope, panhypopituitarism	Sellar/suprasellar mass	2.5%	Gross total resection	Minimal growth at 8 years before total resection
Mu, et al [24] (2015) Bie, et al [25] (2013)	Amenorrhea, galactorrhea, visual loss	Sellar mass	3%	Gross total resection	No recurrence at 21 months
	No symptom	Sellar mass	1.5%	Gross total resection	No recurrence at 15 months
Zygourakis, et al [26] (2015)	Headache, visual loss	Sellar/suprasellar mass	< 5%	Subtotal resection	No growth at 6 months
	Headache	Sellar/suprasellar mass	Not described	Biopsy	No progression at 2 months
Mansour, et al [27] (2015)	Progressive headache	Sellar mass	Not described	Gross total resection	No recurrence at 4 years
Ryu, et al [28] (2015)	Malaise, decreased libido and hot flashes	Sellar mass with involvement of cavernous sinus	10%	Gross total resection	Not described
Vuong, et al [5] (2016)	Headache, visual loss	Sellar/suprasellar mass with involvement of cavernous sinus and optic nerve compression	< 1%	Subtotal resection	No growth at 6 months

续表2
Continued Table 2.

Study	Presentation	Radiology	Ki-67 labeling index	Treatment	Follow-up
Custodio, et al [29] (2016)	Severe hyponatremia, panhypopituitarism, visual field defects	Sellar/suprasellar mass	Not described	Subtotal resection	No growth at 18 months
Billeci, et al [30] (2017)	Onset of asthenia, dyspnea and profuse sweating (male)	Sellar mass involving the sphenoidal sinus and chiasmatic cistern	2%	Subtotal resection	No growth at 14 months
	Headache, visual loss (female)	Sellar mass with optic compression and cavernous sinus involvement	8%	Subtotal resection	No growth at 28 months
Osman and Wild [31] (2017)	Headache, vomiting, neck pain, back pain, reduced level of consciousness and visual loss	Sellar/suprasellar mass with optic and hypothalamic compression	Low (not described)	Subtotal resection + radiotherapy	No growth at 6 months
Kong, et al [32] (2017)	Headache, fatigue, diplopia and visual field defects	Sellar mass with suprasellar and parasellar invasiveness with optic chiasma compressed, bilateral internal carotid arteries partly wrapped	6%→19%→45%	Subtotal resection + radiotherapy	Second and third surgeries after 3 months and 4 months from initial surgery
Sali, et al [33] (2017) Recurring case	Visual field defects in left eye	Sellar/suprasellar mass	6%–8%	Gross total resection	Recurrence after 4 years from initial surgery
Zhao, et al [34] (2009)	Visual loss, menolipsis	Sellar mass	<1%	Gross total resection	Not described
Present case (2017)	Visual loss, slow reaction, fatigue	Sellar mass	3%	Subtotal resection + radiotherapy	No growth at 10 months

细胞腺瘤：三者临床表现和影像学特征相似。组织学形态，垂体腺瘤细胞胞核呈较一致的圆形，较少表现为单一梭形细胞增生。免疫组织化学染色，Syn和各项垂体激素阳性，而TTF-1和AMA阴性。因此，组织学形态和免疫表型可资鉴别。

治疗方面以手术全切除肿瘤为主。对生长固定、血供丰富、无法全切除的肿瘤，建议术后辅以放射治疗。若术前疑诊梭形细胞嗜酸细胞瘤或明确诊断梭形细胞嗜酸细胞瘤后二次手术，建议应于术前行脑血管造影术，有助于术中有效控制出血[30]。

文献报道的39例和本文报道的1例梭形细胞嗜酸细胞瘤患者中肿瘤全切除19例，除2例无随访资料，余17例中复发3例（首次术后3～13年）；肿瘤部分切除和（或）术后辅以放射治疗有18例，除1例无随访资料，余17例中复发7例（首次术后3个月至3年）；复发患者Ki-67抗原标记指数平均6.90%，无复发患者平均3.27%，且Ki-67抗原标记指数随复发次数的增加而升高。由此可见，首次手术是否全切除肿瘤和Ki-67抗原标记指数可以作为梭形细胞嗜酸细胞瘤的预后评价指标。

利益冲突 无

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下期内容预告 本刊2019年第3和4期报道专题为内镜颅底外科，重点内容包括：垂体瘤人工智能联合大数据诊断与治疗；应重视内镜下鼻颅底手术并发症；内镜颅底外科发展史；神经内镜下扩大经蝶窦入路垂体柄占位性病变活检术临床价值初探；Knosp分级和海绵窦分区在侵袭性垂体瘤内镜手术中的意义初探；内镜颅底肿瘤切除术中高流量脑脊液漏修补失败模式及处理；内镜下经鼻颅底重建治疗脑脊液鼻漏；内镜下经鼻脑脊液漏修补；内镜下经鼻颅底手术继发蝶窦感染诊断与治疗；内镜颅底手术并发严重鼻出血诊断与治疗；神经内镜下经翼突入路Sternberg管未闭脑膜膨出伴脑脊液漏一例