

## Type with Somatic Cell Malignant Mediastinal Teratoma: A Case Report

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**Abstract:** Malignant mediastinal teratoma is an undifferentiated mature teratoma, which is located in the mediastinum. In clinical, it is very rare in China. Such patients mainly had chest tightness, shortness of breath for space-occupying and oppression symptoms caused by adjacent organs as chief complaints. By image, it is hard to distinguish benign or malignant mediastinal teratoma, also not easy to identify with other recurrent tumors in mediastinum, such as thymoma and bronchial cyst. It can be well determined for tumor types by invasive examination (surgical excision or biopsy), pathology inspection. In 10 years, there are very few clinical reports about the mediastinal malignant teratoma in China, especially the malignant mediastinal teratoma with somatic cell type, which is of high malignant degree. Patients' prognosis is poor with a short progression-free survival period. By reporting a case of malignant mediastinal teratoma with somatic cell type, we discuss the interdisciplinary treatment for such disease.

**Keywords:** Malignant Mediastinal Teratoma; Somatic Cell; Interdisciplinary Treatment

## 伴体细胞型的纵膈恶性畸胎瘤病例报告

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**摘要:** 纵膈恶性畸胎瘤是占位于纵膈内的一种未分化成熟的畸胎瘤, 临床上较少见。此类病患主要以胸闷, 气短等因占位压迫邻近器官造成的症状为主诉。在影像学表现上很难与良性纵膈畸胎瘤区分, 也不易与纵膈内其他常发肿瘤鉴别如胸腺瘤, 支气管囊肿等。通过侵袭性检查(手术、穿刺活检)可明确, 并在病理检验后确诊具体类型。近十年内有关纵膈恶性畸胎瘤的报告较少, 特别是伴体细胞型的纵膈恶性畸胎瘤, 其恶性程度高, 治疗效果较差, 病患预后不良, 生存期很短。本病例报道一例伴体细胞型的纵膈恶性畸胎瘤, 借此讨论此类肿瘤的综合治疗方案。

**关键词:** 恶性畸胎瘤; 体细胞; 综合治疗

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## 1. 引言

恶性畸胎瘤约占纵膈畸胎瘤 10%，为未成熟性畸胎瘤，伴体细胞型的纵膈畸胎瘤更为少见。近年来发现的伴体细胞型纵膈恶性畸胎瘤的影像学表现与良性纵膈畸胎瘤类似，以囊性纵膈内占位为主，病患也多以肿瘤压迫所致症状如胸闷，气促为主诉。但是此类型肿瘤治疗效果差，复发率高，病患生存期短<sup>[1-3]</sup>，很难追踪临床治疗效果，此病的治疗方案一直在讨论之中。本文报道了一例伴体细胞型纵膈恶性畸胎瘤病例，并借此病例对此类肿瘤的术后治疗进行讨论及总结。

## 2. 病历摘要

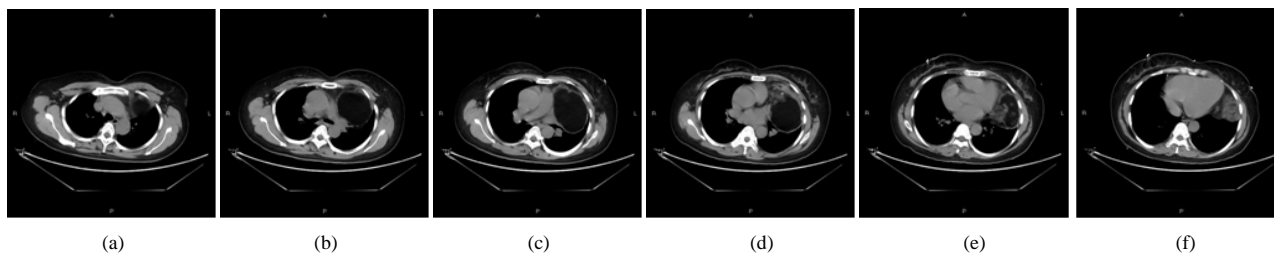
患者，女，45 岁，汉族，安徽舒城，从事化工制品劳动 12 年。

患者于 2013 年 8 月出现活动后胸闷、气喘一周于安徽医科大学第二附属医院，停经 8 月否认呼吸系

统及心血管系统疾病史；无肿瘤家族史；入院体检：神清，步入病房，呼吸不促，皮肤巩膜无黄染及出血点，颈软，浅表淋巴结未及肿大，胸廓无畸，听诊双肺呼吸音清，未闻及明显干湿罗音。心尖搏动位置正常，心率 78 次/分，律齐，各瓣膜区未及明显杂音，腹部查体未见异常，四肢肌力正常，神经检查(-)。血常规、尿常规、大便常规、肝肾功能无异常。2013 年 8 月 26 日当地医院胸部 B 超提示左侧胸腔囊实性占位，考虑畸胎瘤可能。2013 年 09 月 03 日本院胸部增强 CT：左侧纵膈囊性占位，畸胎瘤可能性大(图 1)。

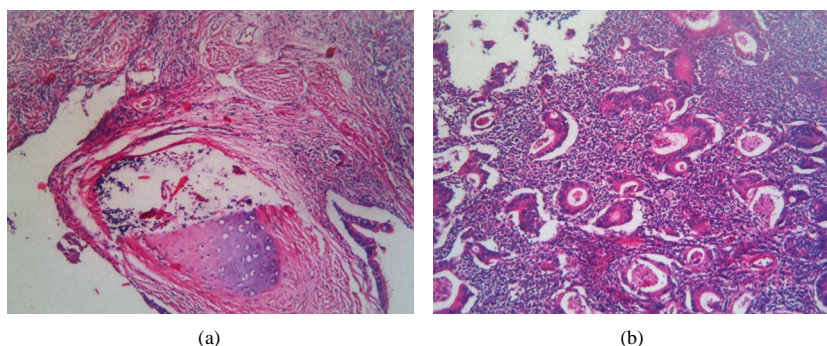
2013 年 09 月 05 日于我院心胸外科行纵膈占位切除术。术中见胸腔广泛粘连，肿瘤位于左侧胸腔，连接前上纵膈，囊性，大小 10 cm × 17 cm × 18 cm。予完整切除，查见囊肿表面光滑，包膜完整。术后病理：(纵膈)伴体细胞型恶性肿瘤的畸胎瘤(腺癌在畸胎瘤中)(图 2)。

2013 年 9 月 6 日术后 CT：左侧胸壁下软组织积



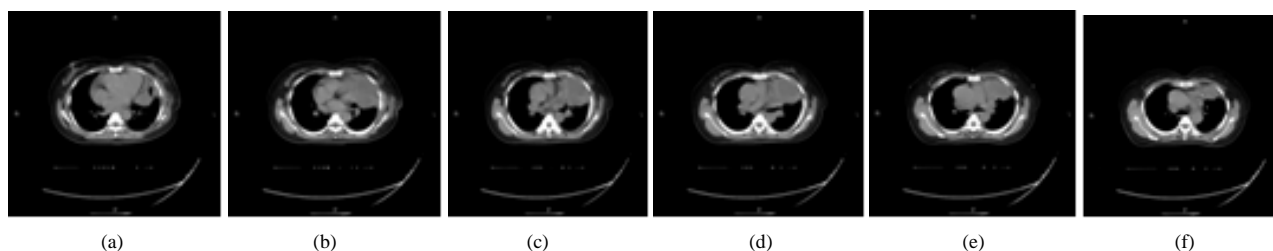
**Figure 1.** (a) - (f): 2013.09.03 enhanced chest CT. In left mediastinal there is a lumpy, mixed and hypodense foci, with clear boundary, with visible complete capsule, the size of about 9.7 cm \* 7.3 cm. Inside there is fat-like hypodense foci, the CT value about -100 HU, and shows multiple nodular lumps and higher density; its inner and envelope shows multiple calcified spots. Impression: The left mediastinal space occupying, of high possibility of large teratoma

**图 1.** (a)~(f): 2013.09.03 胸部增强 CT。纵膈左侧内可见一团块状混杂低密度灶，边界清晰。可见完整包膜，大小约 9.7 cm\*7.3 cm，内可见片状脂肪样低密度灶，CT 值约 -100 HU，并可见多发团状及结节状稍高密度影；其内及包膜可见多发斑点钙化灶。提示：左侧纵膈占位，畸胎瘤可能性大



**Figure 2.** 2013.09.05 postoperative pathology. Visual inspection: grey, brown oval cystic sample with white capsule, the size of 13.0 cm \* 11.0 cm \* 8.0 cm, sample filled with yellow broken slag; The microscopic examination: a large number of tumor cells are arranged in shape of the gland, cell abnormal obviously, and part of fibrocartilage. Pathological diagnosis: malignant teratoma with somatic cell (adenocarcinoma in teratoma)

**图 2.** 2013.09.05 术后病理。大体检查：灰白灰褐囊样卵圆样囊性标本，大小 13.0 cm × 11.0 cm × 8.0 cm，囊内充满黄色碎渣；镜下检查：大量肿瘤细胞排列成腺管状，细胞异型明显，及部分纤维软骨成分。病理诊断：伴体细胞型恶性肿瘤的畸胎瘤(腺癌在畸胎瘤中)



**Figure 3.** (a) - (f): 2013.10.17 enhanced chest CT. Mediastinum center. multiple small and swollen lymph nodes were observed inside mediastinum, left behind the sternum, close to the heart margin; a small amount of effusion on the left side of the pericardium, left pleural thickening; a large patch of low density shadow on the left side of the chest cavity, the range of about 6.8 cm \* 4.9 cm, CT value about 13 HU, patchy soft tissue density around the shadow. Impression: lateral chest capsular effusion associated with incomplete adjacent segmental lung tissue  
**图 3.** (a)~(f): 2013 年 10 月 17 日胸部 CT。纵膈内及胸骨左后方心缘旁见多发小及肿大淋巴结影, 心包少量积液, 左侧胸膜增厚, 左侧胸腔内见大片状低密度影, 范围约 6.8 cm × 4.3 cm, CT 值约 13 Hu, 周围见斑片状软组织密度影。考虑侧胸腔包膜性积液伴邻近肺组织节段性膨胀不全

气, 呈术后改变。术后恢复可, 切口愈合良好。2013 年 10 月 24 日复查胸部 CT 提示左侧纵膈囊性占位, 考虑左侧胸腔包膜性积液伴邻近肺组织节段性膨胀不全(图 3)。

### 3. 讨论

患者起病时为胸闷、气喘, 系肿瘤压迫引起的呼吸道症状。影像学检查提示为一囊性占位, 考虑偏向于畸胎瘤。纵膈畸胎类肿瘤或囊肿者, 不论良性或者恶性, 均应及早手术。患者接受手术治疗, 及时缓解肿瘤压迫所引起的症状。术中发现病灶为囊性, 表面光滑, 包膜完整, 符合畸胎瘤特征。术后病理为伴体细胞型恶性肿瘤的畸胎瘤(腺癌在畸胎瘤中), 伴体细胞型的纵膈恶性畸胎瘤如为生殖源性肿瘤被报道预后差, 易复发转移<sup>[1]</sup>。术后 1 月 CT 提示肿瘤未被完全清扫, 考虑复发。治疗前需完善性腺超声检查, 以排除性腺恶性生殖细胞肿瘤纵膈转移的可能<sup>[4]</sup>。此类疾病一直未有公认的治疗方案, 血清甲胎蛋白(AFP)、绒毛膜促性腺激素(hCG)、乳酸脱氢酶(LDH)等特异性肿瘤标志物水平的检测对是否为纵膈生殖细胞肿瘤的诊断, 治疗方案及预后有帮助<sup>[4]</sup>。

任何 AFP 升高都应考虑其含有非精原细胞肿瘤成分, 需按非精原细胞瘤性生殖细胞肿瘤(NSGCT)进行治疗; 约 74% 的 NSGCT 伴有 AFP 升高, 38% 伴有 HCG 升高; 治疗过程中血清 AFP 和 hCG 水平半衰期的缩短速度被认为具有预后价值, 半衰期快速缩短者提示预后良好, 半衰期缓慢缩短者预示复发进展较快<sup>[4]</sup>。NSGCT 生长快, 恶性度高, 当发生严重外侵及远端转移时手术无法切除干净, 且对放、化疗不敏感,

预后不良<sup>[5]</sup>。化疗方案的选择中, 以顺铂为主的顺铂 + 依托泊甙 + 博莱霉素(PEB)方案每 3 周 1 次共 4 个周期, 可使生存率明显提高<sup>[6]</sup>。当患者出现上腔静脉阻塞、气管梗阻、化疗后病灶残余或复发、脑转移时, 可以考虑放疗。

HCG 和(或)LDH 升高可提示为纵膈精原细胞瘤, 此类肿瘤可治愈。因对放疗敏感, 无远处转移及明显外侵的纵膈精原细胞瘤患者可给予 45~50 Gy 放射剂量, 包括纵膈及双侧锁骨上区, 治愈率可到 50%~60%<sup>[5]</sup>, 联用含顺铂的联合化疗已经成为首选治疗方案, PEB3~4 个周期的化疗可使 67%~89% 的患者达到全缓解<sup>[6,7]</sup>。

### 4. 总结

伴体细胞型的纵膈恶性畸胎瘤, 应属于纵膈恶性畸胎瘤一种恶变类型, 临床上十分罕见。治疗时应完善性腺超声检查, 检测 AFP、HCG、LDH 以帮助提示是否为生殖细胞源以指导治疗方案及预后评估。目前仍无一公认的治疗方案。此病病患一般治疗效果差, 预后较差, 生存期短。

### 参考文献 (References)

- [1] Colecchia, M., et al. (2011) Teratoma with somatic-type malignant components in germ cell tumors of the testis: A clinicopathologic analysis of 40 cases with outcome correlation. *International Journal of Surgical Pathology*, **19**, 321-327.
- [2] 余巨石, 吴强 (2000) 成人腹膜后囊性畸胎瘤腺癌变 1 例. *临床与实验病理学杂志*, **2**, 146.
- [3] Masunaga, A., et al., (2011) A case of granulocyte colony-stimulating factor and interleukin 6 receptor-producing mediastinal mature cystic teratoma with somatic-type malignancy. *Pathology International*, **61**, 243-247.

- [4] Bokemeyer, C., et al. (2002) Extragonadal germ cell tumors of the mediastinum and retroperitoneum: Results from an international analysis. *Journal of Clinical Oncology*, **20**, 1864-1873.
- [5] Fizazi, K., et al. (1998) Initial management of primary mediastinal seminoma: Radiotherapy or cisplatin-based chemotherapy? *European Journal of Cancer*, **34**, 347-352.
- [6] Anthony, D.A., et al. (2004) Bleomycin, vincristine, cisplatin/bleomycin, etoposide, cisplatin chemotherapy: An alternating, dose intense regimen producing promising results in untreated patients with intermediate or poor prognosis malignant germ-cell tumours. *British Journal of Cancer*, **90**, 601-606.
- [7] Motzer, R.J., et al. (2000) Sequential dose-intensive paclitaxel, ifosfamide, carboplatin, and etoposide salvage therapy for germ cell tumor patients. *Journal of Clinical Oncology*, **18**, 1173-1180.