

异时性序贯转移灶切除术治疗转移性肾细胞癌：一例病例报告及文献综述

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摘 要

肾细胞癌(RCC)术后发生对侧肾上腺及腰大肌转移者极为罕见。本文报告一例48岁男性患者, 因右肾下极透明细胞型RCC(T1bN0M0)行根治性肾切除术, 术后3年于左侧腹膜后脂肪发现孤立性转移灶并切除; 术后2年又出现左肾上腺、左腰大肌及左肺多发转移, 经手术完全切除所有转移灶, 病理及免疫组化均证实为转移性透明细胞型RCC。据我们所知, 这是腹腔镜肾肿瘤切除术后RCC转移至对侧腰大肌的首例报道。本例提示RCC转移具有不可预测性和异时性, 可累及多个罕见部位; 定期术后CT随访有助于早期发现转移灶, 及时行转移灶切除术可能延长患者生存。

关键词

异时性肾细胞癌, 肿瘤转移

Metachronous Sequential Metastasectomy in Metastatic Renal Cell Carcinoma: A Case Report and Literature Review

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Abstract

Metastasis to the contralateral adrenal gland and psoas major muscle following surgery for renal cell carcinoma (RCC) is extremely rare. Herein, we report a 48-year-old male patient who underwent radical nephrectomy for clear cell RCC (T1bN0M0) located in the lower pole of the right kidney. Three years after surgery, a solitary metastatic lesion was detected in the left retroperitoneal fat pad and was subsequently resected. Two years later, multiple metastases developed in the left adrenal gland, left psoas major muscle, and left lung, all of which were completely surgically removed. Pathological and immunohistochemical examinations confirmed metastatic clear cell RCC. To the best of our knowledge, this is the first report of RCC metastasis to the contralateral psoas major muscle after laparoscopic renal tumor resection. This case demonstrates that RCC metastasis is unpredictable and metachronous, potentially involving multiple rare sites. Regular postoperative CT follow-up may facilitate early detection of metastases, and timely metastasectomy may prolong patient survival.

Keywords

Metachronous Renal Cell Carcinoma, Tumor Metastasis

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1. 病例报告

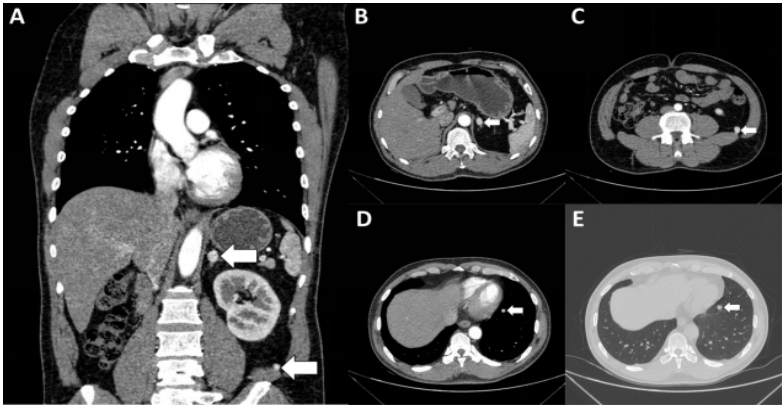
肾细胞癌约占所有恶性肿瘤的 3%，是常见的肾癌类型，具有转移倾向。尽管 RCC 可转移至多种器官，但对侧肾上腺及腰大肌转移均属罕见。本文报告一例根治性肾切除术后发生异时性对侧肾上腺及腰大肌转移的独特 RCC 病例。据我们所知，此为腹腔镜肾肿瘤切除术后 RCC 转移至对侧腰大肌的首例报道。

2012 年 12 月，一名 48 岁男性患者因 CT 检查发现右侧腹膜后占位(位于右肾下极)，接受腹膜后腹腔镜根治性肾切除术。肿瘤大小为 6.5 cm × 4.0 cm。术后病理分析为 Fuhrman I 级透明细胞型 RCC，病理分期 T1bN0M0。肾门血管、淋巴结及远端手术切缘均未见肿瘤浸润。

术后 3 年(即 2015 年)，腹部 CT 复查示左后腹壁前方腹膜后脂肪垫内见一孤立性肿块，大小约 1.0 cm × 1.0 cm。患者随后接受腹膜后肿块切除术，术后病理证实为 RCC 转移。

2018 年 6 月，肾脏增强 CT 显示左肾上腺内一明显强化结节，大小约 1.2 cm × 0.9 cm；同时左肾下极水平腰大肌内见一强化肿块，直径约 0.6 cm (图 1(A)~(C))。此外，左肺上叶近膈肌处见一直径约 1 cm 的结节状高密度影，强化明显(图 1(D)、图 1(E))。综合上述影像学发现，高度怀疑三处病灶均为肾转移。患者接受胸腔镜肿瘤切除术，行左肺叶切除。术后病理证实为转移性 ccRCC (图 2(A))，免疫组织化学染色示 PAX-8(+)、CD10(+)、Vim(+)、P504S(+)及 Ki-67(10%+) (图 3)。

2018 年 7 月，患者接受腹腔镜肿瘤切除术，切除左肾上腺及腰大肌肿块。术中发现肾上腺一直径约 1 cm 的肿瘤，与周围组织紧密粘连并邻近胰尾；腰大肌亦见一直径约 1 cm 的肿瘤。两处肿瘤均被完全切除。病理分析证实为转移性 ccRCC (图 2(B))，免疫组化示 CA-9(+)、PAX-8(+)、Vim(+)、CD10(+)、P504S(+)及 Ki-67(10%+) (图 4)。术后患者选择常规影像学随访。至末次随访(术后 3 年)，未见其他转移征象。患者临床时间线见图 5。



(A)~(D) 增强 CT 图像；(E) 平扫 CT 图像。图(A)中箭头自上而下分别指向肾上腺肿块及腰大肌肿块；图(B)、(C)中箭头分别指向肾上腺肿块及腰大肌肿块；图(D)、(E)中箭头指向肺部转移性肿瘤。

Figure 1. Metastatic tumor in adrenal gland, psoas major muscle and lung
图 1. 肾上腺、腰大肌及肺转移性肿瘤

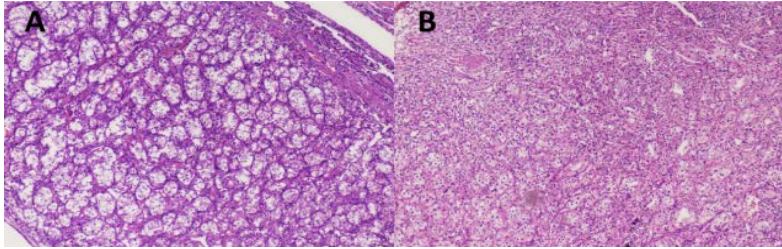
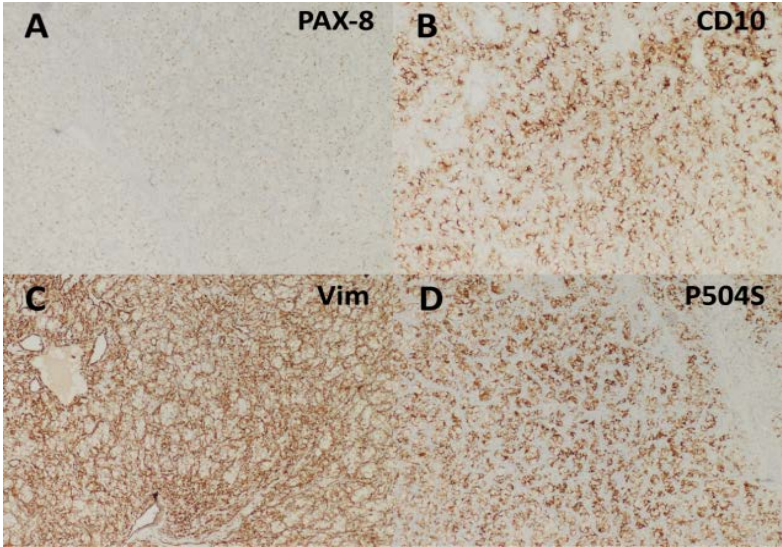


Figure 2. Hematoxylin and eosin stain of (A) a biopsy of lung metastasis and (B) adrenal and psoas major muscle metastasis of RCC ($\times 100$)

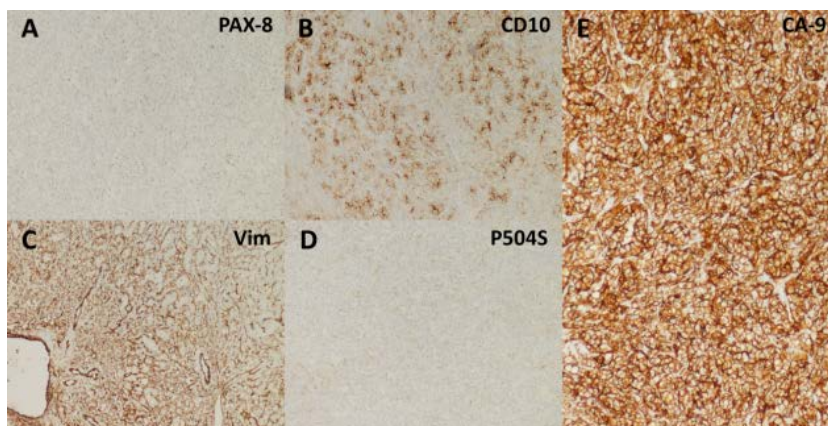
图 2. (A) 肺转移灶活检及(B) 肾上腺及腰大肌转移灶活检的苏木素 - 伊红染色($\times 100$)



(A) 抗 PAX8；(B) 抗 CD10；(C) 抗 Vim；(D) 抗 P504S。

Figure 3. Immunohistochemical staining of a biopsy of metastatic ccRCC in lung ($\times 100$)

图 3. 肺转移性 ccRCC 活检组织免疫组织化学染色($\times 100$)



(A) 抗 PAX8; (B) 抗 CD10; (C) 抗 Vim; (D) 抗 P504S; (E) 抗 CA9。

Figure 4. Immunohistochemical staining of a biopsy of metastatic ccRCC in adrenal gland and psoas major ($\times 100$)

图 4. 肾上腺及腰大肌转移性 ccRCC 活检组织免疫组织化学染色($\times 100$)

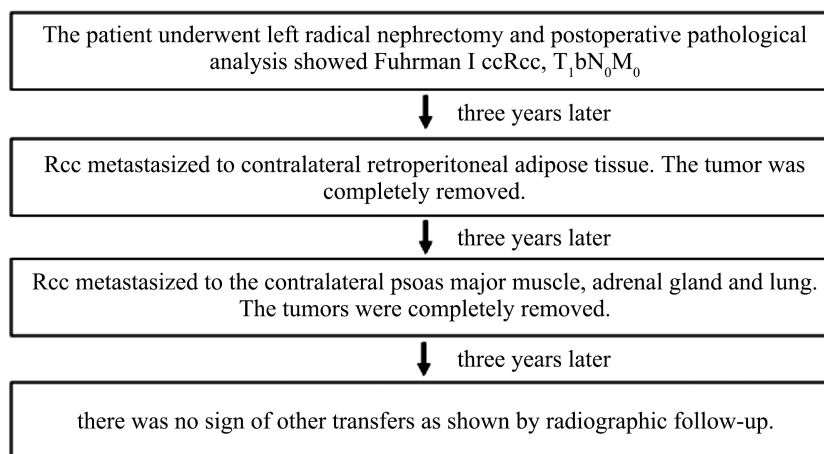


Figure 5. Patient's clinical timeline

图 5. 患者临床时间线

2. 讨论

RCC 是常见肾癌类型, 多数患者手术切除原发灶后预后良好, 但术后仍可发生转移[1]。约 20%~30% 的 RCC 患者于初诊时即已存在转移[2][3]。因此, RCC 术后转移一直是临床亟待解决的问题。RCC 几乎可转移至任何器官, 但同时累及腰大肌和肾上腺者极为罕见。在 RCC 肾上腺转移中, 同侧转移更为常见, 且常伴有其他部位转移[4]。本文报告的对侧肾上腺转移发生率低于同侧转移。据 Kessler 等[5]报道, 过去 17 年间 350 例 RCC 患者中仅有 5 例出现孤立性异时性对侧肾上腺转移。

RCC 转移至对侧肾上腺及腰大肌的内在机制尚不明确。Dieckmann 等[6]回顾了 24 例 RCC 对侧肾上腺转移病例, 推测其机制为肿瘤细胞经血行通过肺部播散至对侧肾上腺。本例患者于肾切除术后多年出现转移, 原发肿瘤位于肾下极且分期较低。因同侧肾上腺转移风险低, 患者仅接受单侧根治性肾切除术, 未联合对侧肾上腺切除术, 该策略符合当前指南推荐[7][8]。

由于患者可无临床症状, 影像学检查成为诊断转移的主要手段[9][10]。CT 可发现占位, 但难以区分原发性肾上腺皮质癌、良性腺瘤或转移灶, 建议联合激素检测。当激素水平正常时, PET/CT 可提供辅助

信息: 放射性摄取率升高提示转移可能[11]。本例即依据上述策略成功诊断。随着手术技术进步, 腹腔镜肾上腺切除术已成为肾上腺转移的标准治疗, 具有恢复快、疼痛轻、美容效果好等优点[12]。

文献表明, 切除孤立性转移灶可延长患者生存期, 部分患者甚至可能获得治愈[5] [13]-[21]。本例患者因此接受了腹腔镜肾上腺切除术。对于肺转移灶, CT 显示直径 1 cm、边界清晰, 遂行肺叶切除术。肺是 ccRCC 常见转移部位[22], 单发、体积小、无淋巴结转移者通常预后较好[23]。既往研究已证实转移灶切除术对 RCC 患者的有效性[24]-[32]。

与转移灶切除术后良好预后相关的因素包括: 完全切除[24]-[30]、年龄较轻[32]、原发灶切除至转移灶切除的间隔时间较长[25] [26] [29]、异时性转移[30]、肺转移灶数量少[24]-[26]、转移灶体积小[24] [27] [30] [31]及淋巴结阴性[25] [27] [30] [31]。因此, 一旦发生转移, 应全面评估患者全身状况及转移灶特征, 积极考虑手术切除。

RCC 晚期 10 年复发率达 11% [33], 建议术后至少进行 10 年的影像学随访(如每 6~12 个月行 CT 检查) [34]。基于本病例经验, 我们强调定期、持续的 CT 随访对于早期发现转移、及时治疗、延长生存至关重要。研究局限性为本报告为单一个案, 结论外推性有限; 转移的具体分子机制未深入探讨; 缺乏长期生存数据。未来需更大样本的病例系列研究以明确腰大肌转移的临床病理特征。

根据 EAU 和 NCCN 最新指南, 寡转移性 RCC 的管理强调最大化无治疗间期(TFI)和局部控制。虽然系统治疗(ICIs/TKIs)是转移性疾病的基础, 但首选系统治疗伴随累积毒性, 且极少能彻底根除肉眼可见的病灶。另一方面, 立体定向身体放射治疗(SBRT)局部控制率高且无创, 但无法提供明确的组织病理学分期, 且常受限于肿瘤大小或与危及器官的毗邻关系。

在本病例中, 每一个临床决策节点的制定都仔细权衡了这些替代方案与手术干预的利弊。之所以选择手术而非首选系统治疗, 是为了尽可能实现完全缓解并最大化无治疗间期(TFI), 从而使患者免受即刻的系统性毒性反应。尽管应对复杂的解剖结构必然伴随较高的围手术期并发症风险(正如本例所示), 但在技术可行的情况下, 彻底的手术切除仍是经过严格筛选的患者实现长期治愈目标的最确切手段。

3. 结论

本文报告一例罕见的 RCC 病例, 在腹腔镜肿瘤切除术后出现对侧腹膜后脂肪、肾上腺、腰大肌及肺转移, 其中肾癌转移至对侧腰大肌系首次报道。本例表明 RCC 的播散具有不可预测性。因此, RCC 患者应定期接受 CT 扫描, 以便早期发现转移、尽早治疗、延长生存。

声明

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