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<td>Author(s)</td>
<td>Ishikawa, Jiro; Umezu, Kei-ichi; Yamashita, Hideyuki; Maeda, Sakan</td>
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Kyoto University
SOLITARY BRAIN METASTASIS FROM RENAL CELL CARCINOMA 14 YEARS AFTER NEPHRECTOMY: A CASE REPORT

Jiro Ishikawa and Kei-ichi Umezu
From the Department of Urology, Kobe National Hospital

Hideyuki Yamashita
From the Department of Neurosurgery, Kobe National Hospital

Sakan Maeda
From the Department of Pathology, Kobe University School of Medicine

We report a case of solitary brain metastasis from renal cell carcinoma (RCC) 14 years after nephrectomy. A 46-year-old female had sudden onset of headaches, aphasia, gait disturbance and right hemiparesis. A brain CT revealed a cystic tumor in the left parietal area, which was surgically removed completely. Microscopic appearances of the brain tumor were similar to those of the primary RCC. Positive immunoreaction for epithelial membrane antigen (EMA) and keratin confirmed the diagnosis of metastatic RCC. This is the second case of solitary brain metastasis from RCC occurring more than 10 years after nephrectomy.

Key words: Brain metastasis, Late recurrence, Renal cell carcinoma

INTRODUCTION

Late recurrence after removal of the primary tumor occurs as a characteristic of renal cell carcinoma (RCC). McNicohls et al. reported that 18 of 158 (11%) patients with RCC showed late recurrence (more than 10 years after nephrectomy). Late recurrence of RCC involves various organs including renal fossa, lung, bone, pancreas.
Fig. 1. An enhanced CT scan of the brain revealed a multilobular cystic tumor in the left parietal area.

DISCUSSION

RCC is a highly metastatic tumor; about 30% of the patients with RCC have evidence of distant metastasis at the time of the first examination. Saitoh examined the mode of distant metastasis of RCC in 1,451 autopsy cases, and found 1,373 cases (89%) which had one or more distant metastases; lungs, lymph nodes, bone and liver were the common sites of the metastasis; less commonly involved organs were adrenal gland, pancreas, and contralateral kidney; brain metastasis was observed in 11% of the autopsy cases with RCC. Gay et al. reported that 39 of 926 (3.9%) of patients with RCC had clinically manifested brain metastasis; all patients, except 2 with incomplete record, had evidence of widespread disease; the median time interval between the initial diagnosis and the discovery of brain metastasis was 65.5 weeks ranging from 0 to 462 weeks.

Hemangioblastoma of the central nervous system is sometimes indistinguishable from brain metastasis from RCC. Immunohistochemical staining of the tumor using antibodies against epithelial membrane antigen is useful in the differential diagnosis; EMA is positive in metastatic RCC as observed in our case but negative in hemangioblastoma. Late recurrence of RCC involving the brain is extremely rare. We are aware of only one other case of solitary metastasis from RCC more than 10 years after nephrectomy. The mechanism of late recurrence of RCC is not known. Nakano et al. speculated that the loss of the patient's hormonal balance or immune suppression against tumor cells may be a causative factor. In summary, we report a case of solitary brain metastasis from RCC 14 years after nephrectomy. The mechanism of late recurrence of RCC is not known. Nakano et al. speculated that the loss of the patient's hormonal balance or immune suppression against tumor cells may be a causative factor. In summary, we report a case of solitary brain metastasis from RCC 14 years after nephrectomy, which was successfully treated by surgical excision. Long term follow up is inevitable for patients with RCC treated by curative nephrectomy.

REFERENCES

Ishikawa, et al. : Late brain metastasis from RCC


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和文抄録

腫摘後14年目に孤立性脳転移をきたした腎細胞癌の1例

国立神戸病院泌尿器科 (医長: 橋本敬一)
石川 二朗, 梅津 敬一

国立神戸病院脳神経外科 (医長: 山下英行)
山 下 英 行

神戸大学医学部第2病理学教室 (主任: 前田 盛教授)
前 田 盛

46歳の女性にみられた腫摘後14年目に孤立性脳転移をきたした腎細胞癌の1例を報告する。
患者は突然、頭痛、失語、歩行障害、右片麻痺をきたした。脳CTでは左側頭部に膿胞性腫瘍を認め、これも外科的に完全に切除された。

脳腫瘍の顕微鏡的所見は、腎細胞癌の原発巣と類似していた。脳腫瘍は免疫組織学的にEMAとケラチン陽性で、転移性腎細胞癌の診断が確認された。

本症例は腫摘後10年以上に至って孤立性脳転移をきたした第2例目の症例である。

(泌尿紀要 36: 1439-1441, 1990)