

Renal Hücreli Kanser Nedeniyle Nefrektomi Yapılan Olguda 16 yıl Sonra Gelişen İzole Beyin Metastazı

Solitary Cerebral Metastases from Renal Cell Carcinoma 16 years After Nephrectomy

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ÖZET

Tanıdan 10 yıl sonra gelişen lokal nüks ve uzak metastaz, renal hücreli kanserin (RCC) geç rekürrens olarak adlandırılır. Geç rekürrens %4.7-11 oranında görülmektedir. Bu olgu sunumunda RCC nedeniyle nefrektomi yapılan ve 16 yıl sonra soliter beyin metastazı gelişen 54 yaşındaki kadın hastayı tartışmayı amaçladık. İntrakranial tumor nedeni ile gross total eksizyon yapıldı. Patolojik tanısı RCC metastazı olarak saptandı. Yapılan immünohistokimyasal incelemede beyin metastazı ile 16 yıl önce yapılan nefrektomi patolojisinin aynı olduğu saptandı. Postoperatif hastaya gamma-knife uygulandı. Hastaya interferon başlandı. Erken evre RCC hastalarında da yıllık kontrollerin >10 yıl sonra da devam edilmesi ile nüksün erken saptanması ile cerrahi rezeksiyon şansı sağlayabilir. Gelecekte yapılan çalışmalarla, gerçek rekürrens gelişiminde rol alan risk faktörlerinin belirlenmesi uzun takip süresi gereken hastaları belirleme de katkı sağlayacaktır.

Anahtar Kelimeler: Geç Rekürrens; Renal Hücreli Kanser; Beyin Metastazı

ABSTRACT

Late recurrence of RCC was described as developing local recurrence or distant metastasis with a latency period of more than 10 years after nephrectomy. The rate of late recurrence after nephrectomy ranges from 4.7% to 11%. Here we report the case of a 54 year-old white female with RCC who developed brain metastasis 16 years after nephrectomy. Gross total resection of intracranial tumor was performed. Histologic examination and immunohistochemical profile of the primary renal tumor and metastatic cranial tumor showed identical morphology and immunophenotype. She was treated with gamma knife stereotactic radiosurgery. Postoperatively, the patient received interferon. Long term surveillance in RCC could be important for earlier detection of recurrence and provide chance for surgical resection. Future studies and long follow up are needed to identify risk factors for late recurrence in patients with RCC.

Key Words: Late Recurrence; Renal Cell Carcinoma; Brain Metastasis.

Introduction

Brain metastasis in patients with renal cell carcinoma (RCC) is associated with poor prognosis(1). Single brain metastasis of RCC is very rare with a reported incidence of 0.6-2.5% in large autopsy series(2). Late recurrence of RCC was described as developing local recurrence or distant metastasis with a latency period of more than 10 years after nephrectomy (3). The rate of late

recurrence after nephrectomy ranges from 4.7% to 11% (1,4). Primary tumor size, stage and histologic subtype were reported as predictive factors associated with late recurrence (5). Here we report the case of a 54 year-old white female with RCC who developed brain metastasis 16 years after nephrectomy.



Case Presentation

A 54 year-old caucasian female was referred to the neurology department complaining of a 8-month history of amnesia. Neurological examination was performed. No sensory or motor deficits were appreciated. She had previously had a right nephrectomy due to RCC 16 years ago. The kidney tumor which was removed in 1998 showed a grade 1 clear cell RCC. The tumor diameter was 4 cm and limited to kidney without lymph node involvement or metastases to distant organs. On magnetic resonance imaging, an intensely enhancing metastatic mass, with some cystic appearing areas in the right temporal lobe compressing the temporal horn of the right lateral ventricle was observed (Fig. 1).

Gross total resection of intracranial tumor was performed. Histologic examination yielded a diagnosis of clear cell RCC (Fig. 2). Histologic examination and immune histochemical profile of the primary renal tumor and metastatic cranial tumor showed identical morphology and immune phenotype. A complete work up, including computed tomography (CT) scans of chest and abdomen, and positron emission tomography (PET) proved to be negative in detecting any other tumoral lesion. Subsequently, she was treated with gamma knife stereotactic radiosurgery. Postoperatively, the patient received interferon- alpha.

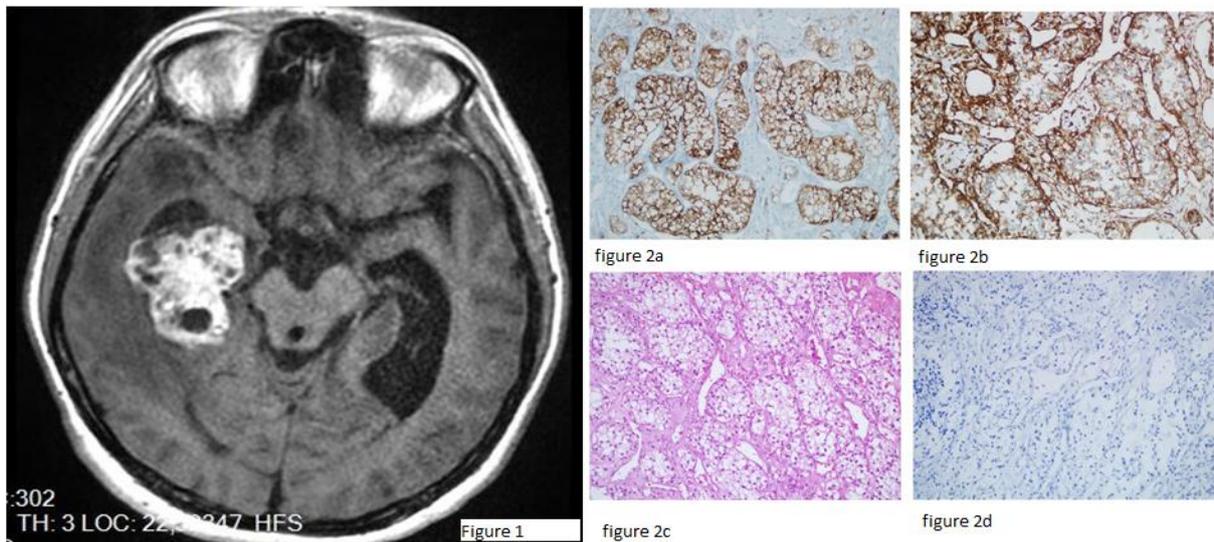


Figure 1) Postcontrast T1 weighted image in the axial plane shows an intensely enhancing metastatic mass, with some cystic appearing areas in the right temporal lobe compressing the temporal horn of the right lateral ventricle. Note the slight uncus herniation due to the mass effect and accompanying edema. **2)** Immunohistochemical profile of the metastatic cranial tumor

Discussion

Approximately 30-40% of patients with early stage RCC will develop local or distant recurrence after surgery. Of them only 1.5% to 3.5% have a solitary metastasis (6,7). Surgical resection is appropriate in selected patients with metastatic RCC. The biologic behavior of RCC is unique and different. The late recurrence is one of the specific entity with a rate of 10.5%-21.6% at 15 and 20 years respectively (8). Nakona et al. revealed that two (4.3%) of 43 patients had late recurrence 10 years after nephrectomy (9). McNichols et al. reported that the incidence of late

recurrence was 11% in patients with RCC (3). A retrospective study including 470 patients was reported in 2011. Of the 470 patients who underwent curative surgery without recurrence within 10 years after the initial treatment, 30 (6.4%) had late recurrence. The most common late recurrence sites were lung (n=16), and bone (n=6). Only four patients developed brain metastasis (8).

Data on the risk factors for late recurrence is limited. A retrospective review of 1454 patients reported by Kim SP et al. demonstrated that 4.3% patients developed late recurrence (>5 years). Primary tumor size



(increasing tumor size), stage (pT3-4 versus pT1-2), histologic subtype (clear cell or collecting duct histologic features) were predictive factors associated with late recurrence (5).

A long disease free interval was considered to be a favorable prognostic factor in metastatic RCC (10). The overall survival was affected by the age at initial nephrectomy, not by late recurrence itself. The nephrectomy bed, the lung and the bone were the most common sites of late recurrences. The treatment options for curing late recurrence were surgery, molecular targeting therapies (11,12). Previous studies revealed that patients with brain metastasis of RCC respond well to the surgery and stereotactic radiosurgery. The role of interferon- alpha and tyrosine kinase inhibitors after solitary metastasectomy is unknown. Follow-up guidelines were recommended for surveillance of patients with early stage RCC. The risk factors associated

with late recurrence were important. But the predictive factors and clinical course of the late recurrence have not been determined yet. Miyao N et al. suggested that follow up of RCC ≥ 10 years after nephrectomy. Abdominal tomography or abdominal ultrasonography and pulmonary examination with chest x-ray or tomography should be recommended annually (8). For brain and bone metastases symptoms based follow up is important.

After an initial 5-year postoperative disease free interval the late recurrence rate was reported as 6-20% (8,13). The most recurrences were distant rather than local. Long-term surveillance in RCC could be important for earlier detection of recurrence and provide chance for surgical resection. Future studies and long follow up are needed to identify risk factors for late recurrence in patients with RCC. Our case emphasizes the importance of lifelong follow up after initial diagnosis of RCC.

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