Solitary Pancreatic Metastasis from Renal Cell Carcinoma 14 Years after Nephrectomy: A Case Report

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We report a case of solitary pancreatic metastasis from renal cell carcinoma which occurred 12 years after radical nephrectomy. The patient had no symptom. The lesion was unrecognized until 2 years later. Distal pancreatectomy was performed and the patient was still doing well 2 years after that operation. We also review the relevant literatures about prognosis, surveillance and choice of treatments for pancreatic metastasis from renal cell carcinoma.

Keywords : *Solitary pancreatic metastasis, Renal cell carcinoma, Distal pancreatectomy*

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The most common metastatic sites of renal cell carcinoma are the lung, bone, lymph node, brain and liver[1-3]. One of the specific manifestations of renal cell carcinoma is its ability to recur many years after nephrectomy, even from early lesions[4,5]. However, pancreatic metastasis from renal cell carcinoma is rare[6]. In the world literature, only 13 previous cases of solitary pancreatic metastasis from renal cell carcinoma occurring more than 10 years after nephrectomy were reported. Herein, the authors present a case of solitary renal cell carcinoma metastasis to the pancreas which occurred 12 years after radical nephrectomy. Though, the authors missed the diagnosis and delayed the treatment for 2 years, the patient is still doing well at the time of presentation 2 years post distal pancreatectomy.

Case Report

In 1987, a 66 year-old woman underwent left radical nephrectomy for renal cell carcinoma at our institute. At that time, pathological staging was pT3b, N0, M0 (AJCC 1997). She remained well on annual follow up which included chest x-ray and abdominal computerized tomographic (CT) scan. In 1999, a 3 cm. solid mass at the tail of the pancreas occurred on the CT scan check up but it was unrecognized by the clinician (Fig.1). This tumor was recognized two years later (2001) when the size had increased to 5 cm. Physical examination was unremarkable. CA 19-9 was within the normal range.

Exploratory laparotomy and distal pancreatectomy were performed. Pathological examination revealed renal cell carcinoma (clear cell type) metastasis to the pancreas. The patient is still doing well at the time of presentation.

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Discussion

Renal cell carcinoma may behave in an unpredictable manner. Some have idiopathic regression and some have late recurrence. Of the patients surviving more than 10 years after nephrectomies, 11% had late recurrence[7]. Metastatic spread of renal cell carcinoma may occur in any organ. Common sites of metastases include lymph node, lung, bone, adrenal gland, liver and brain[1-3]. Pancreatic metastasis of renal cell carcinoma is rare. Only 1.3-1.9% of pancreatic metastases were detected in autopsy of the patients who previously had renal cell carcinoma[8-9]. The longest interval from nephrectomy to the detection of pancreatic metastases was 27 years[10]. Pancreatic metastasis of renal cell carcinoma is asymptomatic in about 50% of cases[4]. In the presented case, the diagnosis was made by routine CT scan during follow up.

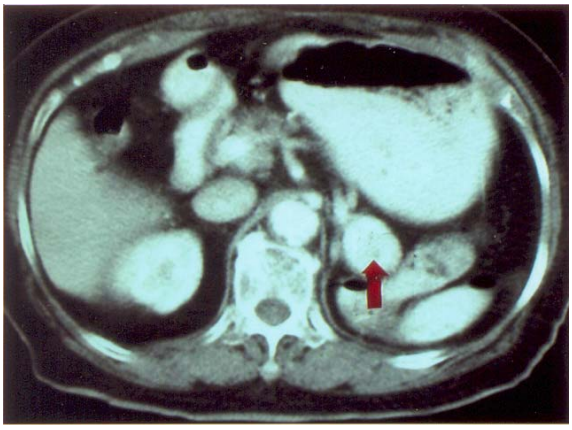

Fig. 1 Abdominal CT scan showed a 3 cm enhanced tumor at the tail of the pancreas (arrow) after nephrectomy 12 years but it was not detected

The preoperative diagnosis of pancreatic metastasis begins with suspicion based on a history of cancer. On imaging CT scan, a highly vascularized tumor is more likely to represent metastasis than primary pancreatic cancer which tends to be relatively hypovascular[11]. The most reliable method of diagnosis remains pancreatic biopsy (specificity 100%) but due to the highly vascular structure of the lesion there is a risk of hemorrhage[12-14]. The authors think that it is not necessary to biopsy a patient who is suitable for surgery.

The mode of spreading of renal cell carcinoma to the pancreas remains unclear. The possible routes are lymphatic and hematogenous. Nagakawa et al[15,16] reported that there are some lymphatic routes from the head of the pancreas to the dorsal site of the renal artery. Some metastases are explained by venous spread via portocaval shunts[17].

The prognosis of metastatic renal cell carcinoma is usually poor. In the case of pancreatic metastases, the average prognosis is better than primary pancreatic carcinoma. Freed[18] and Tolia and Whitmore[19] reported that the most effective treatment is to resect the metastastic renal cell carcinoma when it is solitary since there are no other effective treatments. Tuech et al[20] reported a 68% 5-year survival rate after surgical resection of pancreatic metastasis. To the best of our knowledge, pancreatectomy has been performed to extirpation in almost all reported cases of solitary pancreatic metastasis (Table 1). In the presented case, the pancreatic lesion was unrecognized until 2 years later. The tumor grew slowly at an average of 1 cm per year and other metastatic lesions were not detected. Two years after distal pancreatectomy, the patient is still doing well without any evidence of tumor recurrence. These phenomena support the good prognosis of pancreatic metastasis of renal cell carcinoma and the authors recommend aggressive surgical resection. The role of adjuvant therapy after pancreatic resection is not clear because the condition of solitary pancreatic metastasis of renal cell carcinoma is very rare. Recent advance in immunotherapy, including interferon-α and interleukin-2, have provided some improvement in metastatic renal cell carcinoma. However, there are also some serious side effects from this treatment[29,30].

Conclusion

The authors advise to using imaging modality during routine follow up to detect asymptomatic metastatic renal cell carcinoma. The follow up in the case of renal cell carcinoma should be life long. The authors also recommend aggressive surgical resection of pancreatic metastasis when possible since the surgical removal of a metastatic lesion may prolong the survival rate.

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Table 1. Clinical features of solitary pancreatic metastasis from renal cell carcinoma, occurring more than 10 years after nephrectomy, reported in medline

No.	First author (year)[Ref.]	Age/ sex	Primary location	Pancreatic location	Size (cm)	Intervention	Disease-free Interval	Outcome mt.(s) (years)
1	Jenssen (1952)[21]	?/M	L	Head	Unknown	PD	14	12 mts,alive
2	Guttmann (1972)[22]	66/M	R	Head	Unknown	TP	13	2 mts,alive
3	Audisio (1985)[23]	46/F	R	Head	8.0	PD	20	12 mts,alive
4	Carini (1988)[24]	54/M	Bilat	Head	7.0	PD	11	13 mts,alive
5	Temellini (1989)[25]	70/M	L	Head	5.0	PD	25	Unknown
6	Fullarton (1991)[10]	70/F	R	Tail	4.0	DP	27	3mts,alive
7	Rypens (1992)[26]	68/M	R	Tail	5.0	DP	21	Unknown
8	Paz (1996)[27]	76/F	L	Body	4.5	DP	21	Discharge on POD 15
9	Tuech (1999)[20]	65/M	Unknown	Unknown	Unknown	PD	10	27 mts,alive
10	Kassabian (2000)[5]	57/M	R	Head	4.2	PPPD	12	24 mts,alive
11	Faure (2001)[4]	65/M	R	Unknown	Unknown	PD	10	30 mts,alive
12	Faure (2001)[4]	67/F	L	Unknown	Unknown	PD	10	24 mts,alive
13	Uemura (2003)[28]	70/M	R	Body	1.5	Extirpation	17	14 mts,alive
14	Present case	80/F	L	Tail	5.0	DP	12	24 mts,alive

R = right; L = left; Bilat = bilateral; PD = pancreaticoduodenectomy; DP = distal pancreatectomy; PPPD = pylorus-preserving pancreaticoduodenectomy; POD = postoperative day; mt (s) = month (s)
[Modified from Uemura et al. [28]]

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มะเร็งเนื้อไตกระจายมาตับอ่อนหลังผ่าตัดนาน 14 ปี: รายงานผู้ป่วย 1 ราย

กิตตินัฐ กิจวิกัย, กฤษฎา รัตนโอฬาร

รายงานผู้ป่วยที่เป็นมะเร็งเนื้อไตกระจายมาที่ตับอ่อนส่วนปลายหลังผ่าตัดไตแบบเรดิคัลนาน 12 ปี ตรวจพบโดยการทำเอ็กซเรย์คอมพิวเตอร์ช่องท้อง ซึ่งในครั้งนั้นแพทย์พลาดการวินิจฉัย แต่สามารถวินิจฉัยได้หลังจากนั้นอีก 2 ปีต่อมา ด้วยการทำเอ็กซเรย์คอมพิวเตอร์ช่องท้องเช่นกัน ผู้ป่วยไม่มีอาการผิดปกติ การรักษาทำโดยการผ่าตัดตับอ่อนส่วนปลาย หลังการผ่าตัดผู้ป่วยสบายดีตลอดระยะเวลา 2 ปี จนถึงปัจจุบัน ทั้งนี้ได้มีการวิเคราะห์เกี่ยวกับการพยากรณ์โรค การรักษา การติดตามการรักษา ของผู้ป่วยที่เป็นมะเร็งเนื้อไตกระจายมาที่ตับอ่อน จากวรรณกรรมที่ได้เคยมีรายงานมาก่อนหน้านี้ด้วย