

Research Article

A very rare case report:Renal cell carcinoma metastasizing to the tonsil after 5 years of radical nephrectomy

Yücel Kılıçkap¹, Mehmet Aktaş², Lezgin Kıran², Abdullah Gedik², M.Kamuran Bircan²

Department of Otolaryngology, Special Remedy Hospital

Department of Urology, Faculty of Medicine, Dicle University, Diyarbakir, Turkey

Corresponding author:

Abdullah Gedik, MD

Department of Urology, University of Dicle, Diyarbakır, Turkey

Abstract : Renal cell carcinoma (RCC), is the most common kidney cancer, that accounts for approximately 90% of all adult renal malignancies with 30% of patients presenting with metastasis at initial diagnosis. There are several reports of metastases developing after 10-20 years even if curative nephrectomy has been made. Clear cell (60%-75%), papillary (10%-15%), chromophobe (5%), and collecting duct carcinoma are well characterized subtypes of RCC. Renal cell carcinoma mainly metastasizes to the lungs, the bones, the liver, the lymph nodes and brain. Metastasis to the head and neck region is rare. In this case report we present a tonsil metastasis after 5 years of nephrectomy. Surgery with histopathological examination confirmed that metastasis of clear cell carcinoma. The patient was successfully treated by surgery and referred to oncology. Later he was out of our follow-up.

Key words: Renal cell cancer, Tonsil metastases, Metastasectomy

1.Introduction

Renal cell carcinoma accounts for 2.4% of total cancer patients worldwide [1]. In primary, approximately 30% of patients with renal cell carcinoma have distant metastasis at initial diagnosis. Renal cell carcinomas metastasize mostly to the lungs, bones, lymph nodes, liver, adrenal and brain respectively [2]. And head and neck metastases are very rare possible locations of parotid gland, thyroid, paranasal sinuses and skull.

Until now there are only a few cases published about tonsillar metastasis due to renal cell cancer. Additionally, tonsillar metastasis are very rare. Malignant melanoma, renal cell carcinoma and lung carcinoma have been described as the most common primaries of tonsillar metastases [3].

2.Case report

In October 2018, 63 years old man admitted to our department due to pharyngodinia, dysphagia and difficulty of swallowing for two months. He had used antibiotics before our physical examination.

He had right nephrectomy history due to renal mass in right kidney. In May 2013 he had radical nephrectomy because of 9.5 cm renal mass arising from upper pole right kidney.

The pathology was clear cell carcinoma invading perinephritic adipose tissue and renal vein with Fuhrman nuclear grade 3. And there was one reactive lymph node in hilar region so TNM classification was T3N1M0.

Pharyngoscopy revealed an exophytic, grayish and edematous mass on the right tonsil (Fig.1). Because of the patient's general health we have decided to

excision. Complete surgical excision was performed which revealed metastatic RCC (fig 2) and (fig 3).

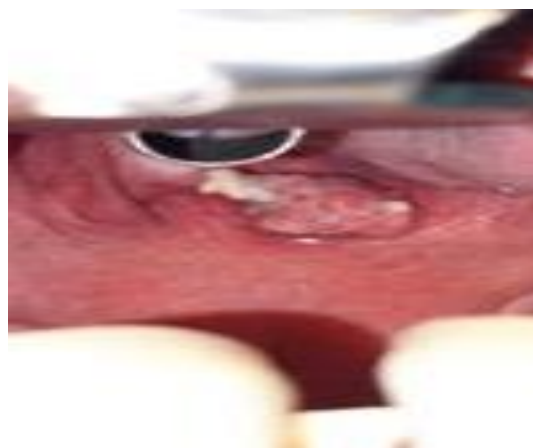


Figure 1. Pharyngoscopy is showing 3x2.5x1.3 cm mass in the right tonsil

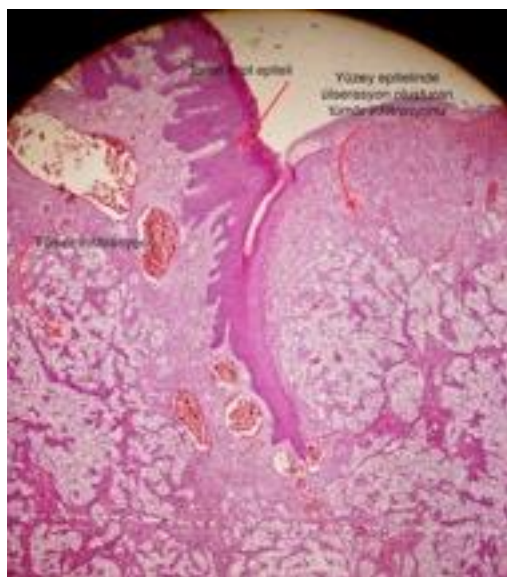


Figure 2. Microscopic examination of the specimen shows tumour infiltration below tonsil crypt epithelium(H&E X40)

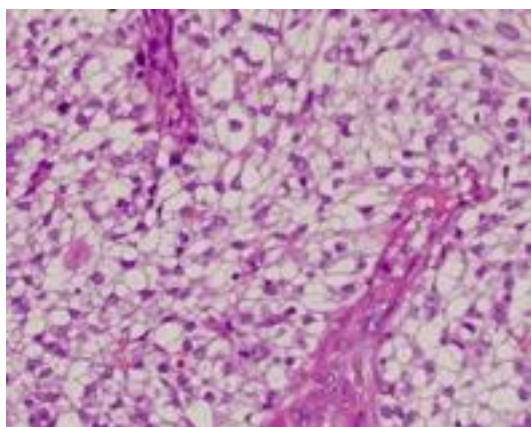


Fig.3 Clear tumour cells with centrally located nuclei and accompanied capillary vessels

3. Discussion

RCC is almost %3 of the all total cancer patients all over the world.Because of the kidney's position it usually remains asymptomatic.Only %10 of the patients have flank pain,macroscopic hematuria and palpabl abdominal mass known as classic symtom triad.%30 of the patients might have paraneoplastic symptoms such as anemia,hepatic disfunction,fever,hipercalcemia,amiloidosis,eritrositosis and cachexia [4].

Although it has been said that it's very rare in previous reports but RCC is responsible 8-15% of all cases of metastasis in head and neck region [5].We have searched pubmed for metastasising to the tonsil from renal cell cancer and found only 5 cases.Metastases to head and neck region usually occur from thyroid gland and upper aero-digestive tract.Among infraclavicular primary neoplasms the kidney is the third after breast and lungs to metastasize to non-thyroid head and neck region.RCC is the most common malignancy to metastasize to the thyroid gland [6].

RCC can metastasize to head and neck region in a several ways.After renal vein involvement tumour cells can follow caval way to metastasize head and neck region after lung and liver metastasis.Without lung and liver involvement,tumour cells must have followed Batson's venous plexus. Batson's venous plexus communicates epidural and vertebral venous plexus directly to the pelvic veins, intercostal veins, the azygous vein and vena cava.So it causes an easy way to spread to head and neck region without lung involvement [7].If intraabdominal and intrathoracic pressures increase tumours cells can follow this way and by-pass the pulmonary capillar filtration.Apperantly this explains the way of metastasis in our patients.

There is no common consensus to treat such patients.The treatment depends on characteristic of tumour and patient's status.Such as performance status,patient's choice,risk factors,nature of metastasis [8].The treatment of such metastases include metastasectomy whenever possible and palliative chemotherapy,radiotherapy.Surgery is recommended as the first option of treatment if there is no other organ involvement.Tzzy et al. showed in their meta-analysis that complete metastasectomy from head and neck region has superiority to incomplete metastasectomy and no metastasectomy.The median overall survival was significantly higher in complete metastasectomy patients [8].

Although RCC is known radio-resistant tumour but metastatic patients benefit with radiotherapy [9].Radiotherapy can be used to control symptoms or facilitating surgical excision.

Although there is a good initial treatment but 2 year of survival is 41% and 5 year survival is only 13% [10].

4. Conclusions

Although metastatic renal cell carcinom to the head and neck region is very rare but the physicians should also check the unusual sites of metastasis during follow-up.And such patients who present with head and neck-related symptoms must be consulted with otolaryngologist.The physicians should be aware of these type manifestations.

References

1. J. Ferlay *et al.*, "Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012," *Int. J. Cancer*, vol. 136, no. 5, pp. E359-386, Mar. 2015.
2. M. Bianchi *et al.*, "Distribution of metastatic sites in renal cell carcinoma: a population-based analysis," *Ann. Oncol.*, vol. 23, no. 4, pp. 973-980, Apr. 2012.
3. H. Wang and P. Chen, "Palatine tonsillar metastasis of rectal adenocarcinoma: a case report and literature review," *World J Surg Oncol*, vol. 11, p. 114, May 2013.
4. P. J. Gold, A. Fefer, and J. A. Thompson, "Paraneoplastic manifestations of renal cell carcinoma," *Semin. Urol. Oncol.*, vol. 14, no. 4, pp.

- 216–222, Nov. 1996.
5. K. M. Pritchyk, B. A. Schiff, K. A. Newkirk, E. Krowiak, and Z. E. Deeb, “Metastatic renal cell carcinoma to the head and neck,” *Laryngoscope*, vol. 112, no. 9, pp. 1598–1602, Sep. 2002.
6. A. Machens and H. Dralle, “Outcome after thyroid surgery for metastasis from renal cell cancer,” *Surgery*, vol. 147, no. 1, pp. 65–71, Jan. 2010.
7. M. D. Gottlieb and J. T. Roland, “Paradoxical spread of renal cell carcinoma to the head and neck,” *Laryngoscope*, vol. 108, no. 9, pp. 1301–1305, Sep. 1998.
8. T.-N. Liou, N. R. Scott-Wittenborn, D. Kallogjeri, J. E. Lieu, and P. Pipkorn, “Survival of renal cell carcinoma metastatic to nonthyroid head and neck region: A systematic review,” *The Laryngoscope*, vol. 128, no. 4, pp. 889–895, Apr. 2018.
9. M. Massaccesi *et al.*, “Late tonsil metastases from renal cell cancer: a case report,” *Tumori*, vol. 95, no. 4, pp. 521–524, Aug. 2009.
10. H. Hsiang-Che, K.-P. Chang, T. Chen, W. Kwai-Fong, and S.-H. Ueng, “Renal Cell Carcinoma Metastases in the Head and Neck,” *Chang Gung Medical Journal*, Jan. 2006.