Abstract:
Metachronous metastasis to testes from a renal cell carcinoma is rare, with only a few cases described so far in the literature. We here describe a case of a fifty five years old gentleman who underwent left radical nephrectomy for left renal cell carcinoma and after a disease free interval of two years, presented with left testicular swelling. As he had no evidence of disease elsewhere and his serum markers (for testicular tumour) were also normal, he underwent Chevassus procedure, and was detected to have metastatic involvement of left testis from a renal cell carcinoma.

Keyword:
Renal cell carcinoma, metastases to testes, metachronous.

Introduction:
As per the W.H.O Classification metastases to testes account for less than 3-4% of testicular neoplasms\(^1\). The primary malignancies causing testicular metastasis, arise most commonly from prostate gland followed by stomach and lung\(^2\). A detailed search of literature revealed only a few case reports of renal cell carcinoma metastasising to testis.

Case report:
A 55 years old gentleman, presented with progressive enlargement of the left testis of 2 months duration. He had undergone left radical nephrectomy for a renal tumour 2 years ago (HPE showed a clear cell variant of renal cell carcinoma invading renal vein, pT3N0M0) and was on regular follow up. On examination, he was found to have multiple nodular lesions in the left testis. Rest of his physical examination was unremarkable. Ultrasound testis revealed a normal right testis with multiple hypoechoic lesions in the left testis, largest measuring about 3x2 cms. The serum levels of tumour markers (beta HCG, AFP, LDH) were within normal limits. CT abdomen and pelvis and chest x-ray did not
show any abnormality. He underwent Chevas-sus procedure, which was suggestive of metastatic deposits from renal cell carcinoma, clear cell variant. In view of the probable solitary site of metastasis, we proceeded with left high inguinal orchidectomy. The final histopathology showed multiple nodules in the testis, largest measuring about 2x2x1.5 cm, tumour was found involving the capsule of the testis, with normal testicular parenchyma identifiable in between.

Following surgical resection, patient is on follow up. The patient is doing well at 3 months post diagnosis of the testicular metastasis.

Discussion:
Renal malignancy has tendency to metastasise to lung, bone and to unusual sites such as conjunctiva, orbit, nasal and paranasal cavities, tongue, heart, testes etc. The incidence of metastatic deposits in the testis is very low (0.06 to 1.6 %)\(^{(1)}\). In an autopsy study of 1451 renal cell carcinoma patients, Saitoh et al found 81% of the patients had multiple sites of metastatic involvement, but none had involvement of testis. First report of testicular involvement by renal cell carcinoma was described by Bandler et al in 1946, a case of testicular involvement antedating the diagnosis of renal cell carcinoma\(^{(3)}\). The testicular metastases can present synchronously with the renal primary tumors or precede the diagnosis of renal malignancy. Metachronous involvement of testis, post radical nephrectomy, after a long disease free interval of almost 7 years have also been described in literature\(^{(7)}\). A metachronous metastases in renal cell carcinoma has better prognosis than a synchronous presentation. However, amongst metachronous renal metastases a disease free interval to less than one year between primary tumor and metastases is associated with poorer prognoses. Several studies have showed that in the setting of a solitary metastases, metastasectomy has a curative potential and is associated with long-term survival with median survival varying from 23 months to 41 months. It remains a topic of debate whether metastasectomy is feasible for the patients who have multiple lesions of RCC metastasis. There are small studies which have showed that, compared to resection of non-solitary lesions, resection of solitary metastasis did not necessarily lead to longer survival. Hence even if multiple site of metastases are present and if all these are potentially resectable, every attempt must be made to resect these tumours, particularly in young patients with Karnofsky’s performance score>70%. The subtype of renal cell carcinoma which metastasises to the testis is almost always clear cell carcinoma and rarely the chromophobe subtype\(^{(7,9)}\). Metastases to testes occurs commonly on the same...
side as the renal tumour (1,4,5,6) and are often seen on the left side than on the right. Retrograde venous extension of renal malignancy has been implicated in causing metastases to testes. However this hypothesis fails to explain the rare instances of metastases to contralateral testes. As of now, the exact mechanism by which renal cell carcinoma metastasizes to testes is not fully elucidated. Also it is not yet clear if metastases to testes has any worse prognosis than metastases to other sites.

Conclusion:
Metastases to testes are rare. And even rarer are metastases from renal primary which occur metachronously. Such rare instances of unusual metastases may give insight into a tumour’s natural history and must be reported as often as feasible.

Bibliography:


3. Clinical and pathological Reports, Cancer Res 1948;8:90-96. [Internet]. [cited 2014 Jul 3]. Available from: http://cancerres.aacrjournals.org/content/8/2/90.full.pdf


