The Journal of Laryngology & Otology (2014), ***128***, *482–483*.

doi:10.1017/S0022215114000644

Rare occurrence of renal metastasis from thyroid carcinoma: lessons not to forget in evaluation

Dear Sirs,

I am writing regarding a recent article entitled 'Clinicoradiological characteristics of patients with differentiated thyroid carcinoma and renal metastasis: case series with follow up' by Kand and Basu.[1] In this paper, the authors attempted to demonstrate clinicoradiological characteristics in a series of patients with rare occurrence of renal metastasis from primary thyroid carcinoma. It was surprising that a journal of your repute accepted this paper in which pathological proof of renal metastasis was lacking in half of the patients (two of four patients).

Firstly, the authors' claim that the diagnosis of renal metastasis was primarily confirmed by radioiodine whole-body scintigraphy may not be true. It is well known that radioiodine undergoes physiological excretion through the renal system. Moreover, certain renal abnormalities such as cysts are known to have false positive radioiodine uptake.[2–5] Even if an ultrasound or computed tomography correlation has been obtained, fine needle aspiration of the renal lesion is imperative to establish the diagnosis of renal metastasis.

Secondly, variable expression of sodium iodide symporter in different metastatic sites, or selective loss of sodium iodide symporter expression, could explain the rarity of detection of renal metastatic lesion from a primary site in the thyroid.[6] This is different from a true 'flip-flop' where a lesion that was initially concentrating radioiodine subsequently loses this ability as it undergoes dedifferentiation. No such lesion (i.e. initially radioiodine avid and later (in follow-up scans) fluorine-18 fluorodeoxyglucose avid) was reported by the authors in this paper.

Thirdly, the thyroglobulin secreting nature of these lesions is of immense clinical relevance, as a lower level of thyroglobulin on follow up would demonstrate treatment response. Hence, to state the value of thyroglobulin as more than 250 ng/ml, and not the actual value, may not be clinically relevant in the follow up of these patients.

G MALHOTRA
Radiation Medicine Centre, Bhabha Atomic Research Centre, Parel, Mumbai, India

References

1 Kand P, Basu S. Clinicoradiological characteristics of patients with differentiated thyroid carcinoma and renal metastasis: case series with follow up. *J Laryngol Otol* 2014;**128**:203–8
2 Sutter CW, Masilungan BG, Stadalnik RC. False-positive results of I-131 whole-body scans in patients with thyroid cancer. *Semin Nucl Med* 1995;**25**:279–82
3 Bakheet SM, Hammami MM, Powe J. False-positive radioiodine uptake in the abdomen and pelvis: radioiodine retention in the kidneys and review of the literature. *Clin Nucl Med* 1996;**21**: 932–7
4 Oh JR, Ahn BC. False-positive uptake on radioiodine whole-body scintigraphy: physiologic and pathologic variants unrelated to thyroid cancer. *Am J Nucl Med Mol Imaging* 2012;**2**:362–85
5 Campenni A, Ruggeri RM, Giovinazzo S, Sindoni A, Santoro D, Baldari S. Radioiodine uptake in a renal cyst mimicking a metastasis in a patient affected by differentiated thyroid cancer: case report and review of the literature. *Ann Nucl Med* 2014. Epub 2014 Feb 20
6 Smallridge RC, Castro MR, Morris JC, Young PR, Reynolds JC, Merino MJ *et al*. Renal metastases from thyroid papillary carcinoma: study of sodium iodide symporter expression. *Thyroid* 2001; **11**:795–804

First published online 8 April 2014

The Journal of Laryngology & Otology (2014), ***128***, *482–483*.

doi:10.1017/S0022215114000656

Authors' reply

Dear Sirs,

This is in response to the letter related to our paper published in this journal on the clinicoradiological characteristics of renal metastases in differentiated thyroid carcinoma.[1] We believe the author has based his letter on certain unusual imaging findings and case reports reported in the literature without adequately fathoming the rigorous clinical and imaging investigation procedure adopted in this case series, including the follow-up data, which, beyond doubt, rule out the concerns raised.

We have addressed the issues in a point-wise manner below.

The ultrasonography findings of the lesions in our patient series were clearly indicative of neoplastic pathology and not consistent with cystic lesion. Also, no doubt was raised by the ultrasonologist about the possibility of other pathologies except for the lesions in contention. This was sufficient to rule out the possibility of a false positive radioiodine uptake due to pathology such as cystic renal disease which has a characteristic radiological pattern. The value of appropriate investigations and their rational interpretation is pivotal for the correct practice of any branch of clinical medicine; which would prevent over-investigation using invasive procedures.

In addition, the findings of the furosemide-enhanced technetium-99 m diethylene triamine pentaacetic acid renogram, technetium-99 m dimercaptosuccinic acid (III) renal scan and biochemical tests of renal function were adequate to clear any suspicion of tracer stasis or accumulation in the collecting system, or any other benign pathology including cystic renal disease. These results were clearly mentioned in our clinical record.

The lesions were confirmed on the low dose radioiodine (iodine-131) diagnostic scan and the post-treatment radioiodine scan, the latter of which was conducted at least 2 days after the administration of high dose radioiodine (iodine-131) for therapy.