Medical Image of the Week: Remote Calvarial Renal Cell Metastases

Figure 1. Contrast enhanced axial MRI image shows the metastatic lesion in the right skull with mass effect and midline shift.

Figure 2. Coronal Image shows the extensive calvarial metastatic lesion and its mass effect.

A 57-year-old woman with past medical history significant for clear cell renal carcinoma and radical nephrectomy 9 years prior was admitted to our hospital for headache and left hemiparesis with associated numbness. Symptoms were progressive and had begun about 5 days prior to her presenting to our emergency department. Neurologic exam was significant for reduced strength in her left upper and lower extremities as well as sensory deficit to fine touch and vibratory sensation in her left arm. Her gait was unsteady and she was unable to ambulate without assistance. Her right calvarium was grossly enlarged and asymmetrical with softening of the underlying bony structures.

MRI of the brain showed a 10 cm x 5 cm mass that was obliterating the calvarium and invading the dura mater (Figure 1). There was mass effect with shift of the midline structures from right to left by approximately 6.5 mm (Figures 1 and 2). This was biopsy proven to be metastatic renal cell carcinoma. Additional smaller calvarium lesions were also seen. At least 3 and possibly 4 parenchymal metastatic deposits are seen in the left occipital lobe. Renal cell carcinoma has been well described to recur after long periods of remission, up to 33 years (1).

She was initially treated with intravenous dexamethasone with resolution of symptoms after 48 hours. Palliative radiation is being provided at this time.

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Reference

1. Parada SA, Franklin JM, Uribe PS, Manoso MW. Renal cell carcinoma metastases to bone after a 33-year remission. *Orthopedics*. 2009 Jun;32(6):446. [\[CrossRef\]](#) [\[PubMed\]](#)