An 82-year-old man was admitted to hospital with lethargy, anorexia and back pain. His past medical history included chronic lymphocytic leukaemia (which was in remission) and hypertension. Blood tests revealed a serum sodium of 115 mmol/l and potassium of 5.4. His Irbesartan was discontinued and sodium rose to 126 prior to discharge. He was readmitted to hospital 6 days later with hyponatraemia (116 mmol/l). A short Synacthen test was performed which showed a flat response (baseline cortisol 282 nmol/l with a 60 minute post-Synacthen level of 265). ACTH level was raised at 400 pg/ml (normal < 46). He was commenced on hydrocortisone replacement therapy and felt much improved. A CT scan of the abdomen showed large bilateral adrenal masses (4.9 x 3.5 cm on the right, 9.2 x 6 cm on the left) (Figure 1), small para-aortic lymph nodes and multiple hepatic metastases (Figure 2). A subsequent biopsy of the left adrenal mass showed features consistent with a high grade B-cell non-Hodgkin’s lymphoma.

Discussion

Patients with malignancy are prone to adrenal dysfunction, but this is often subclinical and associated with non-specific symptoms. More than 90% of the adrenal cortex has to be lost before symptoms of chronic adrenal failure manifest. Common cancers, which metastasise to the adrenals, include lung, breast, stomach, kidney, pancreas and colon cancers. Haematological malignancies are also known to cause adrenal insufficiency as in our case. Lymphoma and leukaemic infiltration are examples of these. The incidence of adrenal involvement in non-Hodgkin’s lymphoma is estimated to be between 0.8-2%. Prognosis is poor for this condition despite chemotherapy, with a median survival time of 4 months.

Conclusion

Although autoimmune adrenalitis is the most common cause for primary adrenal insufficiency in the developed world, malignancy should be considered as an underlying cause, especially in the elderly.

References