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Thyroid

THYROID DISORDERS CASE REPORT

Thyroid Paraganglioma- An Unusual Head and Neck Tumour

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Paragangliomas are neuroendocrine tumour originating from the neural crest-derived paraganglia with majority arising from the head and neck. (1)Thyroid paraganglioma are exceedingly rare neuroendocrine tumours accounting for <0.1% of thyroid malignancy (1)
We present a 57 years old gentleman who was referred to ENT surgeon following discovery of a two month history of lump on his left neckIt has not changed in size and not caused any symptoms such as anxiety, sweats, palpitations, dizziness or unexplained headaches. He has a Past medical history of epilepsy following a Road traffic accident 28 years ago leaving him seizure prone. He has no family history of neuroendocrine tumours His ultrasound scan of his thyroid gland showed a 25 x 23 x 15mm lesion lying anteriorly within the left thyroid lobe. There are two highly reflective foci which could represent microcalcification. It was classified as U5 lesion He proceeded with fine needle aspiration which confirmed carcinoma of the left thyroid gland with no clear differentiation between follicular or papillary carcinoma. He undergone a total thyroidectomy and left central level VI lymph node dissection His histology confirmed a thyroid paraganglioma staining strongly positive for neuroendocrine markers (Synaptophysin and chromogranin) while S-100 shows positivity in the sustentacular cells. He was referred for genetic testing which demonstrate no evidence of mutation in FH, SDHAF2, SDHB/C/D, RET, MAX, TMEM127 and VHL gene. He was commenced on levothyroxine replacement at a dose of 150micrograms OD. His urine metanephrines is 178.1pmol/L (0-510), urine normetanephrines 192.9pmol/L (0-1180) and 3-methoxytyramine <75pmol/ L (0-180) (all normal). His MRI neck revealed no synchronous tumour. He continues to be followed up under our endocrine clinic.
Conclusion: Due to the rarity of these tumours, their natural history is mostly unknown. Nevertheless, post-operative surveillance should include plasma or urinary metanephrines and ultrasonography.
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Thyroid

THYROID DISORDERS CASE REPORT

Thyroid Storm Treated With Nonconventional Therapy

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Background: Thyroid storm is a rare sequela of thyrotoxicosis with mortality rate of 10-30%. Management of thyroid storm is heavily dependent on thionamides. Cholestyramine and potassium iodide (SSKI) are used as adjunctive therapy and not as the sole treatment for storm. We present a case of thyroid storm treated with cholestyramine and SSKI. **Clinical Case:** A 45 year old male with past medical history of atrial fibrillation, congestive heart failure, hypertension, substance abuse and grave's disease presented to the emergency department (ED) for diarrhea. During the course of ED, patient went into atrial fibrillation with rapid ventricular rate. Chest X-ray showed pulmonary edema. Labs were: TSH <0.0025 mIU/L (0.35-4.94 mIU/L) and free T4 3.52 ng/dl (0.7-1.40 ng/dl). Patient was noncompliant with methimazole. Upon admit, ACLS was initiated due to hypoxia and transferred to ICU for ventilator and pressor support. Wartofsky score was 60, suggestive of thyroid storm. Management included methimazole 20mg every 4hours, hydrocortisone 100mg every 8 hours, cholestyramine 4mg every 6 hours, and SSKI 250mg every 6 hours for thyrotoxicosis and amiodarone infusion for afib. Despite normal liver enzymes on admit, day 3 AST increased to 2740 U/L (5-34) and ALT 2684 U/L (0-55). Methimazole was stopped due to potential hepatotoxicity. Day 3 free T4 remained high at 4.16 ng/dl and patient remained critically ill. Plasmapheresis was offered as methimazole was stopped and patient was hemodynamically unstable to undergo surgery. However, family declined this intervention; SSKI and cholestyramine were continued. Free T4 was monitored over the course of treatment; by day 5 free T4 trended down to 1.93 ng/dl. SSKI was eventually stopped on day 8 of treatment as free T4 had normalized and cholestyramine reduced to 4mg twice daily. By day 15, free T4 was 0.8 ng/dl, so cholestyramine was stopped. Due to clinical improvement, patient was weaned off the ventilator and pressor support along with hydrocortisone. Liver enzymes normalized by Day 17. Patient was restarted on methimazole 5mg daily before discharge. **Discussion:** Thyroid storm is associated with varying degree of liver dysfunction, which can pose a challenge to treatment. In our case, acute fulminant liver failure was multifactorial in the setting of shock, thyroid storm and potential drug toxicity. Thus, thionamides were contraindicated. Radioactive iodine treatment was contraindicated due to use of amiodarone. Plasmapheresis and emergent thyroidectomy could not be done. Thus, nonconventional therapy was used and patient responded well to treatment. This case emphasizes the use of cholestyramine along with SSKI as an effective treatment in patients who are critically ill the setting of a thyroid storm, especially when thionamides are contraindicated and other avenues of treatment are limited.

Thyroid

THYROID DISORDERS CASE REPORT

Thyroid Storm With Concurrent Covid-19 Infection in a Pediatric Patient

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