VIPoma: an unsual cause of electrolyte disturbance

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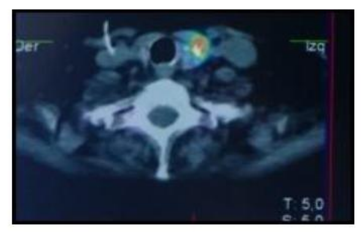
Introduction

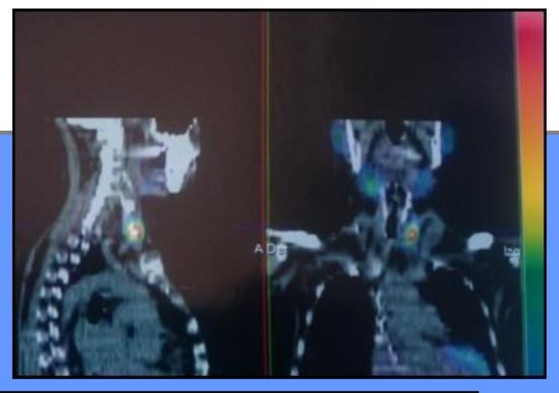
Vasoactive intestinal peptide-producing tumours (VIPomas) represent a rare type of neuroendocrine tumour whose incidence is 1 in 10 million per year. Most are located in the pancreas. They cause diffuse watery (secretory) diarrhoea, hypokalaemia and achlorhydria and also appear as an uncommon cause of hypercalcemia.

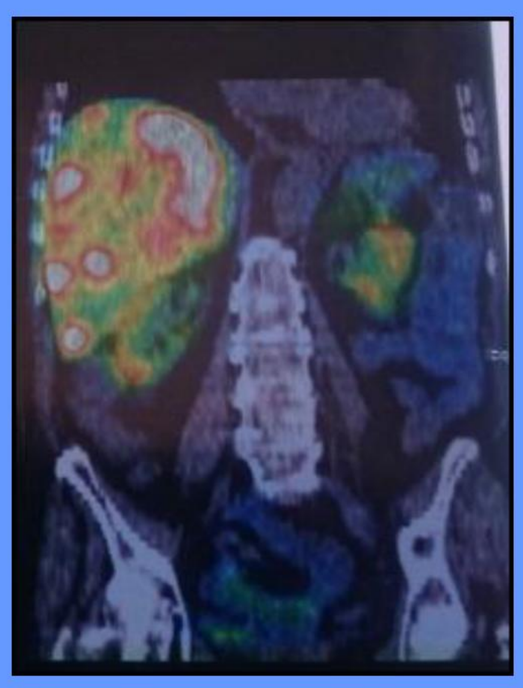
Case Report

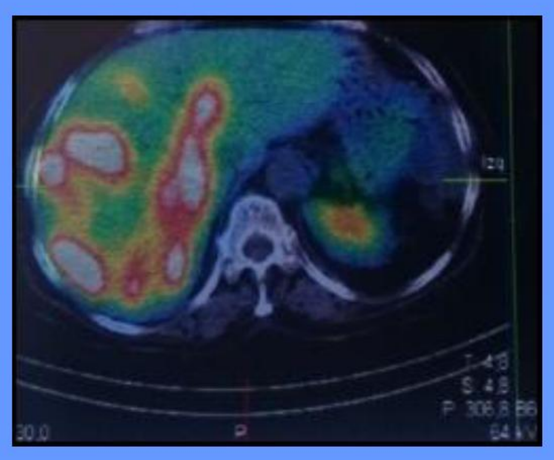
A 69-year-old female with previous diagnosis of a “non-functioning” neuroendocrine pancreatic tumor (2005) with liver metastasis (2009) was admitted for weakness. She complained of chronic watery diarrhoea that persisted with fasting (6-10 stools/day) in spite of multiple therapies. She had been admitted for hypercalcemia a few months before. Her family history was negative for MEN-1 affected.

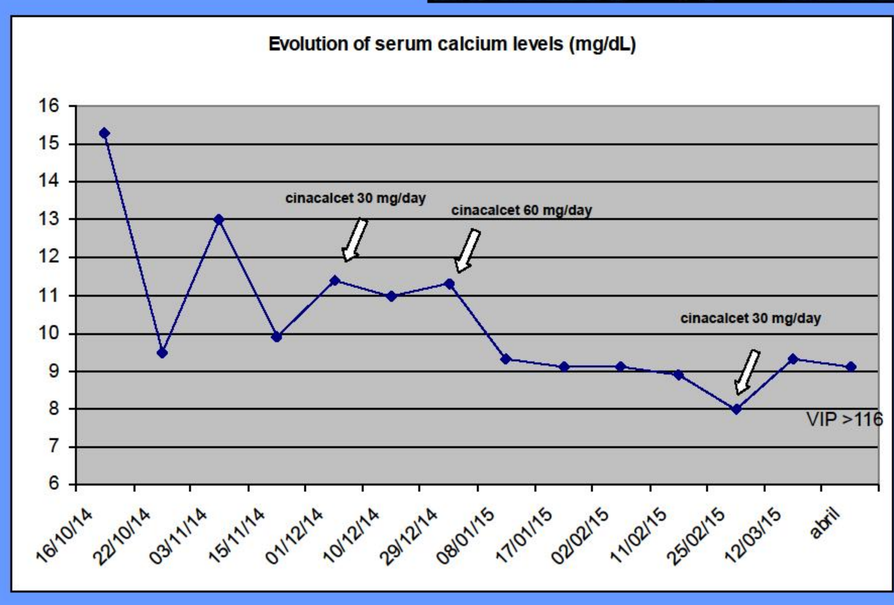
At admission:
glucose 159 mg/dL, creatinine 0.82 mg/dL, K+ 2.6 mEq/L, Na+ 128 mEq/L, Cl- 102 mEq/L, pH 7.34, serum bicarbonate 15.1 mmol/l, P 1 mg/dL, Mg 1.6 mg/dL, **Ca 15.3 mg/dl**, Hb 12.8 g/dL, GGT 131 U/L, PA 93 U/L, AST 44 U/L, GPT 28 U/L . Albumin 4.1g/dL.
Serum TSH, calcitonin, cortisol, PRL, glucagon, PTH-rp and 5HIAA were normal. PTH 23.8 pg/mL. 25-0H-vitamin D 35.6 nmol/L. CgA 115 ng/mL.VIP > 116 pmol/L (<30). Gastrin 149 pg/ml (13-115).











Endocrinological treatment: potassium 125-200 mEq/d, phosphorus 32-48 mmol/d, magnesium 4-8 mEq/d, high intake of salt and water, insulin 20-40 u/d, periodic iv biphosponates, PPI 20 mg/d, octreotide LAR 30 mg/28 d, LT4 25 mcg/d, cinacalcet 30-60 mg/d

Discussion

- VIPomas may initially present as non-funtioning NETs.
- These are a rare cause of hypercalcemia . This might be partially explained by the stimulatory effect of VIP on bone resorption. The other electrolyte disturbances may be attributed to the severe diarrhoea.
- As a new fact, we present cinacalcet as a drug to be considered in hypercalcemia related to VIPoma refractory to conventional therapy

References:

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Clinical Cases - thyroid/others
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