

**A hole in one**

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Mr C.L, a 44 year old golfer, presented to ophthalmology complaining that he had difficulty in seeing the ball when playing golf. Visual acuity was intact but visual fields showed significant loss of peripheral vision. An MRI of his pituitary revealed a large pituitary mass extending into both cavernous sinuses and indenting the chiasm. He was referred to our endocrinology department.

On further history taking, the patient denied symptoms of acromegaly but his wife noticed an increase in nasal size. His libido had decreased. A pituitary profile at presentation showed a grossly elevated prolactin level of 447,078 mU/L, random growth hormone (GH) of 20.1 mU/L which failed to suppress following an oral glucose tolerance test, and an elevated IGF-1 of 69.9 nmol/L (13.0-64.0 nmol/L). Testosterone was low at 6.8 nmol/L, FSH 2.9 IU/L, low LH 0.9 IU/L, random cortisol 364 nmol/L, TSH 0.86 mU/L and low fT48.0pmol/L. An insulin tolerance test showed an adequate cortisol response.

A diagnosis of macroprolactinoma with growth hormone co-secretion was made. The patient was commenced on cabergoline 250 mcg twice weekly, which was titrated up to 1mg twice a week. Prolactin levels decreased progressively to 11,500 mU/L 10 months post-treatment. A repeat MRI 4 months post-cabergoline treatment showed considerable shrinkage of tumour with relief of pressure on the optic chiasma, although tumour size remained relatively large. Visual fields resolved fully. Thyroid function normalised. He was started on testosterone replacement therapy (Nebido 1 g im every 3 months).

Random GH levels remained high on cabergoline at 12.1 mU/L with an elevated IGF-1 at 114 nmol/L, and GH levels failed to suppress following an oral glucose tolerance test. A trial dose of octreotide 200mcg s/c failed to suppress GH levels up to 5 hours post-administration. He has recently been commenced on lanreotide autogel 60 mg s/c.

This patient has a pituitary macroadenoma co-secreting prolactin and GH which is unresponsive to octreotide therapy. The discussion will address the following questions 1) Is the patient likely to respond to lanreotide given his failure to respond to octreotide? 2) How high should we titrate up his cabergoline treatment? 3) Is he a candidate for pegvisomant if he fails to respond to lanreotide? 4) Is there a role for radiotherapy and/or surgery if medical treatment fails?