

Pituitary Adenoma Therapy

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Growth Hormone:

- 1) Surgery is primary treatment for well-defined micro-adenomas (>80% success vs <50% for macro) or for large symptomatic tumors (debulk)
- 2) Medical management preferred for macro-adenomas: octreotide [60-70% will normalize GH/IGF-1, GH receptor blocker, cabergoline; increasing the dose frequency better than increasing the dose. Cabergoline especially useful with GH-Prl tumors.
- 3) Radiation can cure: ~40% after 5 yrs, ~60% after 20 yrs; very slow. GH < 5 in 90% by 18 yrs; IGF-1 normal in 54% by 10 yrs. Probably should be given early to everyone who is not cured by surgery.

Prolactin:

- 1) Medical management (cabergoline [1-2/wk], bromocriptine [1-3/day]) typically effective
- 2) Radiation effective but takes years; again can radiate while treating medically
- 3) Surgery success inversely related to size; high recurrence at all sizes. Usually only used for medical failures, esp with progressive symptoms. May be considered for micro-adenomas, esp if they are growing.

ACTH:

- 1) Surgery is the treatment of choice. May be very small (2 mm) and may be in posterior lobe. Hypophysectomy not very helpful. Give 1 mg Dex at 10 PM on 3rd post-op night, if AM cortisol < 3 then 5-yr remission rate >95%. Also, if AM cortisol <10 prior to steroid therapy, there is good chance of remission.
- 2) Radiation can be effective.

TSH:

- 1) Surgery is usually primary therapy but cures <40%.
- 2) Octreotide lowers TSH and shrinks tumors in ~40%. Should be used prior to surgery to control hyperthyroidism.
- 3) Radiation rarely effective.

FSH/LH: Same as non-functional tumors

Non-funct: (most FSH/LH cells; α -subunit often secreted)

- 1) Observe (MRI) at 1, 2, 5 yrs or if it becomes symptomatic
- 2) Surgery for macro or symptomatic; assess function q 6mths & replace
- 3) Radiation typically used for progression after surgery
- 4) Medications occasionally produce a small clinical response but are not generally recommended.

General:

- 1) There are a small number of adenomas that will spontaneously regress.
- 2) MEN tumors are more aggressive, multifocal, recur more, and respond less well to treatment.
- 3) Many micro-adenomas will not progress so just because they are present does not mean they have to be treated.