A re-audit on treatment outcomes of patients with acromegaly in the Sussex Pituitary Multi-disciplinary team

Author: Dr Bibiana Aiyegbeni, MBBS, Bsc and Dr Anna Crown Consultant endocrinologist, MBBS, PHD.

Department of Endocrinology and diabetes, Royal Sussex County Hospital, Eastern Road, Brighton, East Sussex BN2 5BE

INTRODUCTION & OBJECTIVES

- Acromegaly is an insidious complex condition which often requires multiple treatment modalities.

Aim:

- Compare surgical, medical and radiotherapy treatment in terms of biochemical control and complication rates for acromegalic patients.

Biochemical control definition:
- Mean/random GH <2µg /l or
- Nadir GH post OGTT <1µg /l &
- Normal IGF-I for age & gender.

- Compare treatment outcomes with previous 2010 audits and national standards[1-3].

METHODS

Participants: retrospective review of 40 patients (aged 23-79 years at diagnosis from East Sussex treated for acromegaly from May 2009 to August 2016.

Data source: Patients' notes and hospital electronic systems e.g. ICE + PACS.

Information obtained include: symptoms, Growth Hormone (GH) and Insulin Growth Factor-1 (IGF-1) levels, imaging , surgical, medical and radiotherapy outcomes.

Data recorded on: UK Acromegaly Register proforma

Data analysis: Microsoft Excel 2016

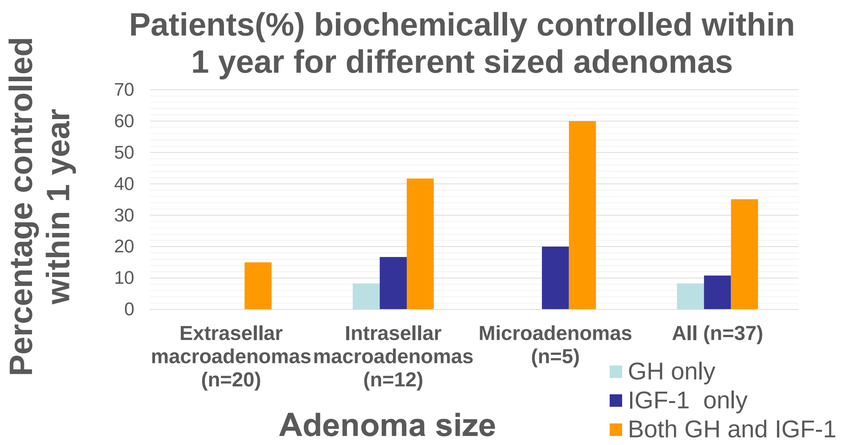
RESULTS

Diagnosis and management

- **Commonest features:** acral (97.5%) & sweating (65%)
- **MRI Imaging:** microadenomas,(17.5%), intrasellar macros (27.5%),extrasellar macroadenomas (52.5%) & no adenoma (2.5%)
- 45% (n=18) had >1 treatment type

Surgery

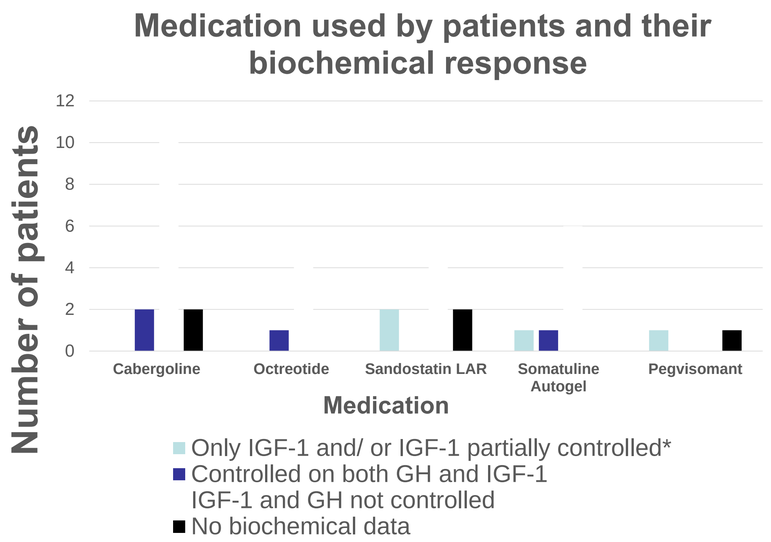
- 37 patients, total =49 surgeries performed by 6 pituitary surgeons.
- Minor post-op complications:22.4% inc CSF leaks + diabetes insipidus
- Post-op residual adenoma: micros (0%), intrasellar Macros (67.7%)+ Extrasellar macros (79.9%).



Medical

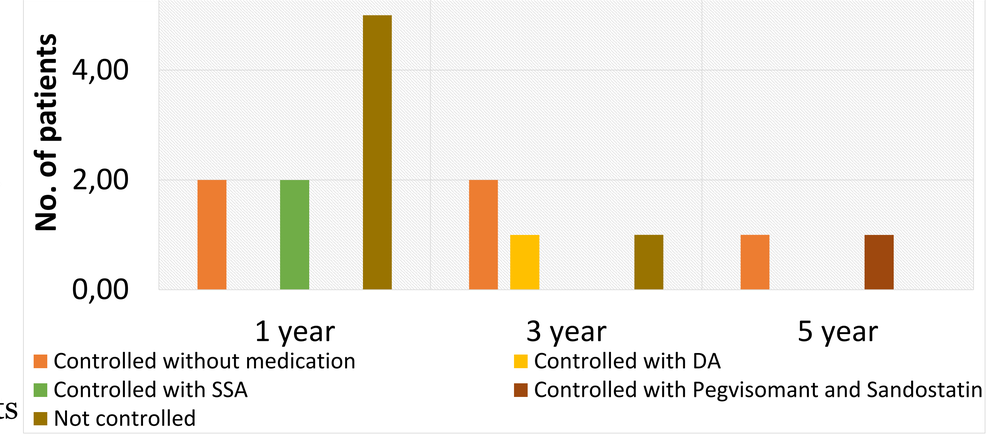
- 22 patients (pts) had medical treatment
- 36.4% (n=8) achieved biochemical control
- Mean time to achieve full control(months):
  - Somatuline Autogel (4)
  - Cabergoline (6.4)
  - Octreotide (9)
- **Side effects:**

-18.2% had gallstones on Somatostatin Analogues
-13.6% had diarrhoea across all medications



Radiotherapy

- 10 pts (6 males) had radiotherapy
- All pts had macroadenomas (Extrasellar=9)
- Some patients required concurrent medication e.g. Dopamine Agonists (DA) or Somatostatin Analogues (SSA).
- Hormone replacement in 60% of pts
- Biochemical control in 60% of pts
- Full biochemical control in 40% of pts



DISCUSSION

Limitations

1. Data omission from patients' notes inc. symptoms.
2. Inconsistent post-op GH testing.
3. Different GH targets used:
   - **BSUH (2010)** audit: Mean/ random GH <2.5ug/l or post OGTT nadir GH <1ug/l[1-2].

Surgical

Similar to previous studies on full biochemical control outcomes:

1.BSUH (2010): Extrasellar macros (0%), Intrasellar macros (0%) & micros (10%) [1-2].

2. Lampropoulos et al (2013): Extrasellar macros (41.5%), Intrasellar macros (74.2%) + micros (75.3%) [4].

Medical

- **Cabergoline low doses (0.5-1mg) used: Jackson et al., (1997)** showed max GH suppression required 2-3.5mg weekly[5].

Radiotherapy

- **Limited follow-up, Jenkins et al (2006)-** at least 10 years of follow up required to achieve biochemical control[6].

CONCLUSIONS

- Current practice adheres to 2014 guidelines[3] .
- Improvement in surgical success rates from 2010 audits by 500% for extrasellar macroadenomas [1-2].
- Medical and radiotherapy outcomes were similar to 2010 audits [1-2].
- **Recommendations:** Regular post-op GH monitoring & better detailed documentation in patients' notes
- **Future work:** patient satisfactions surveys + re-audit.

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