AN AUDIT ON EVALUATION AND MANAGEMENT OF MEN WITH HYPOGONADOTROPHIC HYPOGONADISM IN TWO DISTRICT GENERAL HOSPITALS IN SOUTH WALES, UK

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Objectives:

The current Endocrine Society guidelines (2010) recommend biochemical and radiological evaluation of men with HH to ascertain underlying hypothalamic and/or pituitary aetiology although the cost-effectiveness of this strategy is yet to be established. We did a retrospective audit to ascertain epidemiology, management and diagnostic outcomes for men with hypogonadotrophic hypogonadism (HH) in our hospital practice against the current Endocrine society guidelines.

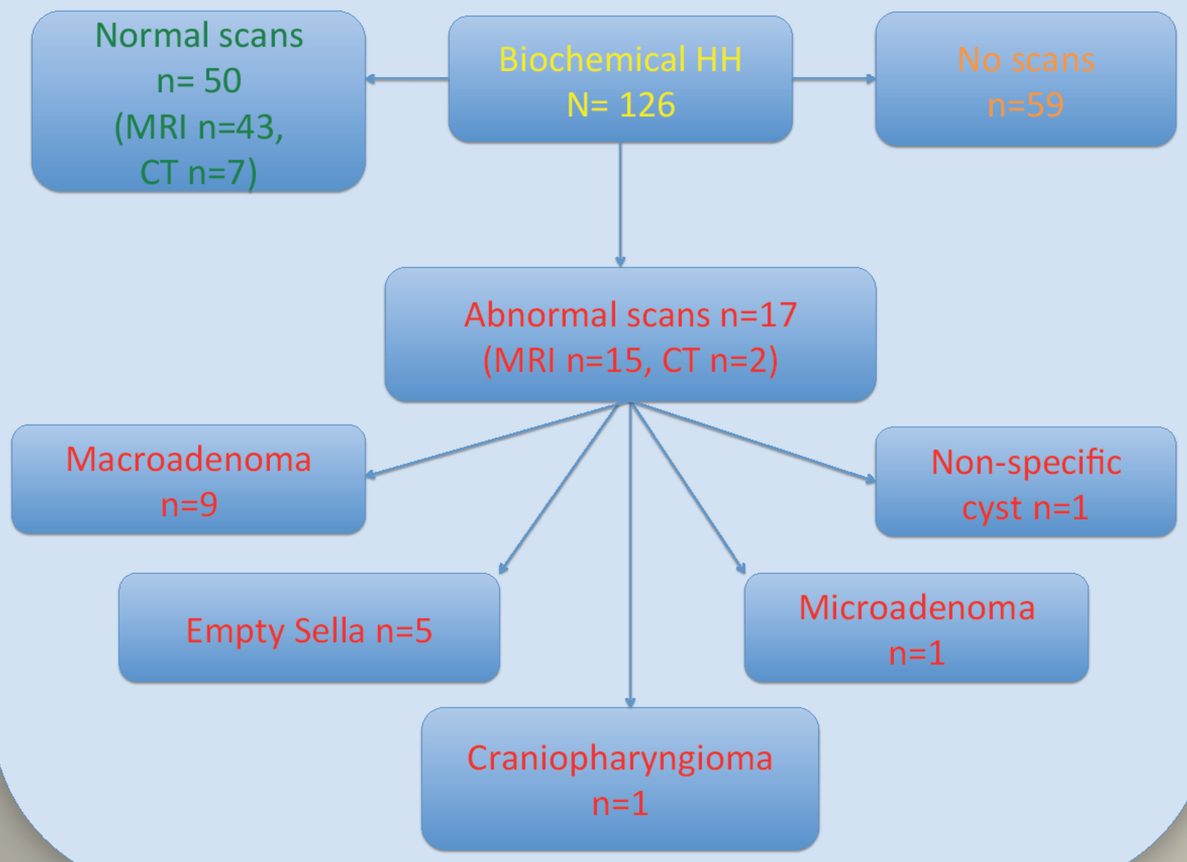
Methods:

A total of 126 men with biochemistry consistent with HH were identified for the audit period from 2013-2015. Retrospective evaluation of these patients was done using a local electronic database (Myrddin) to retrieve relevant clinical information.

Demographics:

- Total number of patients with biochemistry of HH: 126
- Mean age: 51.5
- Who requested the blood tests:
  - Endocrinologists: 63.5% (n=80)
  - Urologists: 19.8% (n=25)
  - Other physicians: 16.7%(n=21)
- Symptoms:
  - Erectile dysfunction: 56%
  - Reduced libido: 23%
  - Lethargy: 15%
  - Excessive sweating: < 10%
- Percentage of patients with BMI > 30kg/m^2 (overweight): 36% (n=45)
- Percentage of patients with diabetes mellitus: 25% (n=32)
- Percentage of concomitant biochemical abnormalities:
  - Raised prolactin: 15% (n=19)
  - Secondary hypothyroidism: 15.8% (n=20)
  - Abnormal IGF-1: 4.8% (n=6)

Number of HH patients who received MRI/CT pituitary and the outcomes



Analysis of HH patients with abnormal pituitary imaging (N=17)

Patient (N)	MRI/CT finding	Abnormal prolactin/ TFT/IGF-1/ cortisol	High BMI	Diabetes Mellitus	Intracranial symptoms
N1	Macro-adenoma (? Rathke's cleft cyst)	Yes	Yes	Yes	Yes
N2	Macro-adenoma	Yes	Yes	N/A	N/A
N3	Macro-adenoma	Yes	Yes	No	N/A
N4	Macro-adenoma	Yes	No	No	Yes
N5	Macro-adenoma	Yes	No	No	Yes
N6	Macro-adenoma	Yes	No	No	N/A
N7	Macro-adenoma	Yes	No	No	N/A
N8	Macro-adenoma	Yes	No	No	N/A
N9	Macro-adenoma	Yes	No	No	N/A
N10	Cranio-pharyngioma	Yes	No	No	N/A
N11	Non-specific pituitary cyst	Yes	No	No	N/A
N12	Micro-adenoma	No	No	No	N/A
N13	Empty sella	No	No	No	N/A
N14	Partial empty sella	Yes	Yes	Yes	N/A
N15	Partial empty sella	No	Yes	Yes	N/A
N16	Partial empty sella	No	Yes	Yes	N/A
N17	Partial empty sella	No	Yes	No	N/A

Discussion:

- 67 patients (53.1%) with biochemical HH had MRI/CT pituitary, but abnormalities were detected in only 17 patients
- Of the 17 patients with abnormal MRI/CT, 9 patients had macroadenoma, 1 craniopharyngioma, 1 non-specific pituitary cyst, 1 microadenoma and 5 empty sella.
- All patient with macroadenoma and craniophranygioma showed a degree of abnormal anterior pituitary function
- All but 1 patients with empty sella had normal anterior pituitary function
- 45 of all 126 HH patients were classified as overweight(BMI>30). n=26 patients had MRI/CT, but majority (n=19) had normal scans

Conclusion:

There has been an increase in number of referrals to endocrine centres for men with secondary hypogonadism related to global pandemic of obesity and diabetes mellitus. The majority of men with increased BMI (without clinical/biochemical features of anterior pituitary dysfunction) do not routinely warrant further radiological investigations. This is especially important in context of higher statistical probability of detecting an incidental pituitary lesion (adenoma or empty sella) leading to an increased health-economic burden. There is a need for larger multi-centric studies to reassess BMI related cut offs for further evaluation of men with HH.

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