PA-A-59

DENSE CALCIFICATION IN A CASE OF GIANT GROWTH HORMONE-SECRETING PITUITARY ADENOMA

https://doi.org/10.15605/jafes.037.S2.65

Sivaraj A/L Xaviar, Noor Ashikin Binti Ismail, Ahmad Akmal Bin Ahmad Zailan, Nor Afidah Binti Karim, Noor Lita Binti Adam
Hospital Tuanku Jaafar Seremban Negeri Sembilan, Malaysia

INTRODUCTION
Calcification is an uncommon feature of pituitary adenomas and extensive calcification evident radiologically is especially rare and is technically challenging for surgical removal. We report a case of a giant growth hormone (GH)-secreting pituitary adenoma with dense tumoral calcification which is an uncommon presentation.

CASE
A 31-year-old male first presented to the surgical ward for infected sebaceous cyst and newly diagnosed diabetes mellitus. He was incidentally noted to have features of acral overgrowth for fourteen years. He had an occasional headache but did not have any visual symptoms. On review, he has prominent acromegalic features with bilateral temporal hemianopia. His diagnosis of acromegaly was based on markedly elevated IGF-1 and non-suppressible GH after 75 g OGTT.

Pituitary MRI showed giant pituitary macroadenoma 4.1 x 2.5 x 4.1cm in size, with cavernous sinus invasion and extrasellar extension. Preoperative medical treatment with octreotide-LAR was started considering the invasive features of the macroadenoma and he was scheduled for endoscopic transsphenoidal excision of macroadenoma following multidisciplinary team discussion. Intraoperatively, the tumour was found to have soft and firm areas with components of calcification and bone fragments. Complete removal was not feasible due to adherence of calcified tumour to the optic nerve and arachnoid plane. The patient still requires inpatient monitoring for post-operative CSF leakage at present. It is important to recognise the presence of calcification within a pituitary tumour as its extent may influence the choice of surgical approach. MRI was not able to verify the true extent of calcification due to signal dropout of calcium. As complete resection is technically challenging in calcified large adenomas, medical therapy and/or radiotherapy are usually required to achieve biochemical remission.

CONCLUSION
Recognising calcification in pituitary adenomas on preoperative imaging is important in decision-making. Total resection can be difficult to achieve in extensive calcification and necessitates non-surgical management to achieve disease control.

PA-A-60

VALUE OF 30 AND 60-MINUTE CORTISOL VALUE DURING SHORT SYNACTHEN TEST – CAN WE DO AWAY WITH ONE OR THE OTHER?

https://doi.org/10.15605/jafes.037.S2.66

Khoo Jun Kit,[1] Pavai Sthaneswar,[2] Shubash Shander Ganapathy,[3] Jeyakantha Ratnasingam[1]
[1]*Endocrine Unit, Department of Medicine, University Malaya, Kuala Lumpur, Malaysia*
[2]*Chemical Pathology Unit, Department of Pathology, University Malaya, Kuala Lumpur, Malaysia*
[3]*Institute For Public Health, National Institutes of Health, Ministry of Health Malaysia*

INTRODUCTION
The short synacthen test (SST) using 250 mcg synthetic ACTH is the most widely used test to identify adrenal insufficiency (AI). The standard testing protocol that requires both 30 and 60-minute cortisol values increases resource utilisation and cost. We examine the utility of 30-minute versus 60-minute single time point cortisol values in identifying AI, compared with the convention of values at both time points.

METHODOLOGY
A retrospective analysis of SSTs done at a single centre between 2018-2021 was done. Serum cortisol was measured at 0, 30 and 60 minutes after 250 mcg of intravenous synacthen. Adequate response was defined as cortisol values of ≥500 nmol/L at either or both time points. We compared 30 and 60-minute values against overall response during SST.

RESULTS
A total of 360 patients (age: 61.5 ± 17.7 years, 44% male) were studied. Indications for SST were exogenous steroid use (41%), pituitary disease (13%), low morning cortisol (27%), hyponatremia (6%), hypotension (4%) and others (9%). Median (IQR) cortisol values at 0, 30 and 60 minutes were 250 (165-371), 581 (427-724), and 651 (479-819) nmol/L respectively. Adequate response was seen in 217 (60.3%) while 96 (26.7%) had inadequate response at both 30 and 60 minutes respectively. Inadequate response at 30 minutes but adequate response at 60 minutes was seen in 42 (11.6%), while 5 (1.4%) had adequate response at 30 minutes but inadequate response at 60 minutes. Using 60-minute cortisol alone was found to have a sensitivity of 98.1% and specificity of 100%, with 100% positive predictive value and 95.1% negative predictive value.

CONCLUSION
The probability of overdiagnosis of AI is significantly higher if only 30-minute cortisol values were to be considered without the 60-minute cortisol values. This study highlights the importance of measuring the 60-minute cortisol value to avoid misclassification of AI.