

Pilot study into short synacthen tests on GVHD patients receiving ECP after stopping long term steroids

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INTRODUCTION

The aim of Photopheresis (ECP) is to reduce and stop the patients steroid intake.

Patients who have chronic Graft-versus-Host Disease (cGVHD) who have been taking corticosteroids for extended periods of time are at a higher risk of developing adrenocortical insufficiency.

AIMS AND OBJECTIVES

The aim of the pilot study was to demonstrate the number of patients that are affected by adrenocortical insufficiency in the Photopheresis Unit.

The pilot covered the period May to October 2016 and utilised the short Synacthen test (SST) for screening the appropriate patients.

Synacthen is a synthetic analogue of ACTH which stimulates the adrenal cortex to produce cortisol.

Results

SST should always use cut-offs derived for the specific assay in use in the laboratory.

For the assay currently in use at Trust the 30 minute cortisol cut-off is 470nmol/L.

The 60 minute sample is used to look for a delayed response to the Synacthen.

Over a time period of 6 months,

- 11 patients were tested.
- 2 patients were found to have an inadequate response to the SST and were subsequently referred to the endocrine team for further investigation.
- One patient was found to have a delayed response to the test, and subsequently referred to the endocrine team.

Method

Once patients have been assessed and determined by the Clinical Lead for Photopheresis that corticosteroids should be stopped, the short synacthen screening test is planned for the patient's next visit. This usually occurs in 4 weeks' time.

Corticosteroids are stopped once a slower taper has taken place and there is no GvHD symptom flare.
Under local protocol.

- Baseline serum sample was taken for cortisol measurement.
- 250µg Synacthen in 1ml (adult dose) was administered via peripheral cannula by slow intravenous injection (over 2-3 minutes) by a registered nurse.
- Two further blood samples were then taken for cortisol analysis at 30 minutes and then 60 minutes following administration of the drug.

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The pituitary and adrenal glands

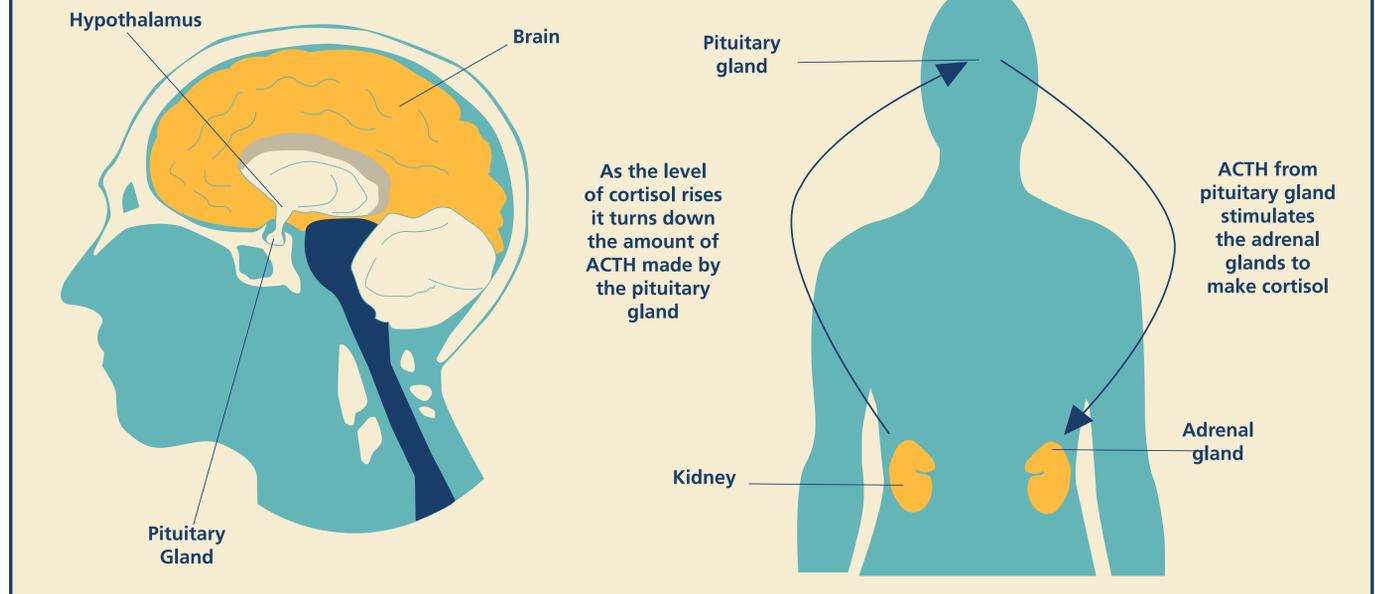
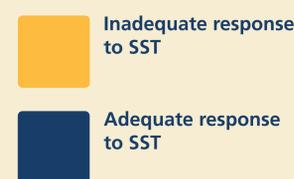
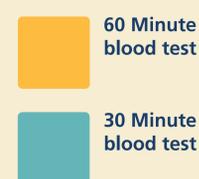


Figure 1 shows how adrenal glands and what do they do in relation to cortisol

Results of SST testing



Inadequate response to SST testing



Conclusion

Whilst only a small number of patients were included within this pilot study, it has highlighted the importance of testing the adrenal reserves of patients with cGVHD whose steroids are being discontinued whilst undergoing Photopheresis treatment.

Twenty percent of patients in this study potentially have decreased cortisol production in times of stress which if unidentified leaves them vulnerable to hypoadrenal crisis. Acute adrenal crisis is a life-threatening condition that occurs when there is not enough cortisol.

On the basis of these results the pilot is being rolled out so all future patients will be tested.