A picture tells a thousand words
The Insulin Tolerance Test – Getting the most from the data collected

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The insulin tolerance test (ITT) is a tried and true method of assessing the hypothalamic-pituitary-adrenal axis in adults*. It is regarded as the ‘gold standard’ in assessment of ACTH/cortisol reserve as well as growth hormone release. It is used clinically to aid decision making by clinicians regarding cortisol and growth hormone replacement.

This test of a patient’s stress response puts more than the patient under the pressure. Many staff performing the test (no matter where in the world you work) will groan and say “oh I hate doing that test”. Certainly the author, who has felt this herself, came to wonder

- how can feel more confident during the procedure,
- can we improve on the way we gather information
- can we improve upon our reaction time to the test that doesn’t follow the expected path
- can we make our results more informative for all concerned.

To this end and in a setting of doing regular ITT’s an innovative method of graphing the rapid fall in blood sugar level has been developed. This tool has improved the staff confidence within the unit when performing the test as well assisting new staff to the area in learning about how to perform the test accurately, safely and ideally only once.

From this graph a further development has been a 2 page report which can be produced which details all aspects of the monitoring performed by staff during the test. As a part of this report a numerical grading of symptoms has been introduced. This visually corresponds with bedside blood sugar levels which ultimately assists in the final interpretation of the procedure.

This more accurate monitoring method has improved the staff confidence and importantly it has reduced the response times to blood sugar level readings that do not follow the normal pattern of fall. An informative report can be produced either electronically or manually in any endocrine setting.

* Though performed in children in the past – currently paediatric centres will use other methods to assess.