

Survey Title: Paediatric Sickle Cell Testing: current practice of APA members

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Brief Description of Purpose:

In our opinion, routine testing of children for the presence of sickle cell disease has always been contentious. Many children undergo unnecessary sickle cell testing and may have their operations delayed or cancelled because of a lack of a test 'result'. There is also shortage of practical guidance available to anaesthetists. The AAGBI guideline on Pre-op Assessment and Patient Preparation (January 2010) states that "sickle cell testing should be performed in susceptible populations" and individual trusts and anaesthetists interpret this in different ways.

Since 2003 sickle cell testing at birth has been part of the Guthrie test in some areas and was fully implemented across England by 2006.

Our local paediatric sickle cell expert confirmed that prior to the introduction of screening in England the oldest child seen presenting with previously undiagnosed sickle cell disease was six or seven years old.

This survey set to examine current practice amongst paediatric anaesthetists and what their drivers for wanting a sickle test are.

Category of Membership Surveyed: Home members (GB + Ireland) only

Dates of Survey: December 2011 until March 2012

Number of Responses: 340

Outline Findings of Survey:

Good response rate – 340

Good representation of actual practice – 90% of respondents were Consultants

Divided opinion on need for sickle cell testing prior to surgery in a scenario involving a 4-year-old child, with some variation for different drivers:

- If elective case (adenotonsillectomy) and no sickle cell history in the family – 54.5% happy to proceed without sickle cell test
- If emergency case (appendicectomy) with no sickle cell history in the family - this rose to 65.7% happy to proceed without a sickle cell test
- If an emergency with unknown family history – only 22.8% happy to proceed without sickle cell test
- If an emergency with unknown family history but the child was mixed race (i.e. at worst was sickle trait) – 55.6% happy to proceed without sickle cell test
- Does their Hb change your practice? Yes in 65%
- Does their Age change your practice? Yes in 41.3%
- Does tourniquet use change your practice? Yes in 61.5%
- Does the Guthrie test factor into your decision? Yes in 50.2%

No sickle cell testing guideline in 55% of departments

Intended Publication/Presentation:

Depending on what next steps are taken we plan to submit to a journal but will also submit as a poster to an appropriate APA meeting.

Follow up Actions Required:

We think that there is a great opportunity to produce simple and robust guidelines, which would stop a lot of unnecessary testing taking place.

Results of this survey show that practice for sickle cell testing throughout the UK needs to be clarified and guidelines established so that Anaesthetists have some framework for what needs to happen – especially in the non-elective scenarios.

We would like to contact the lead/professor of paediatric haematology at tertiary centres in the UK and ask them several simple questions:

- Prior to the introduction of screening at birth for sickle cell disease what was the oldest child seen presenting with previously undiagnosed sickle cell disease? Does this concur with our local opinion of 7 years old?
- We would also seek clarification about other abnormal combinations of HbS e.g. HbSC which is not as dangerous as HbSS but more so than sickle cell trait.

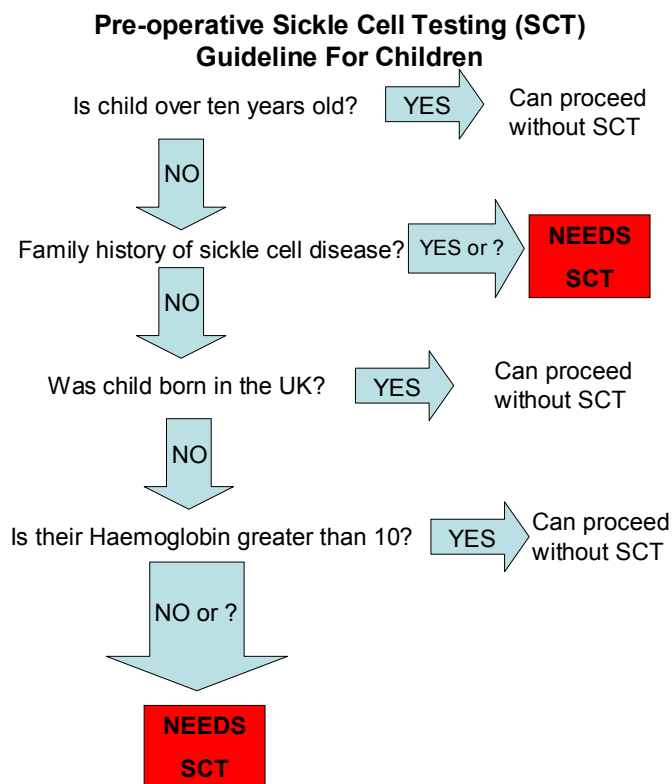
- Their feelings on the use of tourniquets.
- A general question about haemoglobin levels.

We would clarify the Guthrie testing dates in the different parts of the UK and ask about coverage and uptake. We accept this is a concern to anaesthetists – was it ever taken? If it was taken was it ever processed?

If we can we would then construct a simple testing algorithm with an appropriate safety margin. For example, if the child is ten years old we may conclude sickle cell testing is unnecessary – in the knowledge that the oldest child to present prior to the introduction of birth screening was 8 years old. We would then defer back to the experts we have already contacted to see what they think of our algorithm.

Other Comments:

A very rough example of what we are proposing might look like this...



Date Submitted to Survey Lead: 13th April 2012

Submitted by: Dr. Andrew Williams / Dr. David Golden