**Pathway for haematological investigation of bruising and bleeding in children where physical abuse is being suspected or considered**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Version 1 | Created |  March 2024 | To be reviewed | 3 years |
| Version 2 | Created |  | To be reviewed |  |

**National guidance**

This guidance is based on the British Society for Haematology (BSH) Good Practice paper[[1]](#footnote-1) - <https://onlinelibrary.wiley.com/doi/full/10.1111/bjh.18361> and should be read in conjunction with that paper.

**Recommended investigations**

No laboratory investigations are required in the majority of children who present with bruising, particularly older children.

First-line investigations only are recommended as initial tests in the following clinical scenarios:

* There is bruising in a pre-mobile child
* There is unusual bruising pattern and/or bleeding that is out of proportion to the purported mechanism.

If results from first-line investigations are normal, no further testing is recommended.

First- and second-line investigations are recommended as initial tests in the following clinical scenarios:

* There is bleeding at a critical site (e.g., Intracranial haemorrhage, retinal haemorrhage, gastrointestinal haemorrhage, intraspinal haemorrhage, haemarthrosis) with no correlating history of trauma or other explanation that adequately accounts for the bleeding.
* There is suspicion of coagulopathy from the personal history, family history and/or examination.

**First-line investigations**

* Full blood count,
* Blood film
* Coagulation screen (PT, APTT, Fibrinogen level)

**Second-line investigations**

* Factors II, V, VII, 1-stage and chromogenic VIII, IX, X, XI and XIII
* Von-Willebrand screen

**Third-line investigations**

If the child has other injuries besides bleeding/bruising, in particular fractures that are suspected or considered to be due to child maltreatment, then third-line coagulation investigations are rarely indicated.

* Platelet function assays and/or platelet flow cytometry

NB, in the BSH paper, platelet function assays are listed as second-line investigations. In this pathway they are listed as third-line investigations to emphasise the step-wise approach recommended in that paper, to ensure a Consultant Haematologist is involved in the decision to undertake these investigaitons, and because platelet function disorders causing significant bleeding is very rare.

***HIPS Pathway for third-line tests***

If third-line testing is considered, please discuss with any of the following (during working hours):

* Paediatric Haematology Consultants specialising in bruising and bleeding disorders, University Hospital Southampton NHS Foundation Trust
* Haematology Consultant responsible for paediatric haematology clinics, Hampshire Hospitals NHS Foundation Trust

**Child Protection reports and reports for Court by paediatricians involved in the clinical care of the child**

Reports should include all coagulation results and an interpretation of these results. This interpretation can be discussed with a Consultant Haematologist with specialist knowledge, but the expectation is that the (Paediatric) Consultant Haematologist should not need to write a separate report.

**Coagulation investigations requested by Court Expert**

If further coagulation investigations are suggested by a Court Expert, any interpretation of further coagulation investigations should be undertaken by the Court Expert and not by a consultant haematologist.

1. #  Sibson K, Barker P et al. Haematological evaluation of bruising and bleeding in children undergoing child protection investigation for possible physical maltreatment: A British Society for Haematology Good Practice Paper. Br J Haematol. 2022 Oct;199(1):45-53. doi: 10.1111/bjh.18361. Epub 2022 Jul 26. PMID: 35881677. Full text available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/bjh.18361> [accessed on 09/03/2024]

 [↑](#footnote-ref-1)