

Algorithm for Analysis of Patients with Suspected Platelet Dysfunction (01-05-13)

Blue box: Investigation
 Yellow box: Results
 Circle: Diagnosis
 Dotted circle: Query diagnosis

Bleeding signs and symptoms
History Examination
Bleeding score *Appendix 1*

BSS: Bernard-Soulier syndrome
CAMT: Congenital amegakaryocytic thrombocytopenia
ATRU: Amegakaryocytic thrombocytopenia with radio-ulnar synostosis
FPD/AML: Familial platelet disorder and predisposition to acute myelogenous leukemia
GT: Glanzmann thrombasthenia **GPS:** Gray platelet syndrome
SGD: Storage granule disorder **TAR:** Thrombocytopenia with absent radii
THC2: Autosomal dominant thrombocytopenia
XLT: X-linked thrombocytopenia

CBC and blood film

Normal platelet count

Low platelet count

Bleeding time PFA-100

Repeat at least once

VWD testing

Repeat at least once

Repeat at least once

normal

abnormal

Platelet size (MPV)

Large

Normal

Small

Blood cell morphology
Manual platelet count

query
 CAMT
 ATRUS
 FPD/AML
 TAR
 THC2

query
 Wiskott-Aldrich
 XLT

Bone marrow studies

Immune function

Repeat at least once

Platelet aggregation studies

Repeat at least once

normal

abnormal

query
 VWD type 2B
 Platelet-type VWD

query
 BSS
 GPS

Mild abnormalities
 Acquired defects
 Drug effects
 Renal disease
 Liver disease
 MDS

Non-specific pattern

Specific pattern

VWD type 2B
 Platelet-type VWD

Granule and secretion studies
Electron microscopy

Flow cytometry

GT, BSS
 P2Y₁₂ def

Mutational analysis *Appendix 2*

Unremarkable morphology

Abnormal morphology

Without acute history

With acute history

ITP
 Consumptive thrombocytopenia

Neutrophil inclusions

Immunofluorescence

MYH9-related disorders

1^o SGD
 2^o SGD
 GPS

Secretion defect

Israels SJ, Kahr WH, Blanchette VS, Luban NL, Rivard GE, Rand ML. Platelet disorders in children: A diagnostic approach. *Pediatr Blood Cancer* 2011;56:975