

Immune Thrombocytopenic Purpura (ITP)

Key Points

- The purpose of this document is to provide guidance on the diagnosis and treatment of ITP in children at Frimley Health.

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Abbreviations

ANA	Antinuclear antibody
BMA	Bone marrow aspirate
DsDNA	Double stranded DNA
FBC	Full blood count
ITP	Idiopathic thrombocytopenic purpura, immune thrombocytopenic purpura
IVIG	Intravenous immunoglobulin
NAI	Non-accidental injury
RhF	Rheumatoid factor

Introduction

- Childhood ITP is usually a benign, self-limiting condition.
- It can occur at any time in childhood but is most common between 2-5 years.
- It is often preceded by a viral illness or immunisation (within 6 weeks).
- At diagnosis the platelet count is usually $<20 \times 10^9/L$.
- Most children 80-85% will make a full recovery, usually within 3 months.
- Most of the remainder will still make a full recovery but may take 6 months to several years.
- Those aged >10 years at diagnosis are more likely to run a chronic course.
- In neonates consider maternal ITP or neonatal alloimmune thrombocytopenia. (NAIT)
- In general, the child is well, and the history given is of recent onset of petechiae and purpura (24-48 hours).
- Examination should be otherwise normal (if not, be suspicious of another diagnosis). A full clinical examination must be done in each case.
- Hepatosplenomegaly, lymphadenopathy are not consistent with ITP.
- Family history of thrombocytopenia should prompt consideration of an inherited thrombocytopenia.
- Intracranial haemorrhage is rare (0.1-1%)

Symptoms

- Petechiae, easy bruising and purpura.
- Mucosal bleeding. (gums, nosebleeds, gastrointestinal tract)

Investigations

- Full blood count (FBC) and blood film (in all cases). In ITP there should be no significant abnormalities in the FBC other than the low platelets.
 - Small platelets may suggest Wiskott-Aldrich, X-Linked Thrombocytopenia.
 - Pale giant platelets suggest Gray Platelet syndrome.
 - Red Cell Macrocytosis, neutropenia suggests Fanconi.
- Coagulation screen if the child is unwell (Particularly required if a suspicion of meningococcal sepsis, other features of an inherited bleeding disorder, or suspicion of NAI).
- Bone marrow aspiration – This is very rarely needed even if treatment is being considered as long as the blood film has been looked at by an experienced Haematologist.
- Children >12 years - consider underlying auto-immune conditions.

In which case perform

- DAT/Coombs and reticulocyte count
- Immunoglobulins IgA, G, M and lymphocyte subsets (prior to giving immunoglobulins)
- ANA / DsDNA / RhF and Lupus Anticoagulant to exclude SLE.

Differential Diagnoses to consider.

In the Neonatal Period

Exclude more likely diagnosis such as maternal ITP or alloimmune thrombocytopenia.

Outside the Neonatal Period

1. In a young child (within a few weeks or months of birth)
Wiskott Aldrich syndrome, Bernard Soulier syndrome, Other occasional families with isolated congenital or hereditary thrombocytopenia of unspecified type.
2. In older children
Evolving Fanconi anaemia, von Willebrand disease type IIB, acute leukaemia (especially Down syndrome), aplastic anaemias.
3. Other autoimmune diseases especially in children older than 10years
Systemic lupus erythematosus (SLE) and antiphospholipid syndrome.
4. HIV in childhood, thrombocytopenia can occur.

Management

- Parents should be reassured that ITP is generally a benign transient disorder.
- Admission is not needed unless there is significant bleeding or mucosal bleeding. e.g. severe epistaxis lasting more than 30 min, painful oral wet mucosal bleeding, GI bleeding, significant head trauma.
- Troublesome mucosal bleeding or epistaxis should be treated with tranexamic acid.
- Any significant bleeding would require admission to hospital and treatment with tranexamic acid IV plus steroids/IVIG in discussion with haematology.

On discharge

- Give patient support / information: the ITP Support Association website has information, and a leaflet is available for download, see www.itpsupport.org.uk
- There is a trust Patient information leaflet.
- Give advice on signs to watch for and when they need to bring their child back.

Indications for return for reassessment

Head injury, severe headache, gross wet mucosal bleeding, persistent prolonged epistaxis (>30mins) GI/GU bleeding or any bleeding that does not stop within 30 minutes.

- Arrange Open Access and give them the phone number for PAU and ward 24/F1.
- Advise to avoid formal contact sports or any activity with a significant risk of head injury. Remind about wearing cycle helmets. (Although risk of spontaneous intracranial haemorrhage is low (0.1-0.5%).)
- Other activities can be continued as normal, and school encouraged.
- Avoid non-steroidal anti-inflammatory drugs, i.e., Brufen, Ibuprofen, Nurofen (high temperatures can be managed with Paracetamol/Calpol).
- Arrange a repeat FBC 7-10 days after diagnosis to exclude evolving marrow disorder.
- Subsequent FBCs depend on change to clinical symptoms, e.g. return of petechiae or bruising or increased bleeding symptoms.
- FBC when there is clinical resolution of symptoms to confirm recovery.
- FBC for parental reassurance should be discouraged and sympathetically discussed emphasising that treatment is not count dependent and is often not indicated.
- Do not refer to Haematology without discussion with the Attending Consultant. They do not automatically need to be seen by Haematology unless the count has not resolved after 12 months, or an alternative diagnosis is considered.

- If symptoms persist at 12 months repeat the FBC and blood film, as this is now persistent ITP. At this time the child can be referred to the haematology clinic.
Wexham Park – Dr Aspel//Dr Gardner/Dr Burton
Frimley Park – Dr Steele/Dr Burton

Contact for tertiary advice.

Wexham contact - Paediatric Haematology at the Children's Hospital in Oxford.

Frimley contact - Paediatric Haematology at Southampton.

Treatment

- Treatment is only rarely needed. Expectant 'Watch and Wait' policy in most cases.
- The UK approach is to treat symptoms rather than platelet count.
- Decision to treat is always a consultant decision and may be taken in conjunction with Haematology colleagues/tertiary centres.

Situations that might necessitate treatment.

- Significant/persistent mucosal bleeding
- Any troublesome bleeding that might result in the need for blood transfusion (Hb drop of 2g/L or more)
- In order to raise the platelet count pre-operatively
- **Catastrophic haemorrhage, including intracranial bleeding** requires immediate emergency treatment with Platelets and IVIg
- If treatment is considered check the following first:
 - Blood Group and DCT
 - Immunoglobulins
 - Lymphocyte subsets

Specific Treatment

If there is any diagnostic uncertainty discuss with a consultant paediatric haematologist before commencing treatment.

1. Tranexamic acid for troublesome mucosal bleeding
 - Oral tranexamic acid (TXA) 25mg/kg (max 1.5g) TDS for 3-5 days – do not use with haematuria.
 - Or IV for severe bleeding
 - TXA liquid may not be immediately available – tablets can be crushed/dispersed in water or the injection can be given orally (should be diluted with some WFI)
 - Dose reduction of TXA required in renal impairment as follows:
 - If creatinine clearance (CrCl ml/min/1.73m²) = 25-50 give 25mg/kg BD
 - If CrCl = 15-25, give 25mg/kg OD
 - If CrCl <15 or on PD, give 12.5mg/kg OD
2. Oral prednisolone – For mucosal bleeds or peri-operatively
 - 4mg/kg/day orally for 4 days or
 - 2mg/kg/day orally for 5-7 days and then taper dose.
 - Doses may be given once daily or split into 2-3 divided doses.
 - Maximum of 80mg/day
 - Consider omeprazole cover.
3. Intravenous immunoglobulin IVIG – for mucosal bleeds
 - Reserved for emergency treatment of serious bleeding symptoms or in children undergoing surgical procedures. Considered second line to steroids.
 - Raises platelet count more rapidly than steroids.
 - Given as a single dose infusion of 1g/kg, usually over 6-12 hours. (Follow manufacturer's guide on administration.)
 - Dose may be repeated later if platelet count has not responded.
 - An Immunoglobulin Request Form must be completed if IVIG is used: please contact your ward pharmacist, or out of hours; the on-call pharmacist.
 - *Side effects up to 70% - Severe headaches, anaphylaxis*
4. Platelet Transfusions
 - Are usually ineffective in ITP and should only be given in the event of life-threatening haemorrhage or intracranial bleeds.
 - Larger doses are required than for marrow failure.
 - Monitor platelet numbers as a guide as to volume required.
 - In this situation additional therapy will be needed. (IV tranexamic acid, high dose intravenous steroids, IVIG)
5. Thrombopoietin receptor agonist (TPO-RA)
 - Can be considered for children in whom ITP is persistent or who have failed alternative therapy.
 - This needs to be approved by a tertiary centre.

As the disease is self-limiting and will remit spontaneously, treatment does not promote remission. Any response to steroids or IVIG is likely to be transient.

Persistent/Chronic ITP (> 12 months)

1. More common in girls who present after age 10 years.
2. Children should be seen in the joint paediatric haematology clinic.
3. Platelet count is often more than 20,000. Chronic Severe ITP occurs when platelets less than 20,000.
4. Treatment is as for Acute ITP, and risks of specific treatment such as intermittent IVIG need to be weighed against the benefits (e.g. in severe menorrhagia or failure to comply with advice on high-risk sporting activities)
5. Splenectomy may very rarely be offered. It is ineffective in 25% and associated with a high relapse rate although the platelet count is usually maintained higher.
6. Persistent ITP should be investigated with the following
 - FBC and reticulocyte count
 - Film
 - DAT/Coombs
 - Immunoglobulins IgA, G, M
 - Lymphocyte subsets
 - ANA / DsDNA / RhF and Lupus Anticoagulant to exclude SLE.

References

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Guidelines Lead(s):	Dr Johanna Aspel, Consultant Paediatrician.
Contributor(s):	Dr Joanne Steele, Consultant Paediatrician, Dr Kieran Burton, Consultant Haematologist.
Lead Director / Chief of Service:	Dr R Sanghavi, CoS for Paediatrics and Neonates
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Version History

Version	Date	Guideline Lead(s)	Status	Comment
1.0	Sept 2018	T Williams, K Maltby, J Aspel	Final	Based on FPH and HWPH guidelines
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2.0	June 2025	Dr J Aspel	Final	

Related Documents

None