

# Paediatric Pearls

by Dr Julia Thomson, Paediatrician

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Monthly paediatric update newsletter for all health professionals working with children – put together by Dr Julia Thomson, Paediatric Consultant at Homerton University Hospital, London, UK. Housed at [www.paediatricpearls.co.uk](http://www.paediatricpearls.co.uk) where comments and requests are welcome!

## LESSONS FROM THE FRONT LINE

A 6-year-old boy was taken to a routine appointment at the high street optician because of a few weeks of occasional mild headaches. The optician noted blurred disc margins and the child was referred direct to Moorfields Eye Hospital where papilloedema was confirmed. An MRI and lumbar puncture (opening pressure of 39cmH<sub>2</sub>O (normal is up to 28cmH<sub>2</sub>O)) at Homerton then confirmed **Idiopathic Intracranial Hypertension (IIH)**.

Dr Ola Joseph, paediatric trainee, put this slide together to remind us of the features of IIH and of the importance of an eye test in children with headaches. There are 57 new cases of IIH in children per year in the UK, only 50% of them are obese. Support group: <https://www.iih.org.uk/>

This episode led me to ask – again – whether I am the only practising doctor who struggles with eye examination in children. For others in the same boat, the local optician and <https://patient.info/doctor/examination-of-the-eye> are our friends.



## Idiopathic intracranial hypertension

### What is it?

- IIH is a rare neurological condition characterised by **raised intracranial pressure** with **no identifiable pathology**
- Exact pathogenesis unknown
- Previously known as pseudotumor cerebri as features mimic a brain tumour, benign intracranial hypertension (but not benign!)

### Who gets IIH?

- **Typical**- young, **obese female post pubertal** (also seen in adults with IIH)
- **Atypical**- prepubertal, usually not overweight

### How does it present?

- **Symptoms: headaches + visual disturbance most common.** Fatigue, mood changes, retro orbital pain, neck pain, tinnitus less common
- **Signs: papilloedema**, cranial nerve VI palsy

### Investigations

- **Blood pressure** (exclude malignant hypertension)
- **Ophthalmology + Neurological** exam
- **MRI brain +/- MR venography**
- **Lumbar puncture: opening pressure:  $\geq 28$  cm H<sub>2</sub>O is elevated<sup>1</sup> + Normal CSF**

### Management

- **Refer to neuro-ophthalmology**
  - **Aim is to prevent permanent visual loss, reduce headache burden**
  - **Weight loss** if obese/overweight
  - **Medical: acetazolamide** (monitor U+E, blood gas  $\rightarrow$  risk of metabolic acidosis)
  - **Surgical:** rare, CSF diversion
  - Regular ophthalmology review to assess if papilloedema responding to treatment
- Take home points
- ❖ **Ophthalmology/opticians** review if **persistent headaches**
  - ❖ IIH is associated with **obesity** so calculate **BMI**. Remember can be atypical

1. Cleves-Bayon C. Idiopathic Intracranial Hypertension in Children and Adolescents: An Update. Headache. 2018. (level of 28cmH<sub>2</sub>O is non obese, non sedated child, cut off is slightly higher in obese, sedated children)

**Menorrhagia in adolescents** with thanks to Dr Claire Mulvenna, paediatric trainee, for tackling an issue that not many paediatricians know much about.

Surname, First Name	Start Date:	Total:
Towel		
	Day	
	1 2 3 4 5 6 7 8	
Clots/Overflow		
Tampon		
	Day	
	1 2 3 4 5 6 7 8	
Clots/Overflow		

PADS	
Lightly Soaked	+1 Point
Moderately Soaked	+5 Points
Heavily Soaked	+20 Points
TAMPONS	
Lightly Soaked	+1 Point
Moderately Soaked	+5 Points
Heavily Soaked	+20 Points
CLOTS	
Small	+1 Point
Large	+5 Points
FLOODING	
Any	+5 Points

Interpretation:  
A score of >100 points indicates menstrual loss >80ml/cycle

Figure 1. Pictorial bleeding assessment calendar (PBAC). Adapted with modifications from Higham JM, O'Brien PM, Shaw RW. Assessment of menstrual blood loss using a pictorial chart. Br J Obstet Gynaecol. 1990;97(8):734-739. (16)

**Definition of heavy menstrual bleeding:**  $\geq 80$ ml blood loss in each period, having periods that last longer than 7 days, or both (see infographic).

- > Heavy menstrual bleeding is the most common cause of iron deficiency anaemia in adolescent girls.
- > Anovulatory cycles in the first few years after menarche might be responsible for dysfunctional uterine bleeding but this should be a diagnosis of exclusion as about 20% of women with menorrhagia have an underlying bleeding disorder.
- > von Willebrand disease (vWD) affects 1-2% of the general population but 3-36% of women with menorrhagia.
- > 32 to 100% of women with vWD have menorrhagia.

**Investigations:** FBC, von Willebrand testing and tests for other bleeding disorders including platelet function defects (around 50% of patients with any type of bleeding disorder have menorrhagia)

**First line management:** NSAIDs, or tranexamic acid during menses

**Second line treatment:** oral contraceptive pill.

For patients with ongoing heavy menstrual bleeding that is difficult to manage in the community, a referral to gynaecology is warranted.

For iron deficiency anaemia associated with menorrhagia, the first line treatment is iron tablets and increasing the intake of dietary sources of iron.

Heavy periods self-assessment tool on NHS website for patients -

<https://www.nhs.uk/conditions/heavy-periods/>

Academic resource for this article:

[http://pqncr.sbm.ac.ir/uploads/The\\_Adolescent\\_with\\_Menorrhagia.pdf](http://pqncr.sbm.ac.ir/uploads/The_Adolescent_with_Menorrhagia.pdf)

## What is Psychological First Aid (PFA)?

Dr Isabel Wilson explains ...

"Humane, supportive & practical assistance to fellow human beings who recently suffered a serious stressor"



PFA is designed to reduce the initial stress of traumatic events and to enable resilience and long-term coping. Aimed initially at survivors of natural disasters and terrorism, the **8 core actions** are applicable wherever people have been traumatised. [Click here](#) for tips on how to acutely stabilise a very distressed person. Anyone can do it, anywhere.

Further PFA Resources:

- Future learn course: <https://www.futurelearn.com/courses/psychological-first-aid-covid-19>
- National Child Traumatic Stress Network: [www.nctsn.org/treatments-and-practices/psychological-first-aid-and-skills-for-psychological-recovery/about-pfa](http://www.nctsn.org/treatments-and-practices/psychological-first-aid-and-skills-for-psychological-recovery/about-pfa)
- WHO guidance: <https://www.who.int/publications/i/item/9789241548205>

PIMS-TS has meant we have had to look up paediatric reference ranges for troponin, fibrinogen etc. we never usually request. I thought the document below which features normal paediatric ranges for all sorts of tests might be useful for GPs.

## NORMAL RCPCH REFERENCE RANGES

<https://www.rcpch.ac.uk/sites/default/files/rcpch/HTWQ/Reference%20ranges%20Jan%202018.pdf>

NEW RCPCH REFERENCE RANGES- 2016  
Ranges vary between populations and age groups and it is important to always check the reference ranges. If there is no age-specific paediatric range, use the adult range.

	Adult (use if no paediatric age-specific range)	Range	Paediatric (age if applicable)	Range
<b>Haematology:</b>				
Haemoglobin	Male	130 - 175 g/l	0 - 6 days	145 - 220 g/l
	Female	115 - 165 g/l	7 days	140 - 186 g/l
			8 days - 3 months	95 - 125 g/l
			3 months - 4 years	110 - 140 g/l
			5 - 12 years	115 - 140 g/l
White cell count		3.0 - 10.0 x 10 <sup>9</sup> /l	0 - 6 days	10.0 - 26.0 x 10 <sup>9</sup> /l
			7 days	5.0 - 21.0 x 10 <sup>9</sup> /l
			8 days - 6 months	6.0 - 15.0 x 10 <sup>9</sup> /l
			7 months - 12 years	5.0 - 12.0 x 10 <sup>9</sup> /l
Platelets		150 - 400 x 10 <sup>9</sup> /l		150-450 x 10 <sup>9</sup> /l
Mean cell haemoglobin (MCH)		27 - 33 pg	0 - 3 months	31 - 37 pg
			3 - 4 months	27 - 33 pg
			4 months - 12 years	23 - 31 pg
Mean cell haemoglobin concentration (MCHC)		32 - 35 g/dl		32 - 35 g/dl