Paediatric Pearls

by Dr Julia Thomson, Paediatrician

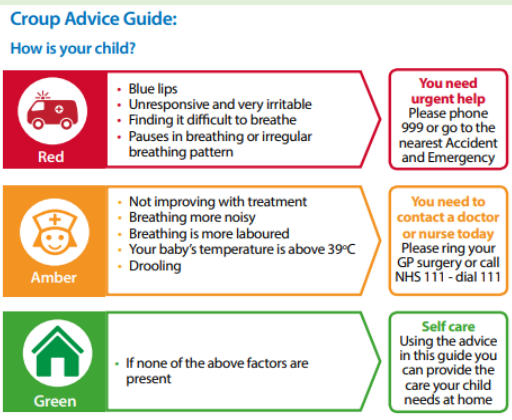
November 2019

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 where comments and requests are welcome!

CROUP clinical assessment tool from Birmingham Women and Children's. I mentioned this website last month as an excellent resource for GPs. It also houses very clear assessment tools for ED practitioners. Here is their traffic light system for identifying the severity of croup:

Table 1: Traffic light system for identifying severity of illness

	Green - low risk	Amber - intermediate risk	Red - High Risk
Colour and Activity	• Normal • Child Alert	• Quieter than normal	• Pale • Lethargy • Distress / agitation
Respiratory	Respiratory rate • Under 12 months: less than 50 breaths/minute • Over 12 months: less than 40 breaths/minute Sats 95% or above	Respiratory rate • Under 12 months: 50-60 breaths/minute • Over 12 months: 40-60 breaths/minute Sats 92-94%	Respiratory rate • over 60 (all ages) Sats less than 92%
Cough	Occasional barking cough No Stridor	Frequent barking cough and stridor	Struggling with persistent cough
Chest recession	NO chest recession	Subcostal and retrosternal recession	Marked subcostal and retrosternal recession
Circulation and Hydration	CRT less than 2 seconds	CRT 2-4 seconds	CRT more than 4 seconds
		• Poor response to initial treatment • Reduced fluid intake • Uncertain diagnosis • Significant parental anxiety, late evening/night presentation. • No access to transport or long way from hospital	



The 10 page guide to croup is available here. It includes this excellent patient information resource which uses the same safety netting format as the West Sussex sepsis resources available here.

What written safety net information are you giving your patients?

Dermatological manifestations of systemic disease by Dr Anusuya Kawsar, dermatology registrar at Barts Health NHS Trust:

What actually is acanthosis nigricans?

The pathogenesis is poorly understood. Possibly caused by increased growth factor levels on keratinocytes with insulin-mediated activation of ILGF growth receptors playing a part.

Characterised by darkening and thickening of skin folds in axilla, groin and back of neck.

Not a disease itself but a sign of an underlying condition. In children, most often obesity-related hyperinsulinaemia. Consider malignancy in adults.

Image and clinical information on 7 different types from: https://www.dermnetnz.org/topics/acanthosis-nigricans/

What to do in primary care with an obese child with acanthosis nigricans:

☑ Screen for type II diabetes and metabolic syndrome (co-existing coronary artery disease, hypertension and diabetes) – fasting insulin, glucose, HbA1c and lipid profile

☑ Consider polycystic ovarian syndrome in a young person with acanthosis nigricans, hirsutism, acne and irregular periods

☑ Correct hyperinsulinaemia through diet and medication (eg. metformin)

☑ Lose weight. Tertiary obesity services will accept children whose BMI is > 99th centile and they have a co-morbidity of which acanthosis nigricans is one example. Start families off with Paediatric Pearls' healthy lifestyle handout and a referral to your local weight management service (eg https://www.henry.org.uk/).

There is a comprehensive article available: Phiske MM. An approach to acanthosis nigricans. *Indian Dermatol Online J.* 2014 Jul-Sep; 5(3): 239–249.

For parents: https://kidshealth.org/en/parents/acanthosis.html

When I searched "VEOID" on-line after a recent presentation by Dr Jonathan Derrick, paediatric SHO, Google helpfully asked "*Did you mean: video*". So, Jon is delighted to share information with you on an emerging type of inflammatory bowel disease in the very young that not even Google knows about…

LESSONS FROM THE FRONT LINE:

VEOID = Very Early Onset Inflammatory Bowel Disease

A 2 ½ year old Asian male presented with a 3-month history of bloody diarrhoea and peri-anal erythema. Mother was mainly concerned about the nappy rash and the long history of blood in the diarrhoea was only elicited on a ward round post admission. He had been treated for viral gastroenteritis and then zinc deficiency. He had lost 3 kg in weight at presentation and looked anaemic.

The child was pale, flushed and looked unwell with a tender abdomen. Hb was 70, CRP 200, ESR 160, WCC 22. Stool samples were negative for MC&S and virology, faecal calprotectin was 4,300. An AXR showed colonic thickening. The child received IV Ciprofloxacin and a blood transfusion. A referral was made to tertiary gastroenterology and following a colonoscopy the child was diagnosed with Very Early Onset Inflammatory Bowel Disease (VEOID) affecting his large bowel.

Take Home Message: VEOID is increasing in incidence. NICE in 2009 (https://pathways.nice.org.uk/pathways/diarrhoea-and-vomiting-in-children) asked us to investigate diarrhoea if there is blood in it. Ask parents the direct question, "is there any blood or mucus in the diarrhoea?". Bloody diarrhoea and weight loss = significant pathology.

After MSK involvement, dermatological lesions are the second most common extraintestinal disorders of IBD with 1/3 of patients having some sort of rash (Pellicer Z et al. Management of cutaneous disorders related to inflammatory bowel disease. *Ann Gastroenterol* 2012; **25**(1): 21–26). This child's nappy rash was secondary to his IBD.

FAQs on VEOID answered at Snapper S. Very–Early-Onset Inflammatory Bowel Disease. *Gastroenterol Hepatol* 2015 Aug; **11**(8): 554–556. Defined as symptoms appearing < 6 yrs of age. There is an infantile type which develops in children under 2. Incidence is increasing, possibly involving the interaction between genetic influences and as yet unknown environmental factors.

Other causes of bloody diarrhoea in children

Reference: Murphy S. Management of bloody diarrhoea in children in primary care. *BMJ* 2008;**336**:1010

INFANTS UNDER 1 YEAR OF AGE	CHILDREN OVER 1 YEAR
Common causes:	***Common causes:***
Intestinal infection	Intestinal infection
Infant colitis	Inflammatory bowel disease
Non-specific colitis	Crohn's colitis
Breast milk colitis	Ulcerative colitis
Cow's milk colitis	Juvenile polyp
Less Common or Rare:	***Less Common or Rare:***
Intestinal ischaemia	Intestinal ischaemia
Intussusception	Intussusception
Malrotation and volvulus	Malrotation and volvulus
Necrotising enterocolitis	Mucosal prolapse syndrome
Hirschsprung's disease	Henoch-Schönlein purpura or other forms of systemic vasculitis
Inflammatory bowel disease	Factitious illness
Crohn's colitis	
Ulcerative colitis	
Systemic vasculitis	
Factitious illness	