

Specialty Corner

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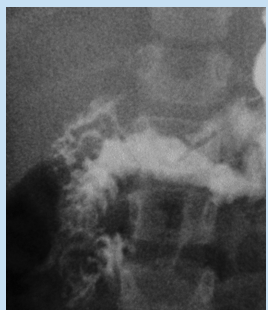


Written by S Andronikou & N Wieselthaler

Case of the day An unusual duodenal C-loop

by Savvas Andronikou

Figs 1 and 2 demonstrate the contrast meal in a child with alleged 'bile-stained' vomiting. The second part of the duodenum shows a loop to the right of the spine prior to crossing to the left of the spine, suggesting malrotation. A false-positive diagnosis was made by the reporting registrar because a normal duodeno-jejunal flexure is expected to be located to the left of the spine, behind the stomach at the level of the duodenal bulb. The above images are consistent with a duodenum inversum or a duodenum reflexum.¹ This subtle variation of normal demonstrates the distal duodenum to ascend to the right of the spinal column up to the level of the duodenal bulb and crossing the spine horizontally where it is fixed in a normal location by the ligament of Treitz. It may result in delayed gastric emptying which gives rise to the presenting symptoms but is not associated with midgut volvulus. An accurate diagnosis is imperative to avoid unnecessary surgery.¹



Figs 1 and 2. Images demonstrating the course of the duodenum, consistent with duodenum inversum.

1. Long FR, Kramer SS, Markowitz RI, Taylor GE, Liacouras CA. Intestinal malrotation in children: tutorial on radiographic diagnosis in difficult cases. *Radiology* 1996; **198**: 775-780.

Journal review – Hermes

Pediatric Radiology October 2005; 35: 947-979.

The minisymposium consists of 2 articles on the evaluation of vascular rings and slings and the imaging thereof. A vascular ring refers to any vascular or ligamentous anomaly that encircles the trachea or oesophagus. There are 2 groups: complete and incomplete. Complete vascular rings include double aortic arch, right aortic arch with retroesophageal left subclavian artery and left ligamentum arteriosum. Incomplete vascular rings include pulmonary artery sling and innominate artery compressive syndrome.

The first article written by M Oddone *et al.* is: 'Multi-modality evaluation of the abnormalities of the aortic arches in children: techniques and imaging spectrum with emphasis on MRI.'

A fantastic article discussing embryology and classification as well as the imaging with chest radiography, barium oesophagography and MRI. Each subtype is then comprehensively described under separate sections with great images and additional line diagrams.

The second article, written by M Hernanz-Schulman, is 'Vascular rings: a practical approach to imaging diagnosis'.

This article also discusses imaging techniques in detail and includes modalities such as ultrasound and multislice CT. Specific subtypes are also described in detail with superb images.

The articles combined are 30 pages but well worth the read.

by Nicky Wieselthaler

Girst TM, Thornton FJ. **MRA in children: technique, indications and imaging findings.** *Pediatric Radiology* 2005; 25: 26-39.

This article explains the conventional MRA techniques that can be used in children as well as contrast-enhanced 3D MRA with rapid T1 spoiled gradient-recalled echo (FSPGR). Injection parameters and indications are discussed in detail. Rating: ***. Comment: very educational and practical.

Taylor Chung, Thornton FJ. **MRA of the body in pediatric patients: experience with a contrast-enhanced time resolved technique.** *Pediatric Radiology* 2005; 35:3-10.

This article compares CT angiography with other available modalities and techniques. It also provides valuable and practical scan parameters that can be used in practice. Dose-specific parameters are discussed with useful suggestions for radiation reduction. Applications in paediatric practice are listed.

by Savvas Andronikou

Conference News

• ESPR – 2005

The European Society for Pediatric Radiologists held its Annual Conference in Dublin. The members of PISSA who attended (S Andronikou and N Wieselthaler) presented 2 papers and 1 paper which were well received. The long papers were delivered by S Andronikou on behalf of Carey Makenzie and Stefan Przybojewski and dealt with physal bar and objective features of basal enhancement in TBM respectively.

The main focus and keynote speakers dealt with increasing scientific evidence of the decreasing importance of vesicoureteric reflux. Abstracts were published in a supplement issue of *Pediatric Radiology*.

• ESPR/ IPR 2006

In 2006 there is a combined meeting of North American, European and Oceanic societies of Pediatric Radiologists at IPR in Montreal. Abstracts have already closed. PISSA has entered

4 abstracts including long papers on radiographer reporting in CT brain and correlation of infants with outcome in TBM.

• ISR 2006

Jan Labuschagne has secured this massive International Conference to be held at the Cape Town ICC in September 2006. Good news for PISSA is that there is a dedicated Pediatric Tract for Thursday 14 September, Friday 15 September and Saturday 16 September with over 8 hours of talks and over 30 invited international speakers just for the Pediatric Tract.

These will be from Europe, the USA, Canada, Australia, Asia and Africa and include the likes of J Barkovich, Susan Blaser, Steven Chapman, Francis Brunelle, Alan Daneman, Marilyn Siegel, Isky Gordon, Kieran McHugh and Douglas Jamieson.

One session is dedicated to neuroimaging, one to abdominal imaging and one to TB/HIV in children. The last day will be jam-packed with internationally renowned TB/HIV experts. Abstracts for posters and long papers are welcome: docsav@mweb.co.za. Check out the programme: www.isr2006.co.za.

Books

Baby Steps into Pediatric Neuro Imaging. S Andronikou, N Wieselthaler, E Kader (2004) SAMA Health and Medical Publishing Group (Cape Town).

A product of PISSA, this national collaboration is finally in print, but has already run out of print! The massive demand has prompted another print of 200 books for 2006. Feedback has shown this to be an excellent quick reference, particularly for the myelin maturation and standardised US imaging of the head.

PISSA intends to produce its next book 'A Guide to Pediatric Imaging Procedures' sometime in 2006.

The RSSA and College of Radiologists are collaborating to produce a free Imaging Atlas for Radiologists and Clinicians. The publishing team of PISSA is heading the project even though most of the atlas will deal with adult anatomy. An excellent chapter in Paediatric Imaging Anatomy is in progress and will form an integral part of the book. The RSSA has donated over R120 000 for the publication which is sanctioned by the College of Radiologists of South Africa.

Pre-exam Course

A pre-exam course is held annually by the College of Radiology. This year paediatric imaging was given as much emphasis as imaging of all the other body systems and the conference was a huge success. Vivas, spot tests and long cases were added to the programme of physics and written question preparation lectures. The next course will be held in Cape Town in 2006. Enquiries contact the organiser: Dr Savvas Andronikou at docsav@mweb.co.za.

College of Radiology

The October 2005 College of Radiology exams have just taken place. Paediatric imaging was a focus of 2 written questions and 2 of the 10 long cases. It also formed a large proportion of the oral exam as one examiner asked only paediatric radiology-related questions.