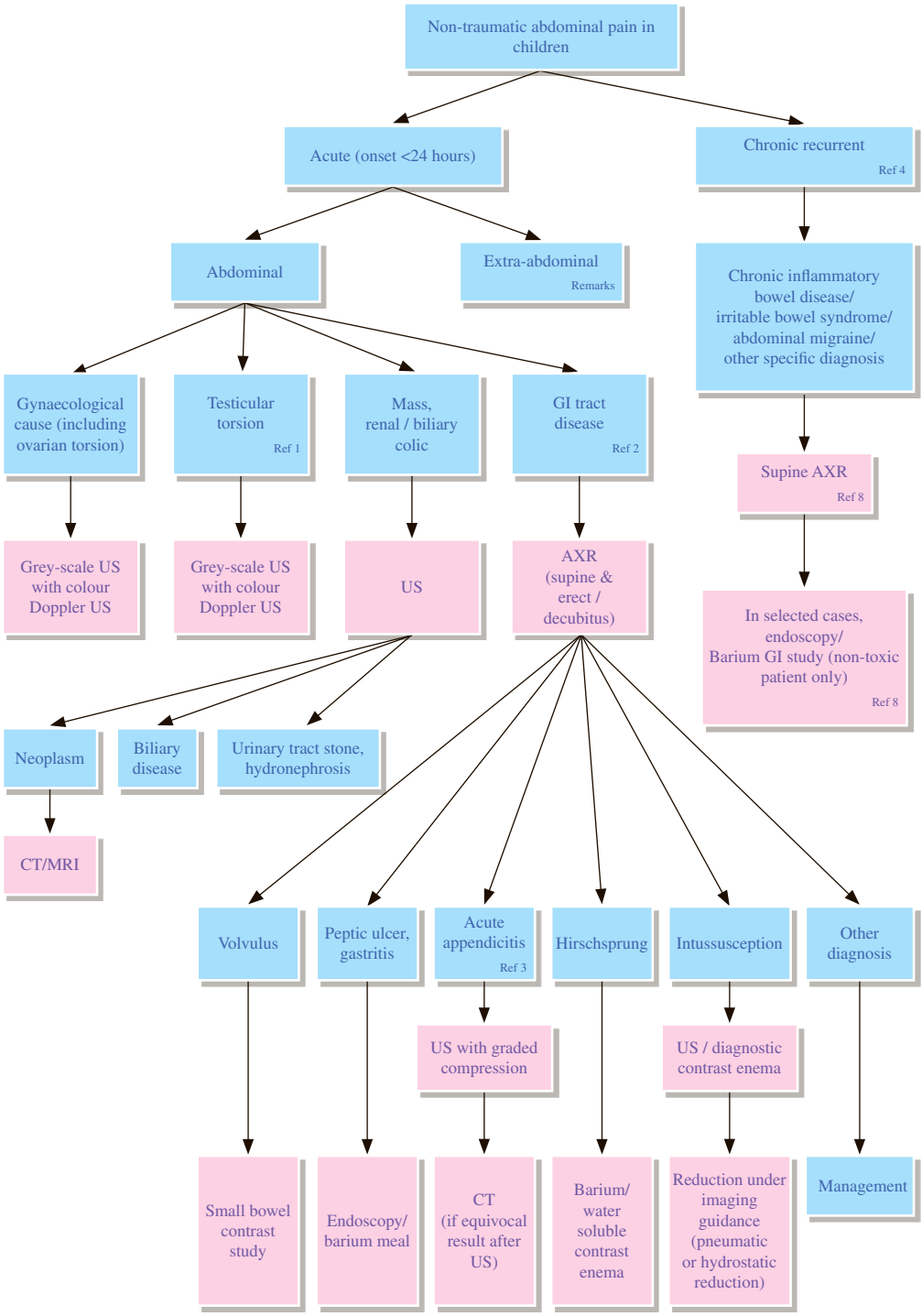
PD 4 Non-traumatic abdominal pain



REMARKS

1 In all children presented with abdominal pain, history and physical examination should be carefully assessed for evidence of significant trauma (both accidental and non-accidental).

2 In significant abdominal trauma, further investigations with radiograph, US and sometimes CT are necessary to exclude pneumothorax, perforation of hollow viscus or contusion / laceration of solid organs.

3 In pre-school children, abdominal pain is rarely of psychogenic origin and an organic source should be carefully sought.[7]

4 A period of observation is important in those with non-specific symptoms and absent physical signs. Subsequent change in symptoms or development of specific signs may point to the diagnosis.

5 **Gynaecological causes**

5.1 Recurrent pain related to menstruation can be due to endometriosis, while chronic pain and vaginal discharge are suggestive of chronic pelvic inflammatory disease. For acute onset of abdominal pain in sexually active females, the possibility of ectopic pregnancy or other pregnancy-related complications as well as acute pelvic inflammation should be considered. All these conditions warrant further investigation by US.[5,6]

5.2 Gastroenteritis and constipation are clinical diagnoses. Radiographs are usually unnecessary.[5]

5.3 For suspected non-accidental injury, please refer to the guideline PD1.

6 **Extra-abdominal causes**

6.1 Diabetic ketoacidosis, porphyria, lead poisoning, in which biochemical tests are needed for diagnosis.

6.2 Pneumonia, bronchiolitis, asthma, in which chest X-ray (CXR) will be useful for diagnosis.[5]

7 **Acute appendicitis**[3]

7.1 Meta-analysis showed US is nearly as good as CT in experienced hands, with a pooled sensitivity of 88% and specificity of 94%, as compared with CT, with a pooled sensitivity of 94% and specificity of 95%. Given the lack of ionizing radiation, US is the preferred examination in children, particularly if equivocal results are followed up by CT.

7.2 CT-after-US approach has excellent accuracy, with reported sensitivity and specificity of 94%.

7.3 If CT is performed, use of intravenous (IV) contrast is recommended; however, the use of enteric contrast, such as oral or rectal contrast, has not been shown to significantly increase sensitivity in children and should be left to the discretion of individual department and hospital policy.

7.4 Non-visualization of the appendix on normal CT has been shown to have a high negative predictive value of 98.7%.[9]

8 Hirschsprung Disease[2]

8.1 Barium or water-soluble contrasts are the routine contrast media used for evaluating childhood Hirschsprung disease.

8.2 In the neonate or infant, water-soluble media diluted to near-isotonic or iso-osmolar concentration is preferred, as there may be potential for bowel perforation.

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