Acute Abdominal Pain in Children

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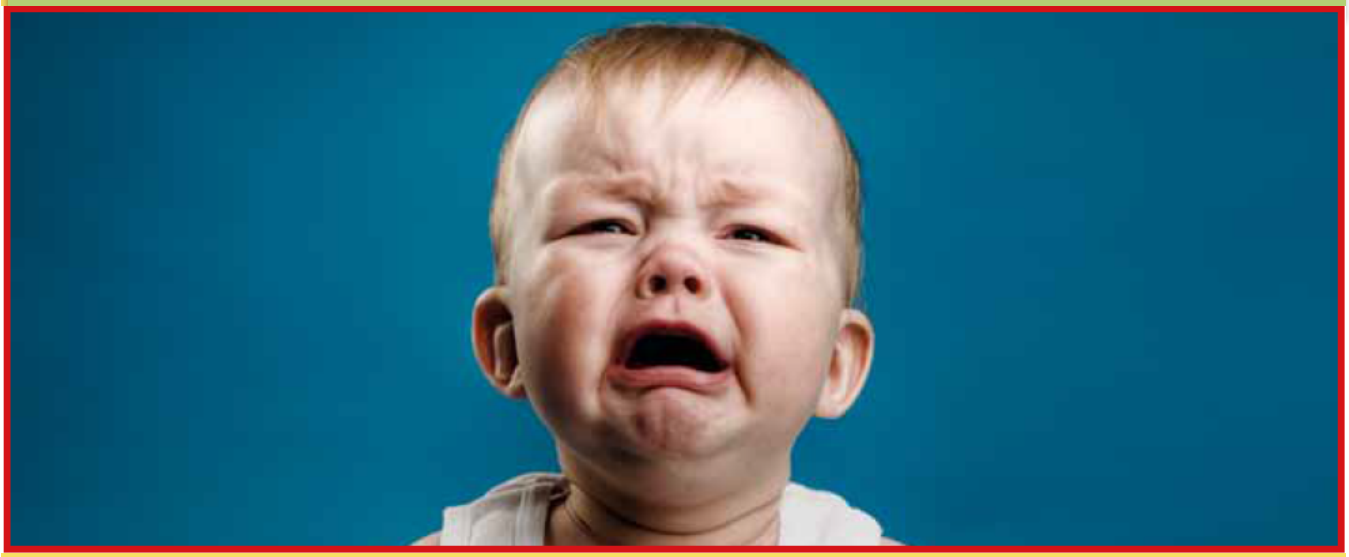

There is hardly any child who did not experience acute abdominal pain from early infancy to childhood. It can be caused by a vast range of surgical or non surgical causes. Most causes are self limiting and do not require active treatment but only close observation by the parents. Gastroenteritis is by far the most common cause. Out of surgical causes acute appendicitis is the most common cause, which needs surgical intervention. Life threatening abdominal pain can also occur but can be recognised with parental observation. It is important that the parents give full details of the events as it started and the physician should also pay full attention to the minute details of the history of the child including the previous illnesses. A through clinical examination in most circumstances can pick the diagnosis of acute appendicitis.

As a general rule of thumb if child is complaining of mild abdominal pain but can eat and drink well without vomiting, the underlying cause usually is self limiting. However in case of persistent pain for over several hours, it is always better to consult a paediatric surgeon. Ultrasound and CT scan are usually not required to diagnose simple appendicitis. Also blood tests can be helpful but are never conclusive.

Usually abdominal pain is associated with other signs and symptoms e.g. cough, sore throat, fever. This type of abdominal pain is usually of viral cause and glands in the tummy are swollen in sympathy with neck glands.

There are certain red alert signs associated with surgical cause of abdominal pain. The most important is dark green (bilious) vomiting and blood in stools.

In a typical episode of acute appendicitis, pain starts in the central abdomen and then moves to the right lower abdomen in few hours. However it may not present this way in a vast majority of children. Vomiting may or may not be associated. There may be associated diarrhoea or burning micturition, depending upon the position of tip of appendix. Also some times the progression of symptoms is very rapid and many a times it takes couple of days and still the signs are not very clear. In female child and very young age the presentation may be confused with other pathology.

Causes of abdominal pain in children according to age			
Age group	**Medical causes**	**Surgical causes**	**Other causes**
Birth-1 year	Gastroenteritis Constipation Urinary tract infection (UTI)	Intussusception Volvulus Incarcerated hernia	Infantile colic Hirschsprung's disease
2-5 years	Gastroenteritis Constipation UTI	Appendicitis Intussusception Volvulus Trauma	Mesenteric lymphadenitis Henoch-Schönlein purpura Diabetic ketoacidosis Sickle cell crises
6-11 years	Gastroenteritis Constipation UTI	Appendicitis Trauma	Mesenteric lymphadenitis Abdominal migraine Henoch-Schönlein purpura Diabetic ketoacidosis Sickle cell crises Pneumonia Functional pain
12-18 years	Gastroenteritis Constipation	Appendicitis Trauma Ovarian torsion Testicular torsion	Dysmenorrhoea Diabetic ketoacidosis Mittelschmerz (ovulation) Threatened abortion Ectopic pregnancy Pelvic inflammatory disease Inflammatory bowel disease Adrenal crisis

In a female child who has started having periods, ovarian problems like ovarian torsion or mid cycle pain may be confused with acute appendicitis. Ultrasound can usually be of help in this case but it also depends upon the experience of monographer or radiologist regarding paediatric ultrasound. Similarly mid cycle pain is a common occurrence in young girls which may be confused with acute appendicitis. However the history or mid cycle coincidence and clinical findings should help an experienced paediatric surgeon to make the correct diagnosis.

Should parents consider getting the appendix removed even if there is doubt of diagnosis?

Sometimes this is the advice given to parents but I differ seriously with this advice. Operation to remove appendix should never be performed unless there is enough evidence that appendix may be inflamed.

What is the best lab test or investigation to diagnose acute appendicitis?

There is no single blood test of x-ray, CT scan or ultrasound which can conclusively diagnose acute appendicitis. The best method is serial examination by a senior paediatric surgeon. Some times a sincere paediatrician is a better option to make the correct diagnosis. However several tests together can Indicate towards the correct diagnosis namely total white cell count and neutrophil count and CRP.

If ultrasound shows inflamed appendix, should parent get the appendix removed?

It is not an uncommon scenario in my clinical practice when parents come with a report of ultrasound showing thickened inflamed appendix. However the child is well and running around. In this case even parents can tell, based on common sense, that child does not need appendicectomy.

Is it a good idea to start antibiotics while the child is being clinically investigated for acute appendicitis?

It is a common practice in Pakistan that many paediatricians and start antibiotics even before asking for an opinion of paediatric surgeon. However it is not the correct practice. In principle, if a child has been started on antibiotics, one is committed to do appendicectomy because antibiotics can mask signs and symptoms of acute appendicitis and one may think that it was not the diagnosis at which point antibiotics are then stopped leading to worst complications of appendicitis including perforation, abscess formation and prolonged hospitalisation. Parents should ensure with the doctor that there is enough reason to treat infection with antibiotics.

Can child be given pain killers if there is suspected appendicitis?

If the child is in pain, the first thing is to start simple pain killers like paracetamol or ibuprofen according to the weight of the child. It is incorrect to think that signs of acute appendicitis are masked with pain killers.

Reference: