

## **INTRODUCTION**

As pediatric gastrointestinal disorders form one of the major leading causes of death in infancy and childhood due to the possible severe complications that may develop due to faulty diagnosis and or management, so prompt early diagnosis of Pediatric gastrointestinal disorders is required for prompt management (*Sargent et al., 2000*).

It is often difficult to reach a diagnosis on clinical grounds alone and several of the possible diagnosis require immediate surgical attention, so radiologists are often called upon to assist in the evaluation of these patients (*Nagai and Feldstein, 2003*).

Ultrasound When first developed was used to evaluate either solid or fluid-filled organs, such as evaluation of the liver, gallbladder, kidneys, pelvis, and the pregnant uterus. Sonography was limited in evaluation of the gastrointestinal tract because of the gas content within the gut lumen making visibility difficult, if not impossible. Thus, other studies such as the barium enema or the upper gastrointestinal series were widely used in studying the gastrointestinal tract. Ultrasound recently has been shown to be of promise in evaluating abnormalities of the gastrointestinal tract. Ultrasound is helpful in the diagnosis of certain gastrointestinal abnormalities such as hypertrophic pyloric stenosis (*Haller & Cohen, 1986*) and acute appendicitis (*Jeffrey et al. 1987*). Other applications of transabdominal ultrasound include evaluation of gastrointestinal tract neoplasms, inflammatory bowel disease, and other acute inflammatory processes (*Sivit et al., 2000*).

Ultrasonography has become an increasingly important, available, safe, useful, and hazardless modality in evaluating the gastrointestinal wall disorders in the pediatric population. (*Chang and Lim-Dunham, 1998*)

Whereas most attention is focused on transabdominal ultrasound, endoluminal and endoscopic sonography also have been used to evaluate the gastrointestinal tract (*Botet & Lightdale, 1991*). Endocavitary scanning has been used to evaluate the esophagus, stomach, rectal wall, and the anus. Endoscopic sonography has been shown to be helpful in diagnosing pancreatic disease. Thus, transabdominal and endoluminal sonography have several applications in evaluating the gastrointestinal tract.

Ultrasonography is of utmost importance Especially in the following cases. "Gasless abdomen on plain abdominal radiograph, physical examination or abdominal radiograph suspicious mass, debilitated patient condition such that contrast study examination may be dangerous (e.g., risk of bacteremia in a neutropenic patient or intubated neonate who cannot be transported to the Radiology department or neonates with severe diarrhea or dehydration)& initial evaluation of suspected appendicitis (*Harrington et al., 1998*). However there are situations in which ultrasonography recommend a contrast study for definitive diagnosis (*Albillos et al., 1999*).