

SUMMARY & CONCLUSION

The term acute abdomen refers to any clinical condition characterized by severe abdominal pain that develops over a period of hours. Rapid and accurate diagnosis is essential if morbidity and mortality are to be significantly decreased. Clinical assessment is often difficult and laboratory and conventional radiological findings are often nonspecific. The development of cross-sectional imaging has had a tremendous impact on the diagnosis and treatment of acute abdomen. In particular CT has gained widespread acceptance as a reliable and accurate modality in the evaluation of affected patients. CT is most often indicated in patients with severe abdominal pain who may require surgery or intervention. It is probably most beneficial in patients who present with confusing or conflicting clinical signs and symptoms.

Spiral CT is a rapid and efficient means of evaluating patients with acute abdominal pain with its ability to provide a correct diagnosis, attention to proper technique and protocol was proved to be essential for optimizing the CT examination and maximizing diagnostic accuracy.

Spiral CT in patients with acute abdominopelvic pain has considerable diagnostic and therapeutic impact :

- CT increases the emergency physician's level of certainty and excludes alternative diagnoses.
- CT facilitates both more timely surgical intervention and reduces the number of patients requiring hospital admission.
- CT with negative findings allowed emergency physicians to confidently exclude many (if not all) serious causes of acute abdominal pain.

- CT modified the primary therapeutic strategy in considerable number of cases and the major effect is to avert intended laparotomy.

Two important decisions must be made in patients presenting to emergency department : **does the patient need surgery ?** And if so, **how soon ?** immediate surgery is required for patients with massive hemorrhage (e.g, abdominal aortic aneurysm rupture); other conditions (e.g., perforation and intestinal ischemia) require surgical intervention in a few hours because additional delay increases morbidity. A delay of more than 12 hours is detriment in disorders such as appendicitis, mesenteric venous thrombosis, and strangulated small-bowel obstruction. CT has become the most important noninvasive imaging tool to diagnose acute abdomen and answer the questions posed above.

In the setting of acute abdomen: Spiral CT is the imaging modality of choice for patient triage.

In the setting of bowel ischemia: Although the CT diagnosis of acute bowel Ischemia may still be difficult if specific CT finding and specific clinical information are lacking, the sensitivity of CT for the diagnosis of acute bowel ischemia is high. CT is able to demonstrate not only vascular occlusions but also bowel wall changes and considering the known additional advantages of CT with regard to its high accuracy for confirmation or exclusion of various other differential diagnoses of acute imaging modality for the diagnosis of acute bowel ischemia. **However , a strongly clinical-radiologic approach must be pursued in the detection, diagnosis, and treatment of this often fatal disease.**

In the setting of acute appendicitis: CT greatly improved the accuracy of clinical diagnosis alone, it has the potential to become with clinically equivocal acute appendicitis.

In the setting of bowel perforation: CT is a valuable method in the diagnosis of alimentary tract perforation. The diagnosis can be established rapidly, even without patient preparation.

In the setting of bowel obstruction : CT has proved to be very useful in cases of high-grade bowel obstruction, with high accuracy. CT is the initial examination of choice because it can help confirm the need for or obviate surgery.

In the setting of abdominal hemorrhage: CT is the single most important imaging technique in the detection and characterization of spontaneous intraperitoneal bleeding . Further development in multi-detector technology, has improved the effectiveness of CT.

Experienced clinician often be able to accurately diagnose and triage patient without the need of imaging study but; in many cases the physical examination is noncontributory and patient history is confusing , further more, in many cases of acute abdomen the presentation is overlapped and So; at this situations CT is strongly justified to make an accurate diagnosis.