بسم الله الرحمن الرحيم

درد شکم و شکم حاد در بیماران کوید۱۹

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۱۶ مهر ۱۳۹۹

بیمارستان ضیائیان

Clinical features of coronavirus disease

- According to ٣٧٠،٠٠٠ confirmed covid-١٩ patients

  - Cough in 50 percent
  - Fever (subjective or >100.4°F/38°C) in 43 percent
  - Myalgia in 36 percent
  - Headache in 34 percent
  - Dyspnea in 29 percent
  - Sore throat in 20 percent
  - Diarrhea in 19 percent
  - Nausea/vomiting in 12 percent
  - Loss of smell or taste, abdominal pain, and rhinorrhea in fewer than 10 percent each

Gastrointestinal involvement

- Abdominal pain
- Nausea
- Vomiting
- Diarrhea
  - Diarrhea occurs secondary to the interaction between ACE٢, highly expressed in the human small intestine, and ٢٠١٩-nCoV cell entry component. Recent studies show that ٢٠١٩-nCoV RNA has been detected in stool samples, confirming fecal–oral transmission.
  - According to the literature, the incidence of diarrhea could be underestimated

A case series of covid-١٩ patients with abdominal pain

Ten case description

- ۱۰ patients: ۶ males, ۴ females
- mean age ۵۰±۱۸ years
- fever and flu-like symptoms in the previous ۵-۱۰ days, with general malaise, decreased appetite, abdominal pain and vomiting/diarrhea
- Only one patient denied cough and fever
- None of them had a history of abdominal surgery or a notable medical history. No IBD, no melena or weight loss, no distension,no tenderness, no altered bowel sounds, normal Ph/E
- maximum body temperature of ۳۹°C (۳۷,۶±۱°C).
- four patients complained of dyspnoea with significantly decreased PaO_2/FiO_2 and a need for oxygen.

Lab data

- Lymphopenia , high CRP and altered liver enzymes in most of the patients
- Average WBC: ٦.١٥ (٣.٢-٩.٢٩) ×١٠^٩/l, PLT: ١٧٦.٧ (٨٢-٣٤١) ×١٠^٩/l, and lymphocytes ١.٣١ (٠.٦٠-٢.٧٦) ×١٠^٩/l.
  - The eosinophil percentage was undetectable in all patients.
- Average value of ALT was ٧٧.٤ U/l (٢٩-١٦٢ U/l), AST was ٨١.٩ (٣٠-٢٨٤) U/l, and GGT was ١٢٣ (٥٤-٢١٨) U/l.
- Bilirubin was increased in only one patient who developed pancytopenia and hemolytic anemia, which improved with oral steroid therapy.
- The average value of CRP was ٦.٦ (١.٥-٢١.٣٧) mg/dl. When measured, procalcitonin was always undetectable, excluding a bacterial infection.
- In the patient who complained only of diarrhea with no flu-like symptoms we performed stool cultures for *Clostridium difficile* and enteric pathogens, which were all negative.

Abdominal imaging

- US of the abdomen did not reveal an abnormal stomach and bowel distention, except in one female patient, who had bowel inflammatory signs (peri-intestinal inflammatory reaction) as confirmed by a CT scan of the abdomen.
- This patient completely recovered after antiviral treatment and was discharged home with no signs of bowel disease on US of the abdomen.
- All the patients were treated with supportive care and antiviral therapy, including lopinavir and ritonavir tablets. Diarrhoea completely resolved.

STRATEGIES FOR TREATING PATIENTS WITH ABDOMINAL PAIN DURING THE EPIDEMIC

considering ۴ aspects

First, know…

- Clinicians, especially surgeons, should be familiar with not only the common symptoms of COVID-١٩, but also the gastrointestinal and abdominal symptoms of the disease
- To avoid misdiagnosing COVID-١٩ as an acute abdomen and admitting patients to the general surgical ward.

Second, ask…

- PMH and especially the epidemiological history

- History of exposure to suspected or confirmed COVID cases within ٢ weeks for each patient with abdominal symptoms.

Third, do…

- Comprehensive physical examination, especially an abdominal physical examination.
- For surgical acute abdominal pain, specific pain sites can often be found; there are even signs of peritonitis such as abdominal tenderness, rebound tenderness, and abdominal muscular defense

Fourth, consider…

- Auxiliary examination methods
  - blood test
  - virus pathogen detection
  - Imaging
  - PCR
    - often requires the collection of multiple samples at different points in time because of false negative results

In the early stages of COVID-١٩, white blood cell and neutrophil counts do not increase, while lymphocyte counts decrease in most patients.

Conclusion

- Four aforementioned recommendations

- Because of difficulty of PCR in emergency situation lung CT scan should be used as a quick screening test especially before emergency surgery.
- CT-scan of the abdomen combined with lungs is recommended for all patients with acute abdominal pain during the epidemic.

References

- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC٧١٦٢٥٦٨/ (Erika Poggiali et al, European journal of case reports in internal medicine)
- https://bjgp.org/content/٧٠/٦٩٦/٣٥٨ (Lu-Lu Zhai, Wei Wang, Lun Wu and Zhi-Gang Tang, British Journal of General Practice)
- Clinical features of covid-١٩ disease on uptodate

با تشکر از توجه شما