

# Pfizer COVID-19 vaccine-induced peritonitis

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## Introduction

The COVID-19 vaccine was one of the essential methods for controlling the pandemic and there was a significant decrease in mortality and morbidity after vaccine initiation.<sup>1</sup>

The safety of vaccines was assessed on large groups of participants and the adverse effects were frequently reported and published.<sup>2</sup>

We report the first case of peritonitis that was diagnosed 2 days after first dose of Pfizer BioNTech COVID-19 mRNA vaccine and that recurred after second and third dose of vaccine.

## Case presentation

A 62-year-old man, with no past medical history apart from hyperlipidaemia treated with statins, presented 2 days after he received the first dose of Pfizer BioNTech COVID-19 mRNA vaccine with diffused abdominal pain associated with nausea. Clinical examination showed generalised abdominal tenderness more severe in the left iliac fossa. Blood testes showed C-reactive protein (CRP) of 150 mg/L and an erythrocyte sedimentation rate of 39. Computed tomography of the abdomen confirmed evidence of diffused peritonitis with appendicitis and few diverticula laterally near the iliac region with thickening of its wall with surrounding edematous changes and fat stranding.

The first peritonitis required hospitalisation and intravenous antibiotic (piperacillin/tazobactam and metronidazole). Significant improvement of abdominal pain and decreased inflammatory markers were seen within a few days.

With the second and third dose of Pfizer BioNTech COVID-19 mRNA vaccine, the patient again experienced symptoms of abdominal pain 2 days after the vaccine, but the pain was less severe and the patient required no hospitalisation, although inflammatory markers were high. He received an oral antibiotic (metronidazole and ciprofloxacin), with good response.

## Discussion

The patient was diagnosed with peritonitis on the basis of clinical, laboratory and radiological findings after the first, second, and third doses of Pfizer BioNTech COVID-19 mRNA vaccine.

The mechanism responsible for vaccine-induced peritonitis is unclear.

There are some data and case reports about COVID-19-infection-induced colitis and peritonitis, but no data related to vaccine induced peritonitis.<sup>3</sup>

## Conclusion

To our knowledge, this is the first report of peritonitis post-COVID-19 vaccine. It is important to report a rare COVID-19 vaccine side effect and the manifestation of the disease to prevent serious complications by early diagnosis and management. ■

## References

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