

## Gastric pneumatosis: an unusual complication of noninvasive ventilation

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### Introduction:

Gastric pneumatosis (GP) is a rare clinical entity, particularly in neonates. It may result from various underlying conditions such as neonatal sepsis, gastritis, pyloric stenosis, gastric involvement in necrotizing enterocolitis (NEC), malpositioned nasogastric tubes, and complications from non-invasive positive pressure ventilation. Prompt recognition and management of the underlying etiology are critical for optimal outcomes. This study aimed to highlight gastric pneumatosis as an important differential diagnosis in cases of suspected pneumoperitoneum.

### Case report:

We report the case of a preterm neonate who developed acute respiratory distress syndrome within 10 minutes of birth, necessitating both invasive and non-invasive mechanical ventilation, and admission to the neonatal intensive care unit. During hospitalization, the patient developed progressive abdominal distension, which led to reintubation. An abdominal radiograph revealed significant pneumoperitoneum (Figure 1), raising concern for gastrointestinal perforation. However, exploratory laparotomy revealed isolated gastric pneumatosis without evidence of perforation (Figure2).

### Conclusion:

Gastric pneumatosis is an uncommon form of pneumatosis intestinalis and can mimic pneumoperitoneum on radiographs. A lateral abdominal X-ray can aid in differentiating between true pneumoperitoneum and gastric wall gas. Multidisciplinary evaluation and conservative management can lead to favorable outcomes.



Figure 1: Abdominal radiograph T showing significant pneumoperitoneum



Figure 2 : Laparotomy: Isolated gastric pneumatosis without evidence of perforation