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Letters to the Editor

Colonic distension treatment in Duchenne muscular dystrophy - response

We would like to thank Dr. Fiorentino for his comments on our article reporting the onset of acute colonic distension in a muscular dystrophy patient receiving Non-Invasive Positive Pressure Ventilation (NPPV) [1] and for sharing with us an interest in discussing relevant aspects concerning the diagnosis of exacerbated chronic colonic pseudo-obstruction and its effective treatment.

We certainly agree that both diagnosis and management of acute colonic pseudo-obstruction require that mechanical bowel obstruction may be excluded without doubt. Once administered a plain abdominal radiograph, our patient nevertheless refused to undergo abdominal CT scan; moreover, although essential for diagnosis clarification and decompression, colonoscopy was excluded because of the high risk of complications [2]. Following the diagnosis of pseudo-obstruction, our patient was assigned conventional management consisting of: nil by mouth, a nasogastric tube, postural changes, i.v. fluids, and electrolyte replacement [3]. In addition, a polyethylene glycol (PEG) 3350 was administered via nasogastric tube, a broad-spectrum antibiotic was prescribed, and a rectal catheter was inserted. In order to reduce the aerophagia and bowel insufflation, the Volume-limited NPPV was switched to Volume-Assured Pressure Support (Elisee 150, ResMed, Sydney, Australia) with a maximal Pressure Support at 15 cm H_20, PEEP at 4 cm H_20, targeted V_T at 450 mL, and RR at 18 breaths/min. Although the patient showed transient benefit due to the passage of flatus and stools and a reduction in abdominal distention at physical examination, her clinical status and blood gas exchange worsened progressively, leading to acute respiratory decompensation. Indeed, once developed, abdominal overdistension could have inhibited downward displacement of the diaphragm in the patient, thereby reducing pulmonary compliance and leading to ineffective alveolar ventilation (see Fig. 1). "Neuro-muscular pulmonary-colon syndrome" is a definition that could describe, we suggest, the combination of abdominal overdistension and acute ventilatory failure resulting from colonic pseudo-obstruction.

Of notice, 2 out of 21 patients with muscular dystrophy recently admitted to our Division for acute respiratory failure (ARF) reported a long-standing history of abdominal bloating and constipation and were diagnosed a colonic pseudo-obstruction. In view of these findings, we believe that physicians caring for muscular dystrophy patients, particularly those administered NPPV, should be aware about the risk of "neuromuscular pulmonary-colon syndrome" and prescribe all appropriate measures with the intent to improve gastrointestinal motility.

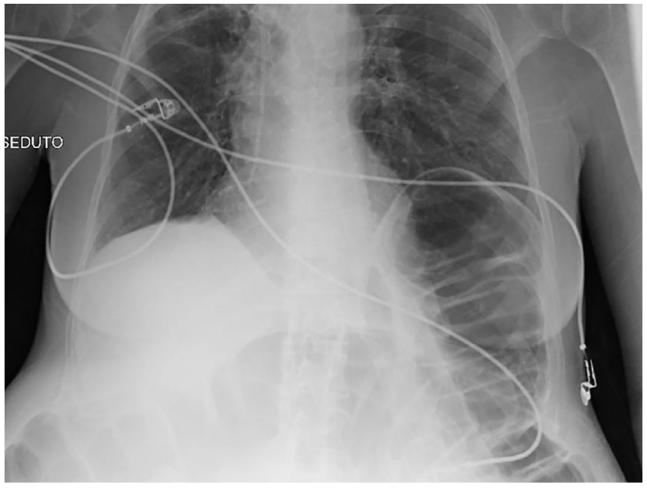

Fig. 1. Radiograph of the chest and the upper abdomen, showing elevation of both hemidiaphragms and marked gaseous distension of large bowel loops.

References

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