A 78-year-old male was admitted to intensive care due to subdural hematoma with acute respiratory distress syndrome (ARDS) secondary to nosocomial pneumonia and prolonged weaning from invasive mechanical ventilation. Following tracheostomy and requiring percutaneous gastrostomy (PG), noninvasive mechanical ventilation (NIMV) was started in support of ventilator weaning, with the development of asymptomatic pneumoperitoneum on the control X-rays (Fig. 1). Hollow organ perforation or complications of PG were discarded by imaging exploration with oral contrast (Figs. 2 and 3). Noninvasive mechanical ventilation is a very infrequent cause of benign pneumoperitoneum that should be considered in ventilated and gastrostomized patients. Conservative management is indicated in such cases.