

## Pneumatosis Cystoides Coli: An Unreported Complication of Laparoscopic Cholecystectomy

Laparoscopic cholecystectomy (LC) accounts for approximately 80–85% of cholecystectomies performed over the past two years in Western countries (1). As well as the most common complications during LC of bile duct injuries and bile leaks, the number of unusual complications unrelated to bile ducts has increased over the last years (2,3). We describe an unreported complication of LC.

LC was performed on a 51-year-old woman who presented with recurrent biliary colic and cholelithiasis, documented on preoperative gall-bladder ultrasonographic examination. Past medical and surgical history were unremarkable. Pneumoperitoneum was introduced with CO<sub>2</sub> insufflation through a Verres needle inserted at the umbilicus. No evidence of preperitoneal, subcutaneous, or omental emphysema was apparent at this time. LC with intraoperative cholangiography was performed without technical difficulty. The patient had an uneventful postoperative course. Fifteen days later, she started to present four to five mucoid bowel movements per day with lower abdominal pain and traces of blood on stools. Physical and laboratory examinations were normal. She underwent a total colonoscopy which revealed the presence of gas-filled cysts within the mucosa and submucosa of the sigmoid and descending colon (Figure 1). When punctured, gas escaped and the size of cysts decreased. After the diagnosis of pneumatosis cystoides coli (PCC), we treated our patient with hyperbaric O<sub>2</sub> at 2.5 atmospheres for two hours for three consecutive days to avoid pulmonary and central ner-

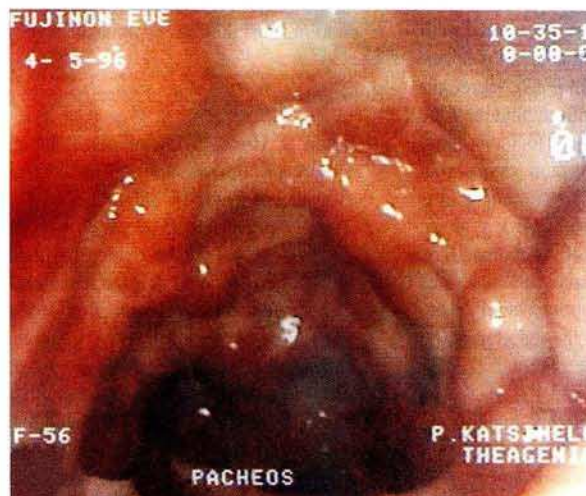
vous system toxicity. She improved and was discharged five days later. She has had no recurrence and continues to do well one year later. A repeated colonoscopy showed a normal sigmoid and descending colon.

The most probable explanation of PCC development in our patient, according to the mechanical theory (4,5) is that pneumoperitoneum in combination with the exposed and intersected nerves and vessels during the operation facilitated the air to track through these vessels and nerves to the mesenteric root and follow major blood vessels and their mesenteric branches, penetrating the bowel wall with smaller vessels and resulting in pneumatosis of the sigmoid and descending colon. The small interval of time between LC and development of symptoms (15 days in our patient) strengthens our view that PCC was the consequence of the preceding operation, but we cannot exclude the possibility of primary PCC.

*P. Katsinelos, N. Eugenidis, T. Vasiliadis, C. Koutras, I. Triandopoulos*  
Second Dept. of Internal Medicine,  
Aristotelion University,  
Ippokraton Hospital,  
Thessaloniki, Greece

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**Figure 1:** Endoscopic appearance of gas-filled cysts within the mucosa and submucosa of the descending colon.

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*Corresponding Author*  
P. Katsinelos, M. D.  
Ydras 31  
54638 Thessaloniki  
Greece