be obtained under ultrasound or CT-guidance or by video-assisted thoracoscopy.[2] With regard to histology, any type of lymphoma may be involved, but the most commonly described type is large B-cell lymphoma, followed by follicular lymphoma, with rates of 60% and 20%, respectively.[3] Treatment requires systemic chemotherapy based on combinations of cyclophosphamide, doxorubicin, vincristine, and prednisone.

References

1. Ahmad H, Pawade J, Falk S, Morgan JA, Balacumaraswami L. Case report: primary pleural lymphomas. Thorax. 2003;58:908–9.
2. Kim Y, Lee M, Ryu YJ, Cho MS. The pleural sandwich sign in two cases of primary pleural lymphoma. Korean J Radiol. 2015;16:213–6.
3. Ru X, Ge M, Li L, Lin Y, Liu L. Primary pleural lymphoma: a rare case and a synopsis of the literature. J Thorac Dis. 2013;5:E121–3.

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Emphysematous Cystitis and Infectious Exacerbation of COPD. A Highly Unusual Finding☆

Cistitis enfisematosa y agudización infecciosa de la EPOC. Un hallazgo altamente infrecuente

To the Editor,

Emphysematous cystitis (EC) is an uncommon complication of urinary tract infection, defined by the presence of gas in the bladder and/or bladder walls.[1] It mainly affects elderly women with diabetes mellitus, poor blood glucose control, and a history of bladder catheterization. Other factors, while less important, may also be associated with this disease, such as renal transplantation, immunosuppression, and recurrent urinary tract infections.[1] The most commonly isolated causative pathogens on urine culture are *Escherichia coli*, *Klebsiella pneumoniae* and *Enterococcus*.[2] Clinical presentation is non-specific but most patients present urinary symptoms and abdominal pain. Pneumaturia is a key but infrequent pointer to suspecting EC.[3] For diagnosis, standard radiography of the urinary tract is unspecific, and the superior resolution and greater ability of computed tomography (CT) to rule out other causes of EC, such as enterovesical fistula due an inflammatory or malignant process, make it the examination of choice.[4] Initial treatment consists of empirical antibiotics, intensive metabolic control, and urinary diversion (transurethral catheterization or bladder drainage).[5] The clinical response of patients varies from rapid clinical improvement to general deterioration with a high rate of complications, such as emphysematous pyelonephritis, bladder perforation, septic shock, and rapid death.[5]

We report the unusual case of a male patient, non-diabetic, with normal blood glucose levels and no significant urological history, who presented EC during admission to the pulmonology ward for a severe COPD exacerbation caused by infection. *E. coli* was cultured from both sputum and urine samples. Our patient was a 66-year-old man, retired from employment in an iron foundry, who had given up smoking 5 years previously (70 pack-years). He had a history of childhood tuberculosis, arterial hypertension, moderate COPD, non-exacerbator emphysematous phenotype (GOLD category A) and, 5 years previously, community-acquired pneumonia. He reported a 5-day history of clinical symptoms of infection, with rhinorrhea, increased cough with purulent sputum, dyspnea, and fever 38.3 °C. He had no urinary symptoms and no changes in bowel habits. He also showed overall acute respiratory failure, with left-shift leukocytosis and increased PCR on clinical laboratory tests. Blood glucose was normal. Urine antigen testing for pneumococci and *Legionella* and sputum culture were performed, which were negative. The physical examination showed significant deterioration of the patient's general status, with tachypnea, and disperse rhonchi on lung auscultation. No signs of abdominal disease were observed at that time.

On day 3 of admission, the patient's clinical situation deteriorated, with symptoms of urinary infection (tenesmus, dysuria, and hematuria). An examination of urinary sediment was requested, showing abundant red blood cells per field and positive nitrites. Gram-negative antibiotic cover was administered, and urine culture was requested, which was positive for *E. coli*, so piperacillin–tazobactam was given, in line with the microbiological sensitivity results. A chest-abdominal computed tomography was performed to complete the study, revealing gas in the bladder lumen, infiltrating the walls (Fig. 1). After diagnosing EC, and following consultations with the urology department, we introduced a bladder catheter, obtaining 400 ml of urine with a slightly hematic tinge and abundant air. Intravenous piperacillin–tazobactam was also initiated and continued for 15 days. The urine culture was repeated after the antibiotic cycle, and results were negative. The bladder catheter was removed and the patient's abdominal symptoms resolved. Despite the initial improvement, respiratory

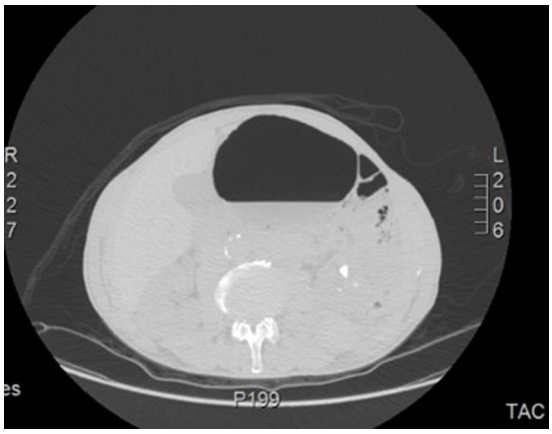

Fig. 1. Abdominal computed tomography showing gas in the bladder and the bladder wall.

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symptoms persisted with purulent expectoration, and a repeat sputum culture was again positive for *E. coli* that showed intermediate sensitivity to piperacillin–tazobactam, so antibiotic therapy was switched to intravenous meropenem. The patient finally showed satisfactory progress, and after completing the intravenous treatment regiment, he was discharged with subsequent follow-up by the respiratory medicine department.

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References

1. Akalin E, Hyde C, Schmitt G, Kaufman J, Hamburger RJ. Emphysematous cystitis and pyelitis in a diabetic renal transplant recipient. Tansplantation. 1996;62:1024–6.
2. Quint HJ, Drach GW, Rappaport WD, Hoffmann CJ. Emphysematous cystitis: a review of the spectrum of disease. J Urol. 1992;147:134–7.
3. Ho KM, Sole M. Pneumaturia due to gas-producing *E. coli* and urinary stasis. Br J Urol. 1994;73:588–9.
4. Grayson DE, Abbott RM, Levy AD, Sherman PM. Emphysematous infections of the abdomen and pelvis: a pictorial review. Radiographics. 2002;22:543–61.
5. Vilchis-Cárdenas MA, Grimaldo-Oliveros AA, Ibáñez-Marín JA, Feria-Flores MA, García Rodríguez MA, Peña-Rodríguez A, et al. Cistitis enfisematosa clásica. Rev Mex Urol. 2010;70:376–9.

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Chylothorax in Adults. Characteristics of 17 Patients and a Review of the Literature☆

Quilotórax en adultos. Revisión de la literatura a partir de una serie de 17 casos

To the Editor,

Chylothorax (CTx) is an uncommon disease caused by extravasation of lymph fluid to the pleural cavity. Diagnosis is based on the detection of triglycerides or chylomicrons in pleural fluid. Triglyceride concentrations higher than 110 mg/dl or the presence of chylomicrons are indicative of CTx.[1] Etiology is defined as traumatic or non-traumatic, the most common causes of which are iatrogenesis or malignancy.[2] Treatment can be conservative in the case of low-output CTx, or surgery may be necessary if disease is high-output or refractory.[3] Prognosis depends on the underlying cause.

We reviewed 1600 cases of pleural effusion seen in our hospital between January 2010 and December 2013, and selected patients with triglyceride levels higher than 110 mg/dl. We analyzed the etiology, clinical manifestations, diagnosis, and treatment of these cases, and reviewed the literature. Seventeen patients were found to have CTx (1.1%). Mean age was 64 (36–81) years, and 8 were men. The most common symptoms were dyspnea (7 cases), cough (3), ascites (3), and anorexia, asthenia and weight loss (4). Pleural effusion was right-sided in 8, left-sided in 2, and bilateral in 7. Pleural fluid obtained from 16 patients was milky in appearance and serous in 1; 12 were exudate, and 4 were transudate (data missing in 1 case). Etiology was non-traumatic in 13 cases, 11 of which were due to malignant disease, mainly lymphoma (n=5). One case was due to lymphangioma, and another was idiopathic. Of the remaining 4, 3 were caused by surgery and 1 by childbirth. With regard to treatment (Fig. 1), nutritional support was administered, with lipid restriction and medium-chain triglyceride diet in all patients, except 2 (due to death and spontaneous resolution). Pleural drainage was applied in 12 patients, and 5 underwent pleurodesis. Three required surgery (thoracic duct ligation), and 2 lymphography. Octreotide was administered in 3 cases, but results were unsatisfactory: 1 patient developed a skin rash, so it was discontinued, and other measures were required in the other 2 due to persistent effusion. Eight of the 17 cases died, 7 due to malignancy.

CTx is a rare entity, mainly caused by rupture of the thoracic duct and accumulation of chyle in the pleural cavity, or leakage from the peritoneum. Etiology of CTx is classified as traumatic or non-traumatic, the former being the most common, accounting for up to 50% of cases.[4,5] In our study, the predominant etiology was non-traumatic. Traumatic etiologies can be subcategorized as iatrogenic (surgical acts such as esophagectomy) and non-iatrogenic (traumatism, childbirth labor, etc.).[2] Neoplasic processes, predominantly lymphoma, are the most common non-traumatic cause. The most common symptoms are cough, dyspnea, and chest pain. Fever is less common, since chyle is a non-inflammatory fluid.[5] Our series notably included 4 cases of anorexia, asthenia and weight loss, most likely due to the high rate of malignant diseases. Diagnosis is based on analysis of pleural fluid, which has been defined as milky or opalescent, but serous and bloody serous specimens have been described, and are even predominant in some series.[1] In biochemical terms, this is a lymphocytic exudate with low LDH levels, although previous studies have described transudates in 32% of cases, mostly due to hepatic cirrhosis, nephrotic syndrome, and heart failure, among others.[5] In our series, 4 were transudates due to malignancy. Most CTx are unilateral.[4] In our series, 7 were bilateral and 10 were unilateral. CT must be performed if the cause is unknown. Other techniques for locating the lesion are lymphography and lymphoscintigraphy, but these techniques may cause adverse effects, and are of most benefit in patients in whom surgical repair is planned. Treatment of CTx will vary depending on severity and refractoriness. In low-output effusions, a lipid-free diet with medium-chain fatty acids is recommended. In more severe cases, fasting with total parenteral nutrition and pleural drainage is recommended. Since 1990, these conservative medical treatment modalities have been combined with somatostatin or its synthetic

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