

## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

### Internal Medicine Quiz – Case 16

An 83-year-old man was admitted to our clinic via the emergency department, because of recent onset of ascites. He gave a two-month history of a heavy abdominal feeling, without other symptoms. A diagnosis of myelofibrosis had been made 10 years earlier, and there was a history of splenectomy, cholecystectomy, and arterial hypertension. He was not a smoker, but reported heavy alcohol consumption for almost fifty years. He denied any weight loss.

On physical examination, his general condition was good. Heart rate was 60 bpm, in sinus rhythm, and the blood pressure was 120/70 mmHg. A grade II/VI systolic murmur was audible over the fifth intercostal space, left midclavicular line. Examination of the abdomen revealed non-tender hepatomegaly 5 cm below the right costal margin, as well as a large amount of ascites. There was swelling of the lower extremities. Peripheral lymphadenopathy was not detected.

On admission, full blood count showed Hct 24%, Hb 8.1 g/dL, WBC 45,000/ $\mu$ L (differential: neutrophils 18%, lymphocytes 21%, monocytes 22%, eosinophils 1%, basophils 5%, blastocytes 5%, promyelocytes 6%, myelocytes 8%, metamyelocytes 14%), and platelets 912,000/ $\mu$ L. The biochemical analysis showed urea 60 mg/dL, creatinine 1.6 mg/dL, Na 132 mmol/L, K 6.2 mmol/L, total and direct bilirubin 0.55 and 0.17 mg/dL, respectively, ALP 941 IU/L,  $\gamma$ GT 413 U/L, LDH 2,518 IU/L, CRP 53 mg/L (normal 0–5).

The patient underwent upper gastrointestinal endoscopy that

was normal. Among the imaging studies, a chest X-ray showed an increased cardiothoracic index, bilateral hilar intensification and bilateral vagueness of the costophrenic angles. A computed tomographic scanning of the chest and abdomen revealed bilateral pleural effusion, reduced pulmonary ventilation, large quantity of ascitic fluid (fig. 1), and an incipient abdominal wall hernia. A magnetic resonance imaging of the abdomen showed hepatomegaly, without a focal lesion, with normal appearance of the intrahepatic and extrahepatic bile ducts. In addition, small cortical renal cysts were noted and the presence of ascites was confirmed (fig. 2).

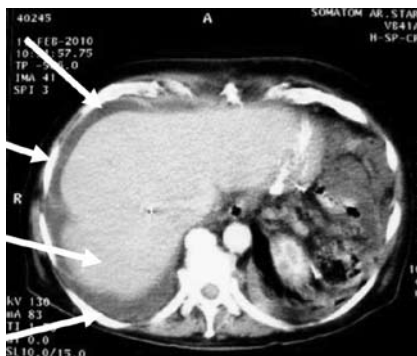
A diagnostic paracentesis and cytologic analysis of the ascitic fluid revealed few sizeable polynucleated cells with hyaloid cytoplasm indicative of megakaryocytes, an abundance of lymphocytes in various stages of maturation, as well as plenty of eosinophils

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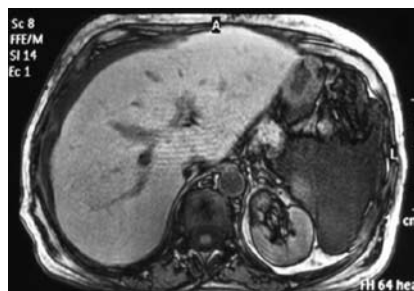
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**Figure 1.** Computed tomography scan showing a normal liver with perihepatic ascites (arrows).



**Figure 2.** MRI scan showing a normal liver without focal lesions and a collection of perihepatic ascites.



**Figure 3.** Computed tomography scan showing resolution of ascites

and neutrophils. There was no evidence of malignancy.

### Comment

*The common causes of ascites include cirrhosis, cancer, heart failure, TB and pancreatic disease. However, it is important to keep in mind some rare causes like the extramedullary hematopoiesis. The patient was started on treatment for myelofibrosis with thalidomide and hydroxyurea. On follow-up three months later he showed a remarkable response to the treatment with the disappearance of ascites confirmed by imaging studies (fig. 3).*

### References

1. HUNG SC, HUANG ML, LIU SM, HSU HC. Massive ascites caused by peritoneal extramedullary hematopoiesis as the initial manifestation of myelofibrosis. *Am J Med Sci* 1999, 318:198–200
2. OREN I, GOLDMAN A, HADDAD N, AZZAM Z, KRIVOY N, ALROY G. Ascites and pleural effusion secondary to extramedullary hematopoiesis. *Am J Med Sci* 1999, 318:286–288
3. YOTSUMOTO M, ISHIDA F, ITO T, UENO M, KITANO K, KIYOSAWA K. Idiopathic myelofibrosis with refractory massive ascites. *Intern Med* 2003, 42:525–528
4. WEINKOVE R, REILLY JT, McMULLIN MF, CURTIN NJ, RADIA D, HARRISON CN. Low-dose thalidomide in myelofibrosis. *Haematologica* 2008, 93:1100–1101

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