Haematologica 2002; 87:(02)ELT09
[Medline] [prev] [index] [next]

Tuberculosis presenting as immune thrombocytopenic purpura

Pierangelo Spedini
Divisione di Medicina II, Sezione di Ematologia, Istituti Ospitalieri di Cremona, Italy

Correspondence: Pierangelo Spedini, Ematologia, Istituti Ospitalieri di Cremona, viale Concordia 1, 26100 Cremona. Tel. 0372-405247/248. Fax: 0372-405655.
E-mail: pspedin@tin.it

Various hematologic abnormalities such as anemia, leukocytosis and pancytopenia have been most frequently cited in tuberculosis. However thrombocytopenia is very rare. We report the case of a 48-year-old woman who presented with immune thrombocytopenia and generalized purpura. During the hospitalization the patient was found to have culture and roentgenographic evidence of tuberculosis. Antituberculous treatment induced complete remission of thrombocytopenia.

A 48-year-old African woman was admitted to our hospital because of severe thrombocytopenia. On admission, physical examination revealed numerous cutaneous petechiae on the chest and arms. There was no lymphadenopathy nor hepatosplenomegaly. A full blood count revealed that hemoglobin was 13.1 g/dL, platelet count was $1x10^9$/L and leukocyte count was $5.6x10^9$/L; a peripheral blood smear was only remarkable for its paucity of platelets. The ESR was 18 mm/h and the coagulation profile was within normal limits. Bone marrow aspirate showed an increased cellularity of all cell lines with normal maturation of erythroid and myeloid precursors. An increased number of megakaryocytes with normal morphology was evident. Other causes of thrombocytopenia were excluded, so a diagnosis of immune thrombocytopenic purpura (ITP) was made. The patient was started on methylprednisolone (1 mg/Kg/day). After 7 days, the patient developed fever and important cervical right lymphadenopathy (5 cm in diameter); no other symptoms were reported. A new full blood count revealed that the platelet count was $31x10^9$/L. Although the history of the patient was negative for tuberculosis, Mantoux's intradermoreaction was performed and resulted positive. Sputum cultures, hemoculture, urine culture, coproculture and their microscopic analysis were performed and all were negative for tuberculosis and other bacterial and fungal infections. A chest X-ray demonstrated enlargement of the superior mediastinum. Computed tomography of the chest revealed right subpleural lung infiltrates and massive mediastinal adenopathy (Figure 1). CT scan of abdomen and pelvis were negative. The cervical lymphnode biopsy showed massive necrotizing lymphadenitis without caseating granulomas and no evidence of acid-fast bacilli. Genetic analysis on lymphonode, in order to diagnose tuberculosis at molecular level, was also negative. However, after a 40 day culture of the lymphonode biopsy Mycobacterium tuberculosis was isolated.[1-6] The patient was started on isoniazid a febrile, 300 mg/day, rifampin 600 mg/day, ethambutol 1,5 g/day, pyrazinamide 2 g/day and pyridoxine 50 mg/day. The patient was discharged 5 weeks after her admission; at that time platelet count was $148x10^9$/L. The association between tuberculosis and ITP is very rare (described in less than 2% of cases). To our knowledge only one report of tuberculosis with a giant primary complex of the mediastinum associated with ITP[3] has been described.

Our case raises some points:

- it is important for the medical community to recognize tuberculosis as a treatable cause of secondary ITP: in the last few years, many people from geographical areas where tuberculosis is endemic have migrated to regions where TBC is sporadic;
- the diagnosis of tuberculosis may became evident after the start of large doses of steroid.[5]
- althought the BK may be demonstrated by histochemical stains, the final identification of the etiologic agent must be made by cultural examination. This is important especially for those hospitals where PCR or other sophisticated methods for the diagnosis of tuberculosis are not available and in common use.

- finally, in our case, the significant increase in the platelet count after antituberculous treatment was considered as a convincing proof of the etiology of tuberculosis as the cause of thrombocytopenia.

References

1. Al-Majed SA, Al-Momen AK, Al-Kassimi FA, et al. Tuberculosis presenting as immune thrombocytopenic purpura. Acta Haematol 1995; 94: 135-8.
2. Ghobrial MW, Albornoz MA. Immune thrombocytopenia: a rare presenting manifestation of tuberculosis. Am J Hematol 2001; 67: 139-43.
3. Talbot S, Dowling A, Dowling JP, et al. Mediastinal nodal tuberculosis presenting as immune thrombocytopenia. Aust NZ J Med 1998; 28: 465-6.
4. Hernandez-Maraver D, Pelaez J, Pinilla J et al. Immune thrombocytopenic purpura due to disseminated tuberculosis. Acta Haematol 1996; 96: 226.
5. Boots RJ, Roberts AW, McEvoy D. Immune thrombocytopenia complicating pulmonary tuberculosis. Case report and investigation of mechanism. Thorax 1992; 47: 396-7.
6. Huxley H, Konx-Macanlay M. TB and the haemopoietic system. Bailliere's Clin Haematol 1992; 5: 101-29.