Case Report

cause of the radiological findings.



Transient Lymphadenopathy Secondary to Nephrotic Syndrome

Olívia Meira Dias, André Nathan Costa, Carlos Roberto Ribeiro Carvalho, Ronaldo Adib Kairalla Instituto do Coração (Incor) - Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, São Paulo, SP, Brazil

Mediastinal lymphadenomegaly secondary to hypervolemia is an underdiagnosed tomographic finding. Herein we describe, in a patient with normal cardiac function, findings of pulmonary congestion associated to lymph node enlargement. The nephrotic syndrome causing hypoalbuminemia, low plasma colloid osmotic pressure and augmented transcapillary fluid leakage was the probable

A 57-year-old man with systemic scleroderma and occupational silica exposure presented a two-month history of progressive dyspnea and peripheral edema. Physical examination revealed anasarca, pulmonary bibasilar crackles and hypoxemia (SatpO2 80%).

Contrasted high-resolution computed tomography scan (HRCT) of the chest revealed enlarged mediastinal lymph nodes and mediastinal fat associated to bilateral diffuse ground-glass infiltrates and interlobular septal thickening with predominance in the superior lobes, without arterial thrombi. The echocardiogram was unremarkable, and renal biopsy was diagnostic of nephrotic syndrome secondary to focal segmental glomerulosclerosis.

After prednisone and treatment with diuretics, the edema and dyspnea significantly improved. HRCT performed two months later showed resolution of the signs of pulmonary congestion and involution of mediastinal lymph node and fat enlargement (Figure 1).

Mediastinal lymphadenomegaly secondary to hypervolemia is an underdiagnosed tomographic finding ¹⁻⁹. Its incidence may arise in 55% of patients with symptomatic congestive heart failure ¹. They are usually located in the pretracheal area and have $< 2 \, \mathrm{cm}$ in short axis diameter ¹⁰. Differential diagnosis to this case would include malignancies, lymphoma and sarcoidosis.

In this study, we describe a patient with normal cardiac function, findings of pulmonary congestion associated to lymph node enlargement. The nephrotic syndrome causing hypoalbuminemia, low plasma colloid osmotic pressure and augmented transcapillary fluid leakage was the probable cause of the radiological findings. To our surprise, even lymph nodes with peripheral calcification can enlarge due to edema. The rapid improvement after treatment, together with resolution of parenchyma findings of congestion, leads us to the diagnosis without an invasive procedure.

Potential Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Sources of Funding

There were no external funding sources for this study.

Study Association

This study is not associated with any post-graduation program.

Keywords

Scleroderma, systemic; lymphoma; mediastinum; nephrotic syndrome.

Mailing Address: Olívia Meira Dias •

Rua Capote Valente, 671 / 1401, Pinheiros – 05409-002 – São Paulo, SP, Brazil E-mail: meiradias@yahoo.com.br Manuscript received May 29, 2011; revised manuscript received July 13, 2011; accepted July 28, 2011.

Case Report

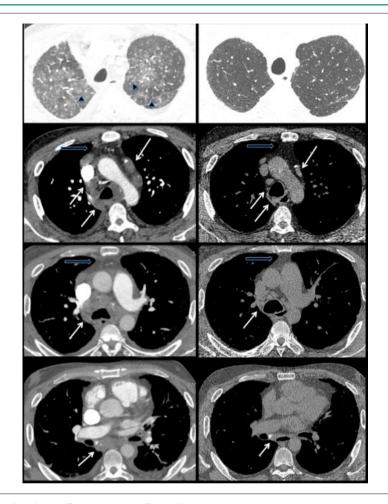


Figure 1 - Chest HRCT revealing bilateral diffuse ground-glass infiltrate with superior lobes predominance, interlobular septal thickening (black arrowheads) and small pleural effusion bilaterally, without arterial trombi. Enlarged lymph nodes are noticed in the paraaortic, paratracheal and subcarinal regions, some with peripheral calcification (white arrows). On the right: Chest HRCT performed two months later shows resolution of ground glass opacities and septal thickening, and involution of mediastinal lymphadenomegaly (white arrows) and mediastinal fat (black arrows). The nephrotic syndrome causing hypoalbuminemia, low plasma colloid osmotic pressure and augmented transcapillary fluid leakage was the probable cause of the radiological findings.

References

- Slanetz PJ, Truong M, Shepard JA, Trotman-Dickenson B, Drucker E, McLoud TC. Mediastinal lymphadenopathy and hazy mediastinal fat: new CT findings of congestive heart failure. AJR Am J Roentgenol. 1998;171(5):1307-9.
- Ngom A, Dumont P, Diot P, Lemarié E. Benign mediastinal lymphadenopathy in congestive heart failure. Chest. 2001;119(2):653-6.
- Storto ML, Kee ST, Golden JA, Webb WR. Hydrostatic pulmonary edema: highresolution CT findings. AJR Am J Roentgenol. 1995;165(4):817-20.
- Forster BB, Müller NL, Mayo JR, Okazawa M, Wiggs BJ, Paré PD. High-resolution computed tomography of experimental hydrostatic pulmonary edema. Chest. 1992;101(5):1434-7.
- Gluecker T, Capasso P, Schnyeder P, Gudinchet F, Schaller MD, Revelly JP, et al. Clinical and radiologic features of pulmonary edema. Radiographics. 1999;19(6):1507-31.
- 6. Erly WK, Borders RJ, Outwater EK, Zaetta JM, Borders GT. Location, size, and distribution of mediastinal lymph node enlargement in

- chronic congestive heart failure. J Comput Assist Tomogr. 2003;27(4): 485-9
- Chabbert V, Canevet G, Baixas C, Galinier M, Deken V, Duhamel A, et al. Mediastinal lymphadenopathy in congestive heart failure: a sequential CT evaluation with clinical and echocardiographic correlations. Eur Radiol. 2004;14(5):881-9.
- Lewin S, Goldberg L, Dec GW. The spectrum of pulmonary abnormalities on computed chest tomographic imaging in patients with advanced heart failure. Am J Cardiol. 2000;86(1):98-100.
- Miller JA, Contractor S, Maldjian P, Wolansky L. Transient mediastinal enlargement: an unusual computed tomographic manifestation of pulmonary venous hypertension and congestive heart failure. Respiration. 2000;67(2):216-8.
- Pastis NJ Jr, Van Bakel AB, Brand TM, Ravenel JG, Gilbert GE, Silvestri GA, et al. Mediastinal lymphadenopathy in patients undergoing cardiac transplant evaluation. Chest. 2011;139(6):1451-7.