Letters to the Editor

Epipericardial fat necrosis: increasing the rate of diagnosis by disseminating knowledge within a single institution

Dear Editor,

Epipericardial fat necrosis (EFN), an inflammatory process that occurs within the epipericardial fat and leads to encapsulated fat necrosis, has long been described as a rare entity\(^1\). However, since 2012—when the first case was reported in Brazil\(^2\)—the number of reports has been increasing worldwide. In fact, there were only 23 cases reported between 1957 and 2010, in comparison with 26 new cases reported between 2011 and 2015\(^3\). What could explain this increase? Analyzing the data from a retrospective analysis of EFN at a quaternary hospital in the city of São Paulo, Brazil, and its impact on the diagnosis of the entity, we have made some assumptions.

From 2011 to 2014, 20 cases of EFN were diagnosed on the basis of chest computed tomography (CT) scans performed in the emergency department (ED) of our institution. That was the focus of a previous retrospective analysis\(^1\), in which 11 cases of EFN were initially described from 3604 CT scans analyzed by two thoracic radiologists\(^5\). Scans were considered positive for EFN—as described “a soft, round, fatty attenuating lesion in the epipericardial fat, with or without pericardial thickening”\(^6\), as depicted in Figure 1—if both radiologists agreed. The authors of a case series analyzing previous reports suspected that EFN is, in fact, an underdiagnosed condition, and a subsequent study retrospectively analyzed 7463 CT scans, comparing clinical and laboratory data of the patients with those of control subjects\(^3\). The study described 20 cases and reported the incidence of EFN in ED patients with acute atypical chest pain\(^5\) to be 2.15% at the institution.

In 2013, the radiology department of our institution decided to disseminate information regarding the clinical and radiological features of EFN, in order to make radiologists aware of the entity, which was formerly considered to be extremely uncommon. The information was disseminated by the presentation of cases and lectures in multidisciplinary meetings, as well as in meetings of the radiology residence program. The radiological features of EFN were also presented to the radiologists of the ED. The data of the study were further analyzed in order to determine whether the radiologist had previously diagnosed the entity correctly in the formal report.

REFERENCES

1. Niemeyer B, Marchiori E. Giant pilomatrixoma: conventional and diffusion-weighted magnetic resonance imaging findings. Radiol Bras. 2015;48:63–4.
2. Niemeyer B, Salata TM, Antunes LO, et al. Desmoplastic fibroma with perineural spread: conventional and diffusion-weighted magnetic resonance imaging findings. Radiol Bras. 2015;48:266–7.
3. Niemeyer B, Bahia PBV, Oliveira ALVSM, et al. Lethal midline granuloma syndrome: a diagnostic dilemma. Radiol Bras. 2012;45:353–5.
4. Gonçalves FG, Ovalle JP, Grieb DFJ, et al. Diffusion in the head and neck: an assessment beyond the anatomy. Radiol Bras. 2011;44:308–14.
5. Calhouf KH, Fulmer P, Weiss R, et al. Distant metastases from head and neck squamous cell carcinomas. Laryngoscope. 1994;104:1199–205.
6. Sawali H, Yunus MHM, Ai OC, et al. Cutaneous metastases from nasopharyngeal carcinoma: a rare manifestation. PJOHNS. 2010;25:32–5.
7. Luk NM, Yu KH, Choi CL, et al. Skin metastasis from nasopharyngeal carcinoma in four Chinese patients. Clin Exp Dermatol. 2004;29:28–31.
8. Wang J, Takashima S, Takayama F, et al. Head and neck lesions: characterization with diffusion-weighted echo-planar MR imaging. Radiology. 2001;220:621–30.

Bruno Niemeyer de Freitas Ribeiro\(^1\), Bernardo Carvalho Muniz\(^2\), Tiago Medina Salata\(^2\), Diogo Goulart Corrêa\(^3\), Edson Marchiori\(^3\)

1. Instituto Estadual do Cérebro Paulo Niemeyer, Rio de Janeiro, RJ, Brazil. 2. Hospital Casa de Portugal – 3D Diagnose, Rio de Janeiro, RJ, Brazil. 3. Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, RJ, Brazil. Mailing address: Dr. Bruno Niemeyer de Freitas Ribeiro, Instituto Estadual do Cérebro Paulo Niemeyer – Departamento de Radiologia. Rua do Rezende, 156, Centro, Rio de Janeiro, RJ, Brazil, 20231-092. E-mail: bruno.niemeyer@hotmail.com.

http://dx.doi.org/10.1590/0100-3984.2016.0113

62

Radiol Bras. 2018 Jan/Fev;51(1):58–68

Image

Figure 1. CT scan of a 29-year-old female with acute pleuritic chest pain showing a soft, round, fatty attenuating lesion in the epipericardial fat, the pain and the lesion both being features that are characteristic of EFN.
Letters to the Editor

All 20 reports were reviewed and defined as follows: “not described”—when features of EFN were overlooked; “described but not suggested”—when EFN features were described but the diagnosis was not suggested in the report; and “suggested”—when EFN findings were described and its diagnosis was suggested.

The outcome was surprising. As shown in Figure 2, we found a progressive number of diagnoses over the years, especially after 2013. In 2011, when radiologists were still unaware of the entity, the number of correct diagnoses was zero. In 2014, after the educational intervention, there were no more missed diagnoses of EFN at the institution.

We can suggest that the dissemination of knowledge at our institution changed the pattern of the diagnosis of a disease. We believe that, in the next few years, EFN will become known worldwide, the labels “rare” and “unknown” therefore no longer being associated with this entity.

REFERENCES
1. Giassi KS, Costa AN, Bachion GH, et al. Epipericardial fat necrosis: an underdiagnosed condition. Br J Radiol. 2014;87:20140118.
2. Giassi KS, Costa AN, Apanavicius A, et al. Epipericardial fat necrosis: an unusual cause of chest pain. J Bras Pneumol. 2013;39:627–9.
3. Giassi KS, Costa AN, Bachion GH, et al. Epipericardial fat necrosis: who should be a candidate? AJR Am J Roentgenol. 2016;206:1–5.
4. Pineda V, Caceres J, Andreu J, et al. Epipericardial fat necrosis: radiologic diagnosis and follow-up. AJR Am J Roentgenol. 2005;185:1234–6.
5. Diamond GA. A clinically relevant classification of chest discomfort. J Am Coll Cardiol. 1983;1(2 Pt 1):574–5.

Karina de Souza Giassi1, André Nathan Costa1, Ronaldo Adib Kairalla1, José Rodrigues Parga Filho2
1. Faculdade de Medicina da Universidade de São Paulo (FMUSP), São Paulo, SP, Brazil. Mailing address: Dra. Karina de Souza Giassi. Faculdade de Medicina da Universidade de São Paulo. Avenida Doutor Arnaldo, 455, Pacaembu. São Paulo, SP, Brazil. E-mail: ksgiassi@gmail.com.

http://dx.doi.org/10.1590/0100-3984.2016.0095

Pulmonary cryptococcosis mimicking neoplasm in terms of uptake PET/CT

Dear Editor,

We report the case of a 64-year-old female nonsmoker who presented with complaints of chronic cough and weight loss. Physical examination revealed no fever or other abnormalities. Positron emission tomography/computed tomography (PET/CT) demonstrated a mass, with soft tissue attenuation and spiculated borders, in the anterior segment of the right upper lobe, arising from the horizontal fissure and extending to the pleura, measuring 3.2 × 2.2 × 1.2 cm, with a maximum standardized uptake value (SUV) of 5.5 and high glycolytic metabolism (Figure 1A–C). The patient underwent lung biopsy, and histopathological analysis of the biopsy sample indicated cryptococcosis (Figure 1D).

Figure 1. A–C: PET/CT scans showing a spiculated mass with soft tissue attenuation, located in the anterior segment of the right upper lobe, arising from the horizontal fissure and extending to the pleura (arrows), with a maximum SUV of 5.5. D: Histological slide, with hematoxylin-eosin staining (magnification, ×10), of a lung biopsy sample, showing rounded structures with basophilic capsules (asterisks), accompanied by nuclear fragmentation of inflammatory cells, together with macrophages and multinucleated giant cells (arrows). Histochemical analysis, with mucicarmine and Grocott’s staining, confirmed the presence of cryptococci.