

Cerebellopontine Angle Lipoma Manifesting as Trigeminal Neuralgia



A 10-year-boy presented with episodic lancinating pain in the right cheek, aggravated with chewing. The stabbing pain was distributed over the second division of the trigeminal nerve. Each episode lasted for several seconds, and episodes occurred at a frequency of 20-30 times a day, occasionally awakening the patient. He could obtain partial relief by rubbing his cheek.

The patient's developmental history was normal. Motor and sensory examination of the trigeminal nerves was unremarkable, and no autonomic dysfunction was evident. Cranial magnetic resonance imaging was suggestive of right cerebellopontine angle lipoma indenting the trigeminal nerve (**Figure**).

A regimen of oral carbamazepine 50 mg 3 times/day was started. At a 3-month follow-up, the patient was pain-free and able to continue his studies. ■

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Figure. **A**, Axial T1-weighted magnetic resonance imaging of brain showing a well-defined hyperintense lesion in the right cerebellopontine angle (arrow). **B**, The lesion is causing indentation over the root entry zone of the right trigeminal nerve (arrow) and appears hyperintense on an axial fast imaging employing steady-state acquisition sequence. **C**, Axial noncontrast computed tomography scan showing fat attenuation of the lesion.

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Mediastinal Fat Necrosis



A 12-year-old boy was admitted to the emergency department with a 2-day history of left anterior lower pleuritic chest pain. No fever or other relevant

symptom was identified. No trauma was reported, and no comorbidity was registered in the patient's medical records. Physical examination findings were unremarkable. The electrocardiogram was normal. A chest radiograph obtained at another medical service on the day of onset of the pain revealed no significant finding. However, as the pain

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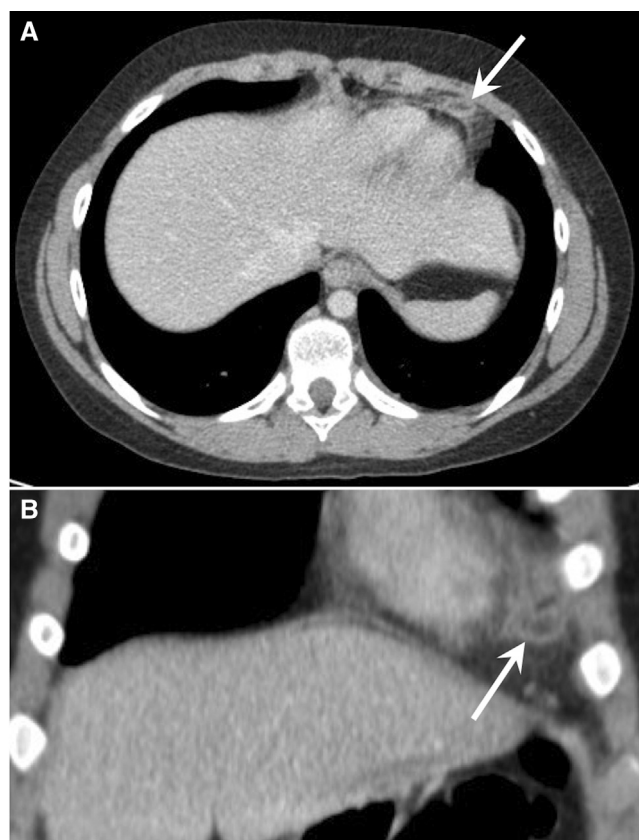


Figure. Contrast-enhanced CT images (*soft-tissue window*) in the **A**, axial and **B**, coronal planes showing an ovoid mediastinal fatty lesion (*arrow*) in the left cardiophrenic space, measuring $1.5 \times 1.4 \times 0.9$ cm, demarcated by a soft-tissue attenuation ring, with intrinsic and surrounding dense stranding, and thickening of the adjacent pericardium.

worsened, it was decided to perform a computed tomography (CT) scan that revealed an ovoid mediastinal fatty lesion in the left cardiophrenic space demarcated by a soft-tissue attenuation rim (**Figure**). There was a small ipsilateral pleural effusion. The diagnosis of mediastinal fat necrosis was made. A conservative approach was adopted, and the patient's pain was relieved by nonsteroidal anti-inflammatory drugs.

Mediastinal fat necrosis, also known as epiperocardial fat necrosis, is a self-limited cause of chest pain that represents an inflammatory process, usually occurring in the juxtapericardial mediastinal fat and leading to encapsulated fat necrosis. The pathologic features of this condition are similar to those of fat necrosis in epiploic appendicitis.^{1,2} The number of reported cases has increased worldwide in recent years.³ Giassi et al reported a 2.15% frequency of mediastinal fat necrosis among adult patients who underwent chest CT for the evaluation of atypical chest pain, with a 3:1 male predominance.⁴ A few cases in pediatric patients have been reported

in the medical literature.⁵⁻⁷ Mediastinal fat necrosis may be underdiagnosed in children because CT is not performed routinely in the diagnostic workup of chest pain.⁶ Pediatric patients who have the clinical features of musculoskeletal chest pain and no other relevant findings do not require additional evaluation or referral.⁸

Mediastinal fat necrosis usually manifests with acute pleuritic chest pain in previously healthy individuals and can mimic acute cardiopulmonary processes. The chest pain is characteristically ipsilateral to the lesion. Usually, the affected individuals have no history of trauma or infection. Electrocardiography and laboratory findings are usually normal, with nonspecific C-reactive protein elevation. The pain is expected to subside gradually, ceasing within several days.^{1,2,4}

Imaging examinations permit lesion localization and characterization.¹ Chest radiograph may be normal or show an ill-defined juxtacardiac opacity, with or without pleural effusion. On CT, mediastinal fat necrosis manifests as an ovoid or round fatty lesion demarcated by a soft-tissue attenuation rim in the mediastinum, usually in juxtapericardial fat (more frequently on the left side), with dense stranding of the surrounding mediastinal fat. A small ipsilateral pleural effusion is often present. Thickening of the adjacent pericardium and atelectasis may be encountered.^{1,2,4} Ultrasonography and magnetic resonance imaging also may be used to diagnose this condition.^{2,7} Conservative treatment is indicated, and nonsteroidal anti-inflammatory drugs are usually sufficient to relieve the symptoms.^{1,2,4-7} In cases of diagnostic uncertainty, follow-up imaging examinations can be performed to document the expected lesion shrinkage or disappearance.⁷

A confident diagnosis based on imaging findings may help to preclude unnecessary invasive procedures, and conservative symptomatic treatment is the recommended practice. ■

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References

1. Bhatt MY, Martínez-Jiménez S, Rosado-de-Christenson ML, Watson KR, Walker CM, Kunin JR. Imaging manifestations of mediastinal fat necrosis. *Case Rep Radiol* 2013;2013:323579.
2. Gayer G. Mediastinal (epipericardial) fat necrosis: an overlooked and little known cause of acute chest pain mimicking acute coronary syndrome. *Semin Ultrasound CT MRI* 2017;38:629-33.

3. Giassi KS, Costa AN, Kairalla RA, Parga Filho JR. Epipericardial fat necrosis: increasing the rate of diagnosis by disseminating knowledge within a single institution. *Radiol Bras* 2018;51:62-3.
4. Giassi KS, Costa AN, Bachion GH, Kairalla RA, Parga Filho JR. Epipericardial fat necrosis: who should be a candidate? *Am J Roentgenol* 2016;207:773-7.
5. Aiga S, Hosoya Y, Nozaki T, Matsusako M. Epipericardial fat necrosis: rare cause of chest pain in children. *Pediatr Int* 2018;60:767-8.
6. Bolourchi M, Renjen P, Kovanlikaya A, Baad M, Traister M, Flynn PA, et al. Epipericardial fat pad necrosis-a rare cause of chest pain in an adolescent. *Pediatr Emerg Care* 2018. in press.
7. Artunduaga M, Fuqua BL, Pierry C, Soto Giordani GA, Roman-Colon AM. Imaging diagnosis of epipericardial fat necrosis in children. *Pediatr Radiol* 2020;50:285-8.
8. Reddy SR, Singh HR. Chest pain in children and adolescents. *Pediatr Rev* 2010;31:e1-9.