

## Anterior mediastinal masses with calcifications on CT in children with histiocytosis-X (Langerhans cell histiocytosis)

### Report of two cases

K. Odagiri<sup>1</sup>, K. Nishihira<sup>2</sup>, S. Hatekeyama<sup>3</sup>, and K. Kobayashi<sup>4</sup>

<sup>1</sup> Department of Diagnostic Radiology, Kanagawa Cancer Center <sup>2</sup> Department of Oncology, Kanagawa Children's Medical Center, <sup>3</sup> Department of Radiology and <sup>4</sup> Pediatrics Gunma Children's Hospital, Japan

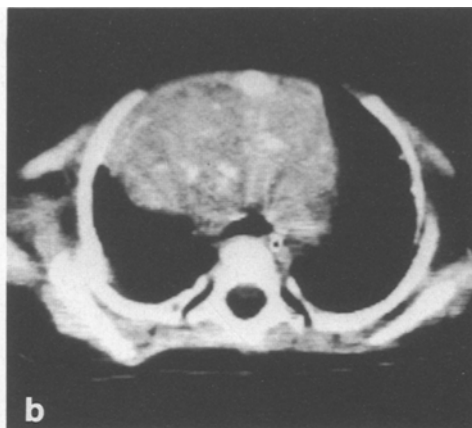
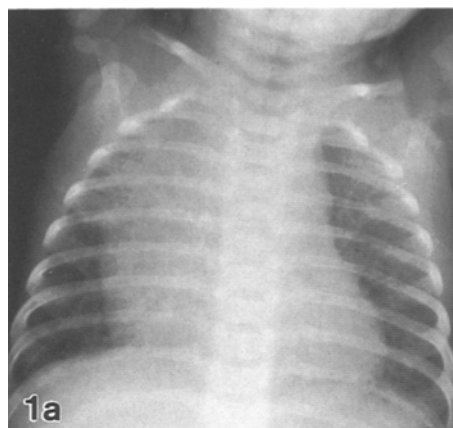
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**Abstract.** We report two cases of histiocytosis-X (Langerhans cell histiocytosis) in infants with an anterior mediastinal mass containing punctate calcifications on CT.

Anterior mediastinal masses are present at diagnosis in some cases of histiocytosis-X (Langerhans cell histiocytosis). We report two such cases of histiocytosis-X in infants with anterior mediastinal masses containing calcifications on CT.

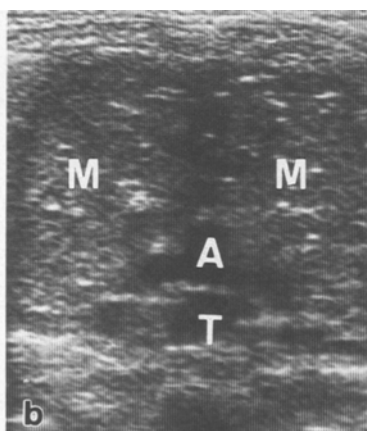
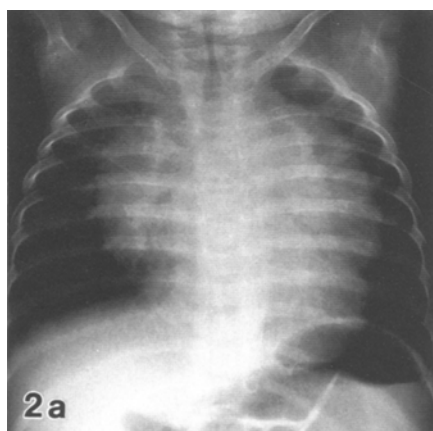
### Case reports

*Case 1.* A 3-month-old girl presented in May 1986 with a rash, fever and poor feeding. She had tachypnea, tachycardia, and hepatosplenomegaly. Chest radiographs revealed a mediastinal mass and diffuse reticular shadows in both lung fields (Fig. 1 a). CT showed an anterior mediastinal mass containing multiple punctate calcific foci (Fig. 1 b). A diagnosis of histiocytosis-X was made by skin biopsy. The patient was started on chemotherapy with good response. She was doing well when last seen in 1991.



**Fig. 1. a** Case 1. PA chest radiograph showing a mediastinal mass. Reticular pattern of the lungs is barely seen on the reproduced image. **b** CT demonstrating multiple punctate calcifications in the mass

**Fig. 2. a** Case 2. Radiograph of the chest showing a mediastinal mass. **b** Ultrasonogram revealing multiple strong echoes in the solid mass. (T – trachea, A – aorta, M – mass). **c** CT showing punctate calcifications in the mass in the anterior mediastinum



**Case 2.** A 7-month-old boy was hospitalized in May 1991 with a rash, intermittent fever, lymph adenopathy, hepatosplenomegaly, anemia and increased ESR. Plain radiographs of the chest demonstrated an anterior mediastinal mass (Fig. 2a). Ultrasonogram of the thorax showed a solid mass containing small strong echoes (Fig. 2c). CT revealed scattered fine calcifications in the mass (Fig. 2c) and a lytic change of the left scapula (not shown). The patient was placed on chemotherapy and is currently doing well.

## Discussion

Anterior mediastinal masses occur in generalized histiocytosis-X (Langerhans cell histiocytosis) [1-3]. Cavitation of these masses has been reported before [2] and after chemotherapy [3]. We failed to find a published report of calcifications in a mediastinal mass in histiocytosis-X, which were demonstrated by CT or other imaging modalities. None of the masses in our patients were explored and the histological basis of the calcifications is not known. The fine and punctate nature of the calcifications observed on CT in our patients are of interest; they differ from calcifications and ossifications in teratomas, which are usually more distinct and coarse, and often visible on plain radiographs. In neither of our patients were the calcifications in the masses visible on plain radiographs.

As CT is used more extensively in the investigation of mediastinal masses, it is probable that more cases of histiocytosis-X will be encountered with such fine calcifications in the mediastinal masses. This finding may be useful in the differential diagnosis of anterior mediastinal masses in children.

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Dr. K. Odagiri  
Department of Diagnostic Radiology  
Kanagawa Cancer Center  
54 2 Nakaicho Asahi Ku  
Yokohama City 241  
Japan

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\* Compiled by Professor Willich, Heidelberg