Pak J Med Sci July - September 2003 Vol. 19 No. 3 226 - 227

Case Report

MATURE TERATOMA OF THE POSTERIOR MEDIASTINUM – first case report from Nepal

Chandra Mohan Yadav[1] & Binay Kumar Shah[2]

ABSTRACT:
Posterior mediastinum is a rare site for teratoma. We report a primary benign mature teratoma in posterior mediastinum in a 20-month-old male child. A preoperative radiological diagnosis made on x-ray and computed tomography of chest was confirmed on histopathological examination.

Pak J Med Sci July - September 2003 Vol. 19 No. 3 226-227

CASE REPORT

A 20-month old boy presented with progressive respiratory distress, on and off cough and fever for 3-4 months duration. His chest x-rays, postero-anterior (Fig. 1) and right lateral (Fig. 2) views, showed a large lobulated right postero-inferior mediastinal soft tissue density mass occupying more than half of the hemithorax. Multiple calcific structures were noted in it.

Ultrasound examination showed complex mass consisting of both cystic (predominant) and solid components. A few intensely hyperechoic structures without distal acoustic shadowing were thought to be fat. A few septae were present. Minimal pleural effusion was noted too. Computed tomography of chest (Fig. 3) revealed compartmentalized lobulated right postero-inferior mediastinal mass consisting of soft tissue, fluid, fat and multiple calcifications. Each compartment showed homogeneity of its internal contents. Minimal pleural effusion was present. No intrabdominal extension was noted.

Microscopically the mass measured 10cm ×6cm ×5cm. It was an encapsulated solid – cystic mass with cartilaginous and bony hard structures in it. Microscopically, the tumour showed cystic spaces lined with squamous and columnar epithelium and were filled with keratin. It consisted of cartilaginous and bony tissue, fat cells and neural fibres. No evidence of malignancy was present. Pathological diagnosis was mature teratoma.

The patient did not show recurrence after one year of complete removal of tumour.

DISCUSSION

Mediastinal teratomas constitute 11.7% of teratomas in children[1]. Mature teratomas are neoplasms consisting of well differentiated adult tissues of ectodermal, mesodermal, and endodermal elements (or tissues of only two of these embryonic layers). Mediastinal mature

1. Dr. Chandra Mohan Yadav, MD Radiology,
Consultant
Department of Radiology

2. Dr. Binay Kumar Shah, FCPS
Resident
Department of Medicine,

1-2. National Academy of Medical Sciences,
Bir Hospital, Kathmandu, Nepal.

Correspondence:

Dr Chandra Mohan Yadav
GPO- 8975; EPC- 2189, Kathmandu, Nepal
E-mail: drchandramohan@hotmail.com

* *Received for publication:* March 27, 2003

Accepted: May 7, 2003

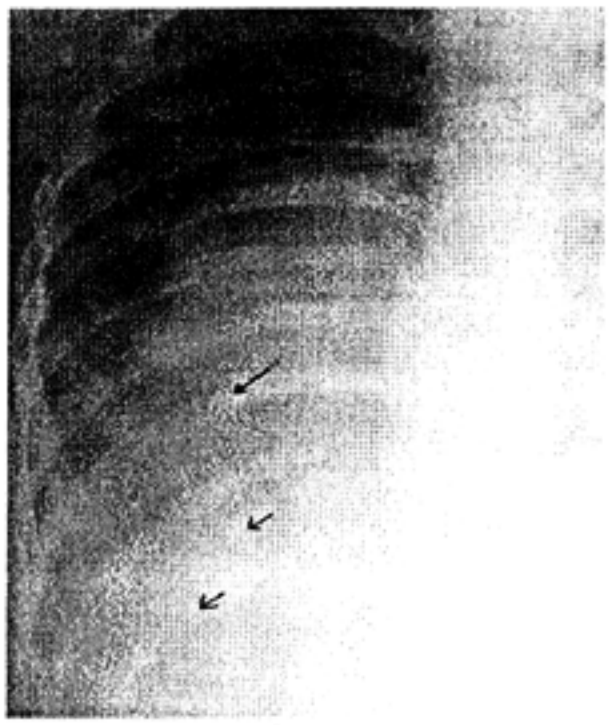

Fig. 1: Postero-anterior chest x-ray showing soft tissue mass with a few calcific foci (arrows) in right hemithorax.

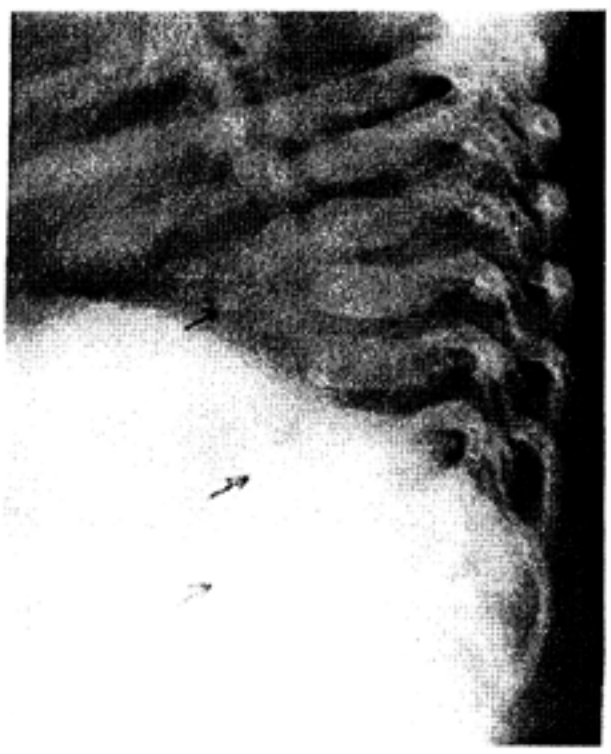

Fig. 2: Right lateral chest x-ray showing posterior mediastinal soft tissue mass with calcifications (arrows).

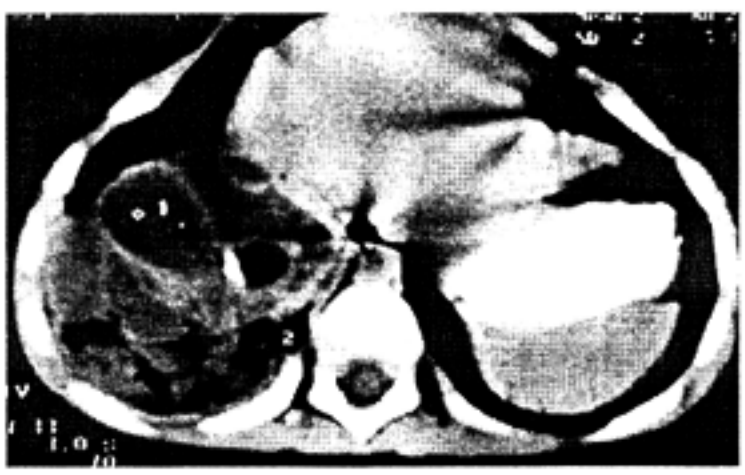

Fig. 3: Transverse CT-chest showing lobulated mixed density right posterior mediastinal mass.

teratoma is a rare benign slow growing neoplasm that usually occurs within or near the thymus and accounts for up to 75% of primary germ cell tumours of the mediastinum. Anterior mediastinum is the commonest site for teratoma; only 3-8% arises from the posterior mediastinum[2-4]. Only twenty cases of posterior mediastinal teratomas (including our case) have been reported so far. There is no case reported from Nepal to the best of our knowledge.

Respiratory difficulty is the commonest presentation of patients with posterior mediastinal teratomas. Other symptoms could be chest pain and cough[5,6]. Our patient had moderate respiratory distress and cough. Radiographically, benign teratomas have calcifications which may be seen at the periphery or centrally; identification of teeth is pathognomonic and suggests benignity[7]. In our case, CT scan showed multiple calcifications in the mediastinal mass consisting of soft tissue, fluid and fat.

The present case highlights an uncommon site of a mediastinal teratoma.

ACKNOWLEDGEMENT

We express our sincere acknowledgement to Dr. Piyush Gupta for his assistance in preparing the paper.

REFERENCES

1. Kalla SE, Hameed MA, Ashbal AA, Menon N. Posterior mediastinal teratoma with abdominal extension. Thorax 1990; 45:773-774.
2. Wychulis AR, Payne WS, Clagett OT, Woolner LB. Surgical treatment of mediastinal tumours: a 40-year experience. J Thorac Cardiovasc Surg 1971; 62:379-392.
3. Phillip WP, Harrison K, Cruickshank DB. A posterior mediastinal dermoid tumour with marked anatomical differentiation. Thorax 1954; 9:245-247.
4. Dhar S, Guleria R, Jindal SK. Posterior mediastinal teratoma. Indian J Chest Dis Allied Sci 1992; 34(3): 153-156.
5. Sasaka K, Kurihara Y, Nakajima Y, et al. Spontaneous Rupture: A Complication of Benign Mature Teratomas of the Mediastinum. AJR 1998; 170:323-8.
6. Karl SR, Dunn J. Posterior mediastinal teratomas. J Pediatr Surg 1985; 20:508-10.
7. Weinberg B, Rose JS, Efremidis SC, et al. Posterior mediastinal teratoma (Cystic Dermoid): Diagnosis by computerized tomography. Chest 1980; 77:694-695.