

Infected teratoma of lower posterior mediastinum in a six-year-old boy

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Abstract. A six-year old boy presented with prolonged unexplained fever caused by an infected teratoma of the lower posterior mediastinum. Modern imaging, combining ultrasonography with computed tomography, enabled the correct diagnosis of topography, extension and nature of this rare lesion to be made and explained the clinical features. Follow-up CT showed regression of the abscess after antibiotics thus permitting elective surgery.

Introduction of computed tomography (CT) has greatly facilitated the radiological investigation of the mediastinum. We have observed an infected teratoma of the lower, posterior mediastinum in a six-year old boy. Diagnosis, suspected on ultrasonography, was positively confirmed by CT which defined three components of the tumour – fat, fluid and calcification.

Case report

A six-year old boy was admitted for investigation of a pyrexia of uncertain origin which had persisted for 3 weeks with evening peaks between 38.5 to 40°C. Positive findings showed 10.9 leukocytes and an elevated erythrocyte sedimentation rate of 80 mm/h but an extensive search for bacterial infection was negative. The chest radiograph demonstrated a faint left paravertebral and retrocardiac arciform opacity. Ultrasound showed a mass in the lower posterior, inferior mediastinum with poorly defined contours and heterogeneous echogenicity. It contained hyper-echogenic structures and produced distal shadowing (Fig. 1). The abdominal CT clearly defined the left mediastinal location of the mass which displaced the crux of the diaphragm anteriorly and laterally (Fig. 2). This mass contained fat, fluid and calcium and compressed and displaced the inferior vena

cava. The aorta is slightly displaced towards the midline and showed no distinct separation from the mass, which measured 13 cm × 3 cm × 3.5 cm.

A diagnosis of infected teratoma was made and antibiotherapy with metronidazole and ceftriaxone was initiated and after 24 hours he was afebrile. Search for serum carcinoembryonic proteins (alpha-foetoprotein and human chorionic gonadotropin) remained negative. One week later a further CT demonstrated a distinct reduction in the liquid component of the paraaortic mass (Fig. 3).

The diagnosis of infected teratoma of lower posterior mediastinum was confirmed at operation. An ovoid mass of yellowish colour was found with strong adhesion to the left diaphragmatic crux and to the aorta. An incision made in the mass disclosed a 6 cm long cavity filled with fetid purulent and caseous matter which also contained numerous long hairs. Bacteriological culture showed presence of *Salmonella cholerae suis*. At pathological examination, the mass was partially cystic and contained hairs, calcifications, fat and cartilaginous tissue, hyperkeratinized skin surface with annexes, mucus-secreting glands and hematopoietic tissue. Final diagnosis was mature benign teratoma infected by *Salmonella cholerae suis*.

Postoperatively the evolution was favourable. On follow-up 4 months later, a control



Fig. 1. 42 mm wide mass (★) of mixed echotexture in the posterior mediastinum displacing the inferior vena cava (←) and the aorta (←) anteriorly

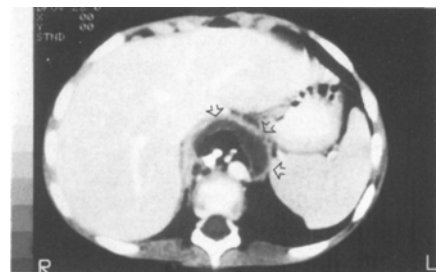


Fig. 2. Well defined mass in the posterior mediastinum containing calcifications, fat and surrounded anteriorly by a crescent shaped fluid filled structure (←)



Fig. 3. Significant regression of the liquid component

CT did not show any sign of relapse, and the boy is now clinically perfectly well 30 months after operation.

Discussion

Posterior mediastinal teratomas are quite rare since only 9 cases have been reported in the literature up to 1985 [3]. About 7% of teratomas are localized in the mediastinum, the vast majority oc-

curing in the anterior mediastinum [2]. To our knowledge our patient may be the first reported case presenting with prolonged fever due to infection and secondary abscess formation in the teratoma.

The most frequent tumors of this area in childhood are neuroblastoma and other neurogenic tumors, more rarely duplication of the gastrointestinal tract [2].

Diagnosis of postero-inferior mediastinal mass which was suspected on ultrasonography was confirmed by CT. Accurate localization and relations to

adjacent organs, together with confirmation of calcification and fat within the mass gave a likely diagnosis. Recognition of a probable abscess formation enabled the correct treatment to be established prior to operation.

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