



Spontaneous resolution of a thymic cyst: report of a case

Naohiro Taira*, Tsutomu Kawabata, Takaharu Ichi, Kazuaki Kushi, Tomofumi Yohena, Hidenori Kawasaki and Kiyoshi Ishikawa

*Correspondence: naohiro_taira@yahoo.co.jp



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Department of General Surgery, National Hospital Organization, Okinawa National Hospital, Okinawa, Japan.

Abstract

We describe 50-year-old male who was diagnosed as thymic cyst and followed by periodic CT scans. Over a 2-year period there was a gradual decline in the size of the lesion and eventual complete resolution. In select cases, a conservative management may be possible, although more thorough scientific documentation is needed to discuss about cause of the spontaneous resolution of thymic cysts because there have previously been few published cases of that.

Keywords: CT scan, thymic cyst, spontaneous resolution, conservative management

Introduction

Thymic cysts are uncommon [1] (1~2% of mediastinal tumors), and usually found incidentally on a chest X-ray or CT scan of asymptomatic patients. The cysts are usually located in the anterior mediastinum that is the path of descent of the thymic primordial. They are commonly classified as unilocular or multilocular, both of which are commonly benign. However, the cystic degeneration of thymic neoplasms can show similar image findings to them. Therefore, the excision is usually recommended with the patients with thymic cysts. We report a case of the patient with thymic cyst which demonstrated the spontaneous resolution during follow-up CT images.

Case presentation

50-year-old male was found to have an approximately 20mm×11mm mass in the left side of the anterior mediastinum on a computed tomography (CT) scan during a health checkup (**Figure 1A**). His past medical history was unremarkable. Physical examination and laboratory data were within normal limits.

With the MRI the mass appeared hypointense on T1-weighted images and homogeneously hypointense on T2-weighted images (**Figure 1B**) and hyperintense on T2-weighted images (**Figure 1C**). The mass was diagnosed as unilocular thymic cyst by CT and MRI findings. We followed closely with periodic CT scans. CT scan at both three months and six months showed that the cyst persisted approximately at its previous size.

Nine months later, a follow-up CT scan demonstrated a significant reduction in size to 19mm×8mm of the cyst (**Figure 2A**). Eighteen months later, a follow-up CT scan showed complete resolution of the thymic cyst (**Figure 2B**). At follow-up three years after complete resolution of the thymic cyst, he was found to

be well with no evidence of regrowth of that.

Discussion

Thymic cysts are commonly categorized as unilocular or multilocular. Unilocular thymic cysts are usually congenital masses derived from remnants of the fetal thymopharyngeal duct, and their walls are lined with epithelium of squamous, transitional, and either cuboidal or columnar cells [2] without inflammation. In contrast, multilocular thymic cysts are predominantly acquired masses characterized by thick walled cystic cavities. It is thought to arise from dilation of medullary duct epithelial structures, including Hassall's corpuscles, secondary to an acquired inflammatory process often of unknown cause [3,4]. The walls are multiple, thick-walled cystic cavities that are lined partially by epithelium with fibrous adhesions.

Though thymic cysts are commonly benign, the cystic degeneration of thymic neoplasms such as thymoma or thymic carcinoma can show similar image findings to multilocular thymic cysts. Also, there have been several reports of malignant transformation in thymic cysts in cases of image findings that demonstrate unilocular cysts [5] which had an irregular thickened walls.

Consequently, it is difficult to differentiate benign thymic cysts from the cysts associated with malignant neoplasms on imaging findings only.

Therefore, the open excision of which open resection is still the preferred method of management though various treatment options include observation, CT guided aspiration and cervical mediastinoscopy.

In our case, we did not perform surgery because it was unilocular and had a regular thin wall and therefore raised some

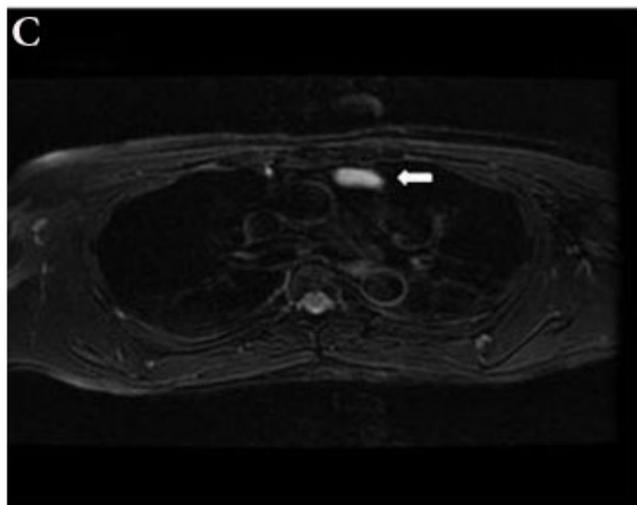
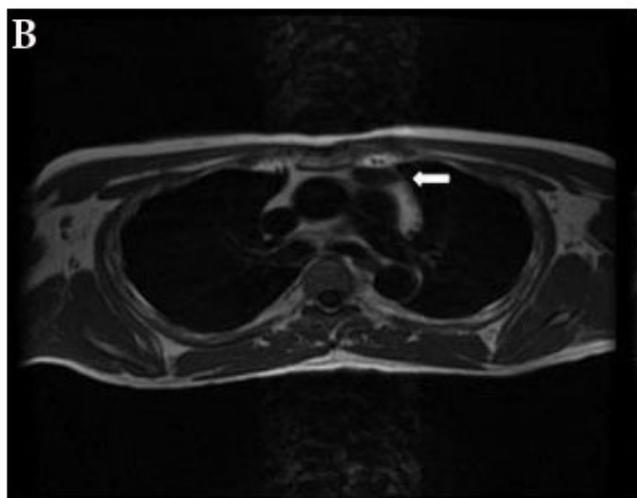
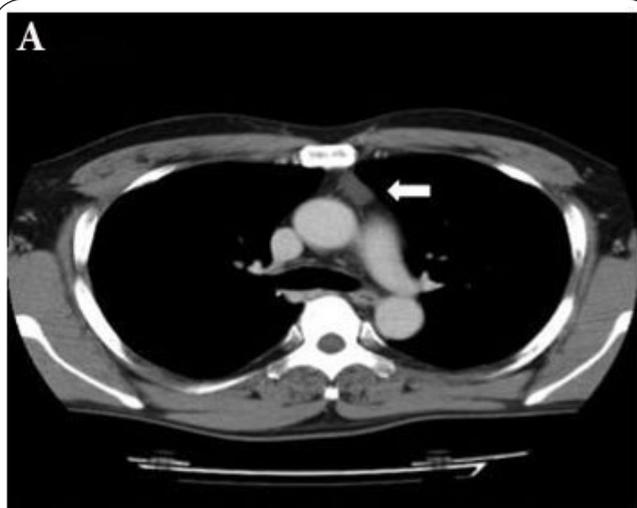


Figure 1. Computed tomographic and MRI images of anterior mediastinum.

(A) Chest computed tomographic scan showed 20mm×11mm mass in the left side of the anterior mediastinum. (B) The mass showed hypointense on T1-weighted MRI images. (C) The mass showed hyperintense on T2-weighted MRI images.

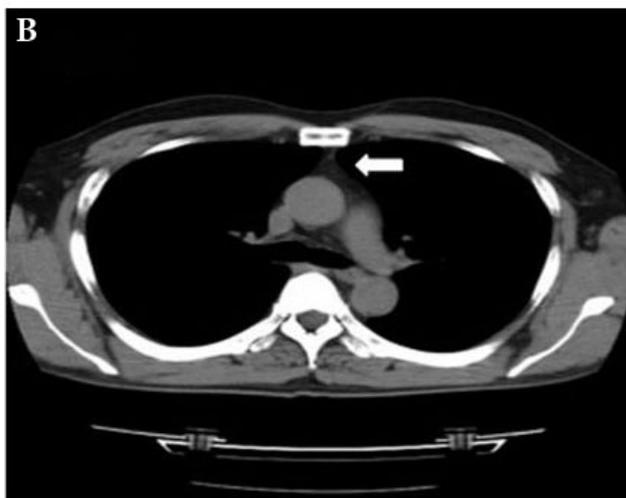
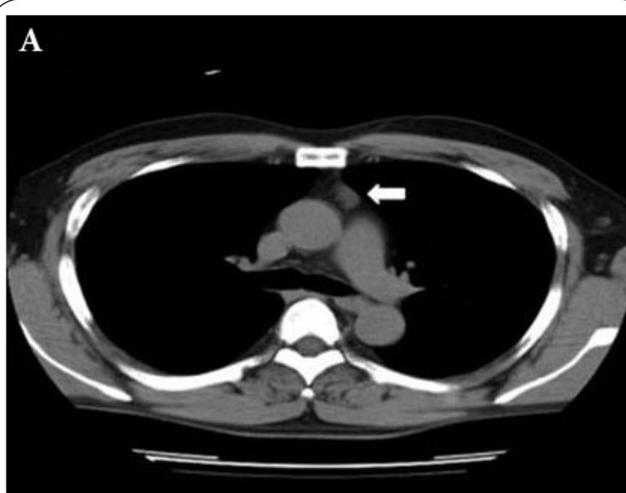


Figure 2. Computed tomographic scan results of thymic cyst. (A) Nine months later, a chest computed tomographic scan demonstrated a significant reduction in size to 19mm×8mm of the cyst. (B) Eighteen months later, a chest computed tomographic scan showed complete resolution of the thymic cyst.

suspicion of benignancy. The cyst demonstrated a gradual reduction in size without evidence of effusion to suggest the rupture, and finally complete resolution.

More thorough scientific documentation is needed to discuss about cause or the possibility of recurrence of the spontaneous resolution of thymic cysts [6] because there have previously been few published cases of that. Therefore, it is important to keep regular follow-up to check for signs of regrowth of the thymic cysts after complete resolution of that.

Conclusion

This case supports the possibility of nonoperative management in select cases.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

Authors' contributions	NT	TK	TI	KK	TY	HK	KI
Research concept and design	--	--	--	--	--	✓	--
Collection and/or assembly of data	--	--	✓	✓	--	--	--
Data analysis and interpretation	--	--	--	--	✓	--	--
Writing the article	✓	--	--	--	--	--	--
Critical revision of the article	--	--	--	--	--	--	✓
Final approval of article	--	✓	--	--	--	--	--
Statistical analysis	--	--	--	--	--	--	--

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References

1. Davis RD, Oldham HN and Sabiston DC. **Primary cysts and neoplasms of the mediastinum: recent changes in clinical presentation, methods of diagnosis, management, and results.** *Ann Thorac Surg.* 1987; **44**:229-37. | [Article](#) | [PubMed](#)
2. Scharifker D. **True thymic hyperplasia associated with a unilocular thymic cyst: an unusual combination not previously reported.** *Ann Diagn Pathol.* 2006; **10**:32-5. | [Article](#) | [PubMed](#)
3. Suster S and Rosai J. **Multilocular thymic cyst: an acquired reactive process. Study of 18 cases.** *Am J Surg Pathol.* 1991; **15**:388-98. | [PubMed](#)
4. Nomori H, Horio H, Suemasu K, Orikasa H, Yamazaki K and Nakano K. **A case of rapidly enlarging unilocular thymic cyst.** *J Clin Pathol.* 2002; **55**:636-7. | [Article](#) | [PubMed Abstract](#) | [PubMed Full Text](#)
5. Zaitlin N, Rozenman J and Yellin A. **Papillary adenocarcinoma in a thymic cyst: a pitfall of thoroscopic excision.** *Ann Thorac Surg.* 2003; **76**:1279-81. | [Article](#) | [PubMed](#)
6. Haro Estarriol M, Baldo Padro X, Rubio Goday M and Sebastian Quetglas F. **[Spontaneous resolution of a primary thymic cyst].** *An Med Interna.* 2003; **20**:552-3. | [PubMed](#)

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