

Castleman's Disease in the Sigmoid Mesocolon: A Case Report¹

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Castleman's disease is a rare disorder that's characterized by the proliferation of lymphoid tissue. It is very rare to find this disease arising from the sigmoid mesocolon. We report here on a case of localized Castleman's disease involving the sigmoid mesocolon, and we discuss the findings of the gray-scale ultrasonography (US), computed tomography (CT), and magnetic resonance (MR) imaging.

Index words : Castleman's disease
Colon disease
Tomography, X-Ray Computed
Ultrasonography (US)
Magnetic resonance (MR)

Castleman's disease is a rare benign lymphoproliferative disorder that was first defined by Castleman et al. in 1956 (1). Most of the cases of Castleman's disease are found in the mediastinum (approximate 70%); Castleman's disease has been identified in multiple anatomic locations, including the axilla, neck, groin, mesentery and retroperitoneal spaces (2 - 4). However, the lesions originating in the mesocolon are extremely rare with only a few cases have been reported in the literature (5 - 7). We present here the ultrasonography (US), computed tomography (CT), and magnetic resonance (MR) imaging findings of a case of Castleman's disease that arose from the sigmoid mesocolon.

Case Report

A 32-year-old woman presented with vague abdominal pain that she'd had for several months. A firm painless, non-tender, mobile mass was palpated on physical examination. The laboratory findings were unremarkable.

Gray-scale US revealed a well-defined, approximately 6.5 × 3.5 cm sized, uniformly hypoechoic, ovoid pelvic mass (Fig. 1A). The precontrast enhanced CT scan showed a homogeneous ovoid mass. The portal venous phase contrast enhanced CT scan showed a large well-enhancing mass (Fig. 1B). MR imaging was performed with using a 1.5-T MR unit. The axial dual echo image showed a homogeneous hypointense mass (Fig. 1C). The axial SSFSE image showed a hyperintense mass (Fig. 1D). The engorged vessels showed signal-void in the peripheral portion of the lesion on the T1- and T2-weighted images. The axial FSPGR postgadolinium fat-suppressed image showed homogeneous enhancement and an enhancing peripheral tortuous vascular structure

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Received February 27, 2008; Accepted May 6, 2008
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(Fig. 1E). Surgical resection was performed. The tumor was closely related to the inferior mesenteric artery and it was located in the sigmoid mesocolon; the mass measured about 7 × 5 cm (Fig. 1F). Histopathological examination demonstrated the typical features of the hyaline-vascular type of Castleman's disease, which was characterized by large follicles with hyalinization in the center of the follicles and concentric layers of lymphocytes at the periphery (Fig. 1G).

Discussion

Castleman's disease is a rare lymphoid tissue disorder, and it is also known as angiofollicular hyperplasia, giant lymph node hyperplasia, lymphoid hamartoma and follicular reticuloma. The etiology of this disease is un-

known. The classic localized lesions of Castleman's disease are histologically classified into the hyaline vascular type and the plasma cell type.

Castleman's disease generally affects young adults. The hyaline vascular type is more common, and it usually presents as an asymptomatic mass in the thorax, and this is in contrast to the plasma cell type that is more frequently associated with systemic manifestations of inflammation (8).

Tumor arising from the sigmoid mesocolon is rare because only blood vessels, lymphatics, lymph nodes, nerves and fat are located in the mesocolon (9). To the best of our knowledge, only three cases of Castleman's disease arising from the mesocolon have been reported to date (5 - 7). The imaging findings of Castleman's disease in the mesocolon make arriving at a specific diag-

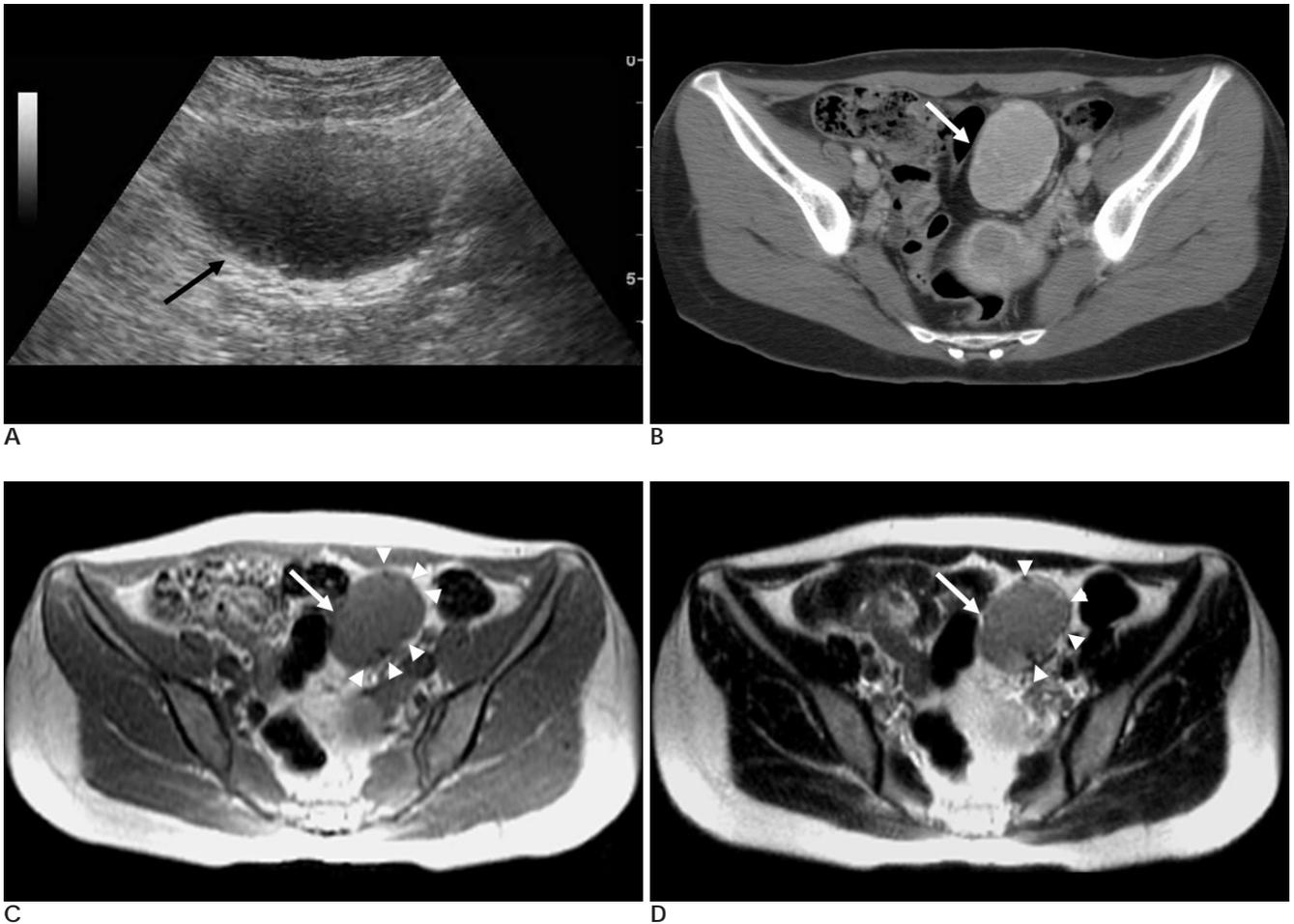
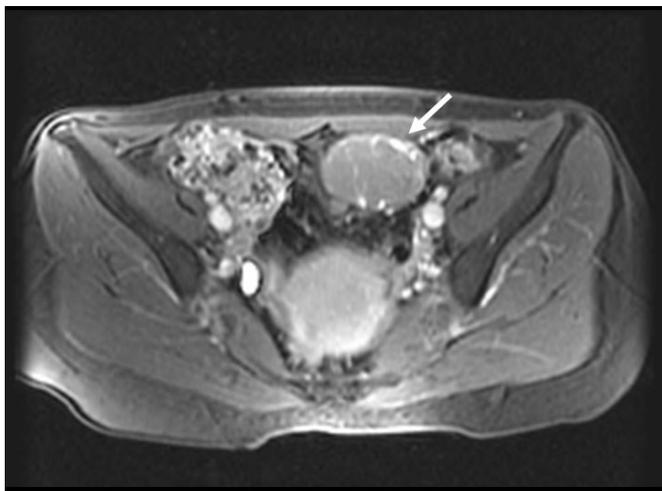


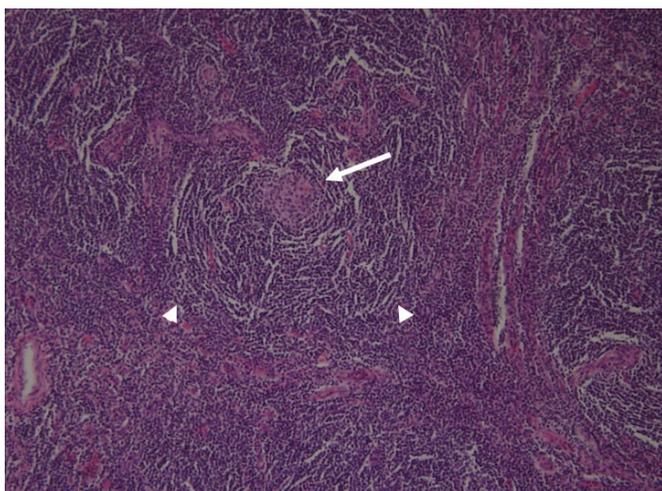
Fig. 1. A 32-year-old woman with localized Castleman's disease arising from the sigmoid mesocolon
A. The oblique transverse gray-scale sonogram of the pelvic cavity reveals a homogeneous hypoechoic mass (arrow).
B. The portal phase contrast-enhanced CT scan shows a large enhancing mass (arrow).
C. The axial dual echo T1-image (TR/TE, 150.0/4.7) shows a homogeneous hypointense mass (arrow). Signal void was also noted at the peripheral portion of the mass (arrowheads).
D. The axial SSFSE T2-image (TR/TE, 1380.4/ 92.1) shows a hyperintense mass (arrow). Signal void was also noted at the peripheral portion of the mass (arrowheads).



E



F



G

Fig. 1. E. The axial FSPGR postgadolinium fat-suppressed T1-image (TR/TE, 100.0/1.8) shows homogeneous enhancement. Note the peripheral tortuous enhancing vascular structure (arrow). F. Photograph of the specimen shows a well-encapsulated solid mass (☆) attached to the sigmoid colon (arrowheads). Feeding vessels are noted in the peripheral portion of the mass (arrows). G. The photomicrograph shows the concentric rings (arrowheads) of small lymphocytes surrounding an atrophic follicle and a hyalinized vessel (arrow) is entering the follicle (H & E × 40).

nosis difficult because it isn't easy to differentiate this benign process from the inflammatory lesions of lymphadenopathy and malignant lymphoma and the other benign or malignant mesenchymal tumors such as stromal tumors, leiomyomas, leiomyosarcomas, fibromas etc.

Castleman's disease presents as a homogeneous hypoechoic mass on US. There is intense contrast enhancement on the CT images of the homogeneous soft-tissue mass for at least the hyaline vascular type of Castleman's disease; homogeneous architecture with hypointensity is seen on the T1-weighted MR images and hyperintensity is seen on the T2-weighted MR images (4, 10).

The presence of hypervascularity on the CT and MR imaging has been often described, and particularly for the hyaline-vascular type (4, 8, 10). Peripheral feeding vessels were noted in our case, and this finding was helpful for making the differential diagnosis.

In conclusion, Castleman's disease in the mesocolon is very rare. Castleman's disease must be considered in the differentiated diagnoses of very hypervascular tumor with well-defined margins and prominent vessels around the tumor in the sigmoid mesocolon. A multimodality approach using US, CT and MR imaging may help make the correct diagnosis of Castleman's disease.

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