

## Case Report

# A Case of Mesenteric Panniculitis Leading to the Diagnosis of Non-Hodgkin's Lymphoma

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## Case Presentation

A 69-year-old male patient with vague abdominal discomfort and few small palpable swellings in the neck from few days presented at our Hospital. He was thoroughly examined and a working diagnosis of Lymphoma was made. The patient did not suffer from any chronic diseases and had not been subjected to any cross-sectional imaging tests. To look for possible enlarged lymph nodes elsewhere in the body, a CT scan of neck, thorax and abdomen was performed after administration of intravenous contrast using GE Revolution EVO VASIR. The CT showed multiple enlarged lymph nodes in the neck, thorax and abdomen, both intraperitoneal and retroperitoneal along with Splenomegaly (Figure 1). Nodular thickened structure was also noted along the lesser curvature of the stomach and in the mesentery of the small intestine. They exhibited "Halo" sign and "Tumoral pseudo capsule" sign along with adjacent ground glass changes of the mesentery. There was no mass effect on the adjacent structures. An associated diagnosis of Mesenteric Panniculitis was made (Figure 2). Other lesions of the Gastrointestinal tract or lesions suspicious of metastases were subsequently excluded. PET CT was not performed on the patient.



**Figure 1:** Multiple enlarged lymph nodes in the neck, thorax and abdomen, both intraperitoneal and retroperitoneal.



Figure 2

## Discussion

Mesenteric Panniculitis is an uncommon disorder which is characterized by thickening of the bowel mesentery to form a pseudo tumor due to variable degree of steatonecrosis, chronic inflammation and fibrosis [1]. It has a male predilection and is more frequently diagnosed after 50 years of age [2]. Retractable mesenteritis represents a more chronic and fulminant subgroup of sclerosing panniculitis with a different set of imaging characteristics [3]. Typically, they are represented by one or more regular fibrotic soft tissue mesenteric masses, small calcifications and there may be encasement of the adjacent bowel loops and vascular structures, leading to signs of obstruction and occasionally to hollow visceral ischemia [4, 5]. Mesenteric panniculitis falls under the category of Sclerosing mesenteritis. The important imaging findings on CT includes the presence of “Tumoral pseudo capsule” sign which refers to the peripheral curvilinear band of soft tissue attenuation limiting the heterogeneous mesenteric mass from the surrounding normal mesentery and the “Fat halo” sign which refers to the preservation of normal fat density in the fatty tissue surrounding the mesenteric vessels [6].

The thickness of tumoral pseudocapsule band of soft tissue is typically not greater than 3 mm [3]. The diagnosis of mesenteric panniculitis cannot be made unless the other causes of so-called “Misty Mesentery” have been excluded. “Misty Mesentery” is a term coined by Mindelzun et al to describe a regional increase of mesenteric fat density at abdominopelvic CT [7]. The other causes of mesenteric panniculitis include Mesenteric edema, Mesenteric Inflammation, Mesenteric Hemorrhage, Mesenteric Lymphedema

and Mesenteric Neoplasia [6]. In patients suspected of Lymphoma, the most challenging differential diagnosis is to exclude early stages of Hodgkins or Non-Hodgkins mesenteric Lymphoma. Although it is relative easier to differentiate mesenteric Lymphoma in the late stages of the disease when the mesentery presents with bulky lymphadenopathy, it is difficult to recognize the lymphnodes in the early stages.

Another important uncommon Lymphoma is Lymphoma of the gastrointestinal tract. Gastrointestinal lymphoma is an uncommon disease with a wide variety of imaging appearances. Although there is no characteristic appearance, features such as a bulky mass or diffuse infiltration with preservation of fat planes and no obstruction, multiple site involvement, and associated bulky lymphadenopathy are suggestive of lymphoma. The most commonly used imaging modalities are barium examination and CT, which are complementary. However, CT is the most useful modality in that it provides a better overall assessment of the disease stage [8]. A fat halo sign is very important in the diagnosis of mesenteric panniculitis [9, 10]. Associated enlarged retroperitoneal lymphnodes should raise the suspicion of Lymphoma [11].

Lymphoma patients after chemotherapy may also show high-density changes in the mesenteric fat that can be indistinguishable from mesenteric panniculitis [12]. Primary mesenteric neoplasms like neurofibromas, lipomas and mesenteric liposarcomas also exhibit pseudocapsule sign [11]. The distinguishing factor in mesenteric panniculitis is the absence of mass effect which the other benign pathological processes exhibit on the adjacent mesenteric vessels [12]. The prevalence of Mesenteric panniculitis in malignancy is a subject of debate. Some of the studies show a correlation of malignancy to be 56% to 75% in patients with mesenteric panniculitis while some studies have concluded that there is no association between Mesenteric panniculitis and malignancy [13-17].

The prevalence of Mesenteric panniculitis in patients with Non-Hodgkins Lymphoma was studied recently by V. Khasminsky et al. They concluded that the connection between the two was coincidental [18]. However, soft nodule in the mesentery, > 1 cm was suspicious for lymphomatous or other malignant involvement of the mesentery and warranted further work-up [18]. In our case, the mesenteric nodules were > 1 cm and showed typical tumoral pseudo capsule sign and the halo sign. We were not able to demonstrate the nodules sonographically which we attribute to technical difficulties due to meteorism. Furthermore, in the work-up of the case, biopsy of the the lymphnodes was performed and a diagnosis of Non-Hodgkin's Lymphoma was made.

## Conclusion

Although the prevalence of Mesenteric panniculitis and malignancy are a matter of debate, it is not completely possible

to exclude the association between the two. A case of mesenteric panniculitis without any previously known malignancy should rightly raise suspicion of malignancy which warrants further work-up of the patient.

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