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Case Report

Multiple Mucinous Cystadenocarcinoma Indicative of an Abdominal Tumor with Ascites in the Male Chinese Patient: A Case Report

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Abstract: Mucinous cystadenocarcinoma in men is very rare; we reported 1 case of mucinous cystadenocarcinoma in the pancreatic disease institute of Wuhan union hospital in China. The aim of the study was to focus our attention on the gender of this patient. The mucinous cystadenocarcinoma is a pathology frequently seen among women. The clinical presentation of this patient is a characteristic which deserves to be described.

Keywords: Mucinous, Cystadenocarcinoma, Ascite, Male, Indicative

1. Introduction

Mucinous cystadenocarcinoma is a type of tumor in the cystadenocarcinoma grouping. It is a very rare entity, which comprises only 1-2% of pancreas neoplasm [1]. It can occur in the breast [2] as well as in the ovary. [3] Mucinous cystadenocarcinomas of the pancreas is a type of pancreatic mucinous tumor. It is considered the more malignant

counterpart of a mucinous cystadenoma of pancreas. Like the more benign mucinous cystadenomas, these are found almost exclusively in females [4].

Mucinous tumors are typically multilocular, with numerous smooth, thin-walled cysts. Mucoid material is found within the cysts, sometimes accompanied by hemorrhagic or cellular debris. A proportionately greater solid, nonfatty, non-fibrous tissue is often considered the most powerful predictor of malignancy [5].

"Mucinous" indicates the presence of mucus in or around the tumor. A "cyst" is a pocket of tissue, often filled with fluid. "Adeno" indicates that the growth is glandular in origin, and "carcinoma" means it is malignant, as seen in the term "adenocarcinoma" to describe a malignant tumor arising in the glands [6]. The diagnosis of mucinous cystadenocarcinoma is mainly based on the presence of invasive foci, angiolymphatic invasion or perineural invasion. Radiographic features it is typically seen as a cystic pancreatic lesion with cysts that are less numerous and larger in size (with an average diameter of ~ 10-12 cm) than typically observed with serous cystadenomas/cystadenocarcinomas. Its external surface is often smooth, and it is composed of unilocular or multilocular large (>2-4 cm) cysts with a thicker wall [7].

Retrospective studies have suggested that many mucinous carcinomas initially diagnosed as primary to the ovary have in fact metastasized from another site [8].

CT may demonstrate high attenuation in some loculi due to the high protein content of the mucoid material. On MRI images, the signal intensity of mucin on T1-weighted images varies depending on the degree of mucin concentration. On T1-weighted images, loculi with watery mucin have lower signal intensity than loculi with thicker mucin.

On T2-weighted images, the corresponding signal intensities are flipped, so that loculi with watery mucin have high signal intensity and loculi with thicker mucin appear slightly hypo intense.

Mucinous cystadenomas have origins from inclusions and invaginations of the ovarian celomic epithelium and persistence of Müllerian cells, or from Wolffian epithelium and teratomas [8]. They often occur in the fourth and fifth decades, accounting for 25% of the ovarian tumors, 5% are bilateral and 15% are malignant [9].

The epithelium of the cysts is usually cylindrical and mono- or multi-stratified and cuboidal epithelium is due to the pressure inside the cyst [2]. The classical cells show clear cytoplasm and a hyperchromatic nucleus at the base [9].

The pathological changes seen in Mucinous cystadenocarcinoma are frequently seen in women. The clinical presentation for this 52 year old male Chinese patient, has encouraged us to write this present case report.

2. Case Presentation

2.1. Clinical Observation

A 52 year-old male patient presented to pancreatic disease institute of Wuhan Union Hospital Of China with a history of abdominal pain, ascites, abdominal mass persisting for a month.

Clinically, we noted a swollen abdomen with an abdominal collateral circulation in place. The patient complained about pain from deep palpations. The palpations also revealed an abdominal mass, of firm consistency, with irregular contours and not adhering to any major part. Normal bowel sounds were noted on auscultation around the umbilicus. Abdominal percussion revealed dullness, consistent with the presence of fluid in the abdominal space. Normal liver dullness was heard with percussion over liver area and there was no visible signs of jaundice. Rectal exam revealed bulging of the rectovesical pouch revealed bulging of the sac, which was also a finding consistent with the presence of a large amount of fluid in the abdomen. The lungs were clear on auscultation and the rest of the physical examination was unremarkable.

2.2. Para Clinical Observation

Laboratory tests included measurement of Glucose level, CA125 (Cancer Antigen 125. Tumor Marker), CA72-4(Cancer Antigen 72-4. Tumor Marker), CYFRA21-1(Cytokeratine Fragment 19), NSE(Neuro Specific Enzyme), AFP(alpha foeto-protein), CEA(Chorionic embryon Antigen), CA19-9(Cancer Antigen 19-9. Tumor Marker), SCC(Squamous Cell Carcinoma), PSA(Prostate Specific Antigen), WBC(White Blood Cell), RBC(Red Blood Cell), HGB(Hemoglobin), Hematocrit, Transaminases.

The levels of tumor markers CA125, CYFRA21-1, NSE, CA72-4, were noted to be high (CA125=476.6, CYFRA21-1=12.23, NSE=26.42). WBC and transaminase levels were normal and RBC count, HGB, Hematocrit levels were found to be low.

Furthermore, the abdominal fluid analysis was ppositive for lymph nodes and mesothelium cells.

The radiography and ECG results did not reveal any pathological characteristics.

The CT scan highlighted various regions with opacities characteristic of the presence of substantial amount of free abdominal fluid, signifying an advanced process. (Figure 1).

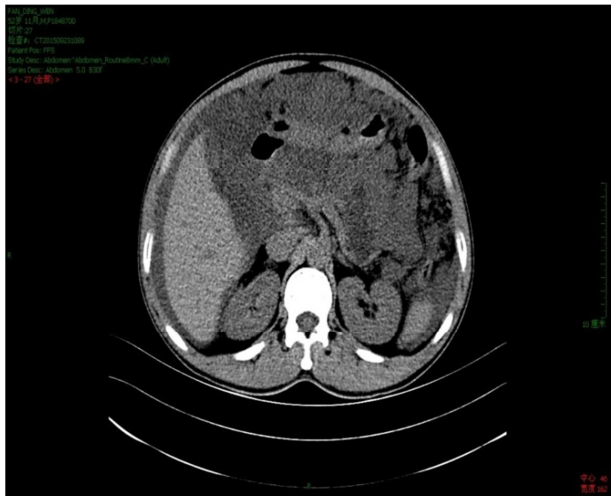

Figure 1. *CT; showed the massive amount of ascitic fluid.*

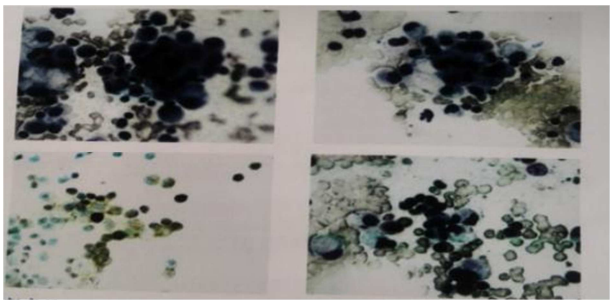

Figure 2. *The biopsy of ascites has shown the proliferation of the lymphocytes and lymph node.*

Based on the above findings, we made the diagnosis of Abdominal Tumor.

2.3. Surgical Treatment

The aim of surgery to explore the nature of the tumor.

Upon performing the abdominal incision, approximately 4 liters of ascitic fluid was drained out. Further exploration revealed multiple tumors which were located at the level of the pancreas, large omentum and the intestines. Following the resection, a biopsy of the tumor was performed. The abdominal wall was also cleaned and 2 drainage catheters were placed.

The parietal was closed step by step and the specimen was sent for histopathological examination which confirmed the diagnosis of mucinous cystadenocarcinoma.

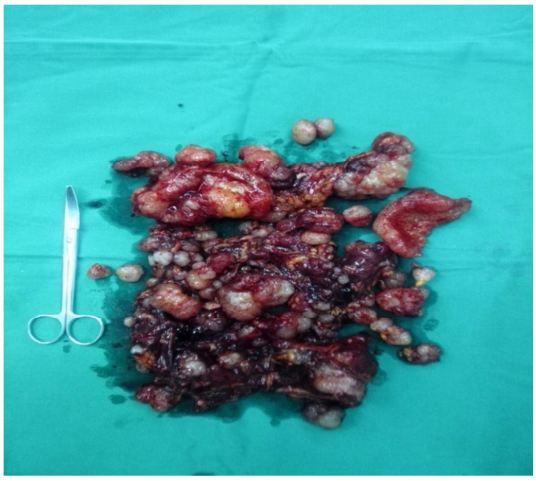

Figure 3. *This gross photograph of the several mucinous cystadenocarcinoma, tumour showing encapsulated, multiloculated, predominantly cystic, filled with thick mucinous fluid and foci of solid areas (arrow).*

3. Discussion

A mucinous cystadenocarcinoma is a malignant tumor arising in glandular tissue with a capsulated structure and mucus-producing cells. These tumors can arise in many different types of tissue, including the breasts, ovaries, pancreas, appendix and kidneys. Mucinous cystadenocarcinomas residing in the abdomen do not any have specific clinical presentation. They may be discovered incidentally, in patients with chronic abdominal pain, or in patients with a palpable mass in the right lower abdomen, during CT or ultrasound examination, or in patients with an intestinal tract invagination or ileus. However, in our precise case, the ascites was the revealing symptom of the disease. Mucinous cystadenocarcinomas are only one-third as common as serous cystadenocarcinomas and usually affects peoples in the age group of 45-65 years. They are typically large, unilateral, multilocular cystic masses containing watery or viscid secretions with smooth white capsules and have average sizes of 18-22 cm. They may contain solid areas with foci of haemorrhage and necrosis [10, 11].

In our study, the diagnosis of mucinous cystadenocarcinoma of the pancreas mainly depended on the presence of destructive invasive foci. Often, they are not diagnosed until they have reached an advanced stage because the symptoms may be relatively minimal. Treatments include surgery and chemotherapy, supervised by an oncologist who may be assisted by other medical professionals, depending on the location of the tumor.

When a mucinous cystadenocarcinoma is located in the abdomen, it can generate abdominal pain and tenderness along with ascites that result in bloating and discomfort. [6, 12]Patients can also experience abnormalities in endocrine function caused by the cancerous cells, such as spikes in levels of certain hormones. Mucinous cystadenocarcinomas can cause infertility, impairments in kidney function, and a variety of other non- specific symptoms.

Medical imaging studies can be used to locate a mucinous cystadenocarcinoma and to check for signs of invasive disease. Biopsy samples of the tumor can provide more information about the source and staging of the tumor. This will help to guide the treatment strategies for the patient.

Surgical resection is considered as the first line of treatment. The surgeon will attempt to remove the whole tumor intact, emphasizing on negative margins, to ensure removal of all cancerous tissue and to avoid rupturing the capsule which may lead to shedding of cancer cells. The tumor can be sent for pathological examination to check for satisfactory resection margins. Adjuvant chemotherapy is offered following surgery especially if adequate margins of resection were not achieved, and also to decrease chances of recurrence.

4. Conclusion

Mucinous cystadenocarcinoma is an overtly malignant tumor found almost exclusively in females than in males. The presence of malignant ascites was a striking feature in this particular case and the differentials diagnoses must be drawn from other GI pathologies presenting in similar fashion.

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