## Contents

### OPINION REVIEW

1. **Necessary problems in re-emergence of COVID-19**
   
   *Chen S, Ren LZ, Ouyang HS, Liu S, Zhang LY*

### REVIEW

8. **COVID-19: An overview and a clinical update**
   
   *Krishnan A, Hamilton JP, Alqahtani SA, Woreta TA*

### ORIGINAL ARTICLE

#### Retrospective Cohort Study

24. **Log odds of positive lymph nodes is a better prognostic factor for oesophageal signet ring cell carcinoma than N stage**
   

36. **Modified procedure for prolapse and hemorrhoids: Lower recurrence, higher satisfaction**
   

47. **Angiotensin converting enzymes inhibitors or angiotensin receptor blockers should be continued in COVID-19 patients with hypertension**
   
   *Tian C, Li N, Bai Y, Xiao H, Li S, Ge QG, Shen N, Ma QB*

#### Retrospective Study

61. **Massively prolapsed intervertebral disc herniation with interlaminar endoscopic spine system Delta endoscope: A case series**
   
   *Meng SW, Peng C, Zhou CL, Tao H, Wang C, Zhu K, Song MX, Ma XX*

71. **Primary lung cancer with radioiodine avidity: A thyroid cancer cohort study**
   
   *Lu YL, Chen ST, Ho TY, Chan WH, Wong RJ, Hsueh C, Lin SF*

81. **Is traumatic meniscal lesion associated with acute fracture morphology changes of tibia plateau? A series of arthroscopic analysis of 67 patients**
   
   *Chen YD, Chen SX, Liu HG, Zhao XS, Ou WH, Li HX, Huang HX*

### Observational Study

91. **Role of relaxin in diastasis of the pubic symphysis peripartum**
   
   *Wang Y, Li YQ, Tian MR, Wang N, Zheng ZC*

### SYSTEMATIC REVIEWS

102. **Chinese medicine formulas for nonalcoholic fatty liver disease: Overview of systematic reviews**
   
   *Dai L, Zhou WJ, Zhong LLD, Tang XD, Ji G*
Comparative profile for COVID-19 cases from China and North America: Clinical symptoms, comorbidities and disease biomarkers
Badawi A, Vasileva D

META-ANALYSIS
Polymerase chain reaction-based tests for detecting Helicobacter pylori clarithromycin resistance in stool samples: A meta-analysis
Gong RJ, Xu CX, Li H, Liu XM

CASE REPORT
Surgery-first for a patient with mild hemifacial microsomia: A case report and review of literature

Late-onset non-islet cell tumor hypoglycemia: A case report

Risk of group aggregative behavior during COVID-19 outbreak: A case report
Zuo H, Hu ZB, Zhu F

Low-grade fibromyxoid sarcoma of the liver: A case report
Dugalic V, Ignjatovic II, Kovac JD, Ilic N, Sopita J, Ostojic SR, Vasin D, Bogdanovic MD, Dumić I, Milovanovic T

Treatment of Stanford type A aortic dissection with triple pre-fenestration, reduced diameter, and three-dimensional-printing techniques: A case report

Hyperprolactinemia due to pituitary metastasis: A case report

Pulmonary thromboembolism after distal ulna and radius fractures surgery: A case report and a literature review
Lv B, Xue F, Shen YC, Hu FB, Pan MM

Myeloid neoplasm with eosinophilia and rearrangement of platelet-derived growth factor receptor beta gene in children: Two case reports
Wang SC, Yang WY

Sclerosing angiomatoid nodular transformation of the spleen: A case report and literature review
Li SX, Fan YH, Wu H, Lv GY

Late recurrence of papillary thyroid cancer from needle tract implantation after core needle biopsy: A case report
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>232</td>
<td>Type A aortic dissection developed after type B dissection with the presentation of shoulder pain: A case report</td>
<td>Yin XB, Wang XK, Xu S, He CY</td>
</tr>
<tr>
<td>236</td>
<td>Hemosuccus pancreaticus caused by gastroduodenal artery pseudoaneurysm associated with chronic pancreatitis: A case report and review of literature</td>
<td>Cui HY, Jiang CH, Dong J, Wen Y, Chen YW</td>
</tr>
<tr>
<td>245</td>
<td>Endoscopic treatment for acute appendicitis with coexistent acute pancreatitis: Two case reports</td>
<td>Du ZQ, Ding WJ, Wang F, Zhou XR, Chen TM</td>
</tr>
<tr>
<td>252</td>
<td>Residual tumor and central lymph node metastasis after thermal ablation of papillary thyroid carcinoma: A case report and review of literature</td>
<td>Hua Y, Yang JW, He L, Xu H, Huo HZ, Zhu CF</td>
</tr>
<tr>
<td>262</td>
<td>Endoscopic salvage treatment of histoacryl after stent application on the anastomotic leak after gastrectomy: A case report</td>
<td>Kim HS, Kim Y, Han JH</td>
</tr>
<tr>
<td>267</td>
<td>Immunosuppressant treatment for IgG4-related sclerosing cholangitis: A case report</td>
<td>Kim JS, Choi WH, Lee KA, Kim HS</td>
</tr>
<tr>
<td>274</td>
<td>Intraparenchymal hemorrhage after surgical decompression of an epencephalon arachnoid cyst: A case report</td>
<td>Wang XJ</td>
</tr>
<tr>
<td>278</td>
<td>Krukenberg tumor with concomitant ipsilateral hydronephrosis and spermatic cord metastasis in a man: A case report</td>
<td>Tsao SH, Chuang CK</td>
</tr>
<tr>
<td>284</td>
<td>Simultaneous bilateral acromial base fractures after staged reverse total shoulder arthroplasty: A case report</td>
<td>Kim DH, Kim BS, Cho CH</td>
</tr>
</tbody>
</table>
ABOUT COVER

Editorial Board Member of World Journal of Clinical Cases, Dr. Antonio Corvino is a PhD in the Motor Science and Wellness Department of University of Naples “Parthenope”. After obtaining his MD degree from the School of Medicine, Second University of Naples (2008), he completed a residency in Radiology at the University of Naples Federico II (2014). Following post-graduate training at the Catholic University of Rome, yielding a second level Master’s degree in “Internal Ultrasound Diagnostic and Echo-Guided Therapies” (2015), he served on the directive board of Young Directive of Italian Society of Ultrasound in Medicine and Biology (2016-2018). His ongoing research interests involve ultrasound and ultrasound contrast media in abdominal and non-abdominal applications, mainly in gastrointestinal, hepatic, vascular, and musculoskeletal imaging. (L-Editor: Filipodia)

AIMS AND SCOPE

The primary aim of World Journal of Clinical Cases (WJCC, World J Clin Cases) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

INDEXING/ABSTRACTING

The WJCC is now indexed in Science Citation Index Expanded (also known as SciSearch®), Journal Citation Reports/Science Edition, PubMed, and PubMed Central. The 2020 Edition of Journal Citation Reports® cites the 2019 impact factor (IF) for WJCC as 1.013; IF without journal self cites: 0.991; Ranking: 120 among 165 journals in medicine, general and internal; and Quartile category: Q3.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: Yan-Xia Xing; Production Department Director: Yun-Xiaojian Wu; Editorial Office Director: Jin-Lei Wang.

NAME OF JOURNAL
World Journal of Clinical Cases

ISSN
ISSN 2307-8960 (online)

LAUNCH DATE
April 16, 2013

FREQUENCY
Semimonthly

EDITORS-IN-CHIEF
Dennis A Bloomfield, Sandro Vento, Bao-gan Peng

EDITORIAL BOARD MEMBERS
https://www.wjgnet.com/2307-8960/editorialboard.htm

PUBLICATION DATE
January 6, 2021

COPYRIGHT
© 2021 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS
https://www.wjgnet.com/bpg/gerinfo/204

GUIDELINES FOR ETHICS DOCUMENTS
https://www.wjgnet.com/bpg/GerInfo/287

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH
https://www.wjgnet.com/bpg/gerinfo/240

PUBLICATION ETHICS
https://www.wjgnet.com/bpg/GerInfo/288

PUBLICATION MISCONDUCT
https://www.wjgnet.com/bpg/gerinfo/208

ARTICLE PROCESSING CHARGE
https://www.wjgnet.com/bpg/gerinfo/242

STEPS FOR SUBMITTING MANUSCRIPTS
https://www.wjgnet.com/bpg/gerinfo/239

ONLINE SUBMISSION
https://www.ijppublishing.com
Sclerosing angiomatoid nodular transformation of the spleen: A case report and literature review

Shu-Xuan Li, Ye-Hui Fan, Hao Wu, Guo-Yue Lv

ORCID number: Shu-Xuan Li 0000-0001-6809-4283; Ye-Hui Fan 0000-0002-3041-7224; Hao Wu 0000-0002-7140-5852; Guo-Yue Lv 0000-0002-9372-4053.

Author contributions: Li SX and Fan YH contributed equally to this work; Li SX wrote the original draft of the manuscript; Fan YH was responsible for the methodology and data curation; Wu H performed the analyses and interpretation of the imaging findings; Lv GY was responsible for the revision and editing of the manuscript; all authors issued final approval for the version to be submitted.

Informed consent statement: The patient provided informed written consent.

Conflict-of-interest statement: The authors declare that they have no conflict of interest.

CARE Checklist (2016) statement: The authors have read the CARE Checklist (2016), and the manuscript was prepared and revised according to the CARE Checklist (2016).

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in

Abstract

BACKGROUND
Sclerosing angiomatoid nodular transformation (SANT) is a rare disease of the spleen. It has unique pathological features and mimics splenic tumor on radiological imaging.

CASE SUMMARY
A 47-year-old woman was incidentally found to have a splenic mass on abdominal ultrasound. She had a 10-cm postoperative scar in the lower abdomen due to previous cesarean sections. The patient had a past history of anemia of unknown etiology for 20 years. The patient underwent laparoscopic splenectomy. The postoperative course was uneventful, with a hospital stay of 7 d. The histopathological examination of the spleen revealed SANT. At the 6-mo follow-up, the patient remained disease-free.

CONCLUSION
SANT is a rare benign disease mimicking a malignant tumor. A definitive diagnosis can be made only on histopathology.

Key Words: Splenic neoplasms; Sclerosing angiomatoid nodular transformation; Spleen; Case report

©The Author(s) 2021. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: We report the case of a 47-year-old lady with long-standing anemia with an incidentally detected splenic mass of 5.9 cm × 5.1 cm that appeared malignant on
INTRODUCTION

Sclerosing angiomatoid nodular transformation (SANT) of the spleen is a rare benign lesion[1]. SANT was first reported and described as a benign splenic lesion by Martel et al[1]. SANT is more common in women than men and has no characteristic clinical or radiological features. Most patients undergo open or laparoscopic splenectomy due to a diagnostic dilemma. The final diagnosis is made based on histopathological examination of the spleen. We report a case of SANT and discuss the radiological and immunohistochemical characteristics of this disease.

CASE PRESENTATION

Chief complaints
A 47-year-old woman visited our hospital for a yearly health checkup.

History of present illness
She denied any recent fever, allergy, chills, or changes in bowel habits.

History of past illness
The patient had a past history of anemia of unknown etiology for 20 years. She also had a history of cesarean sections performed 23 years earlier.

Personal and family history
She did not have any addictions or any significant family history.

Physical examination
On clinical examination, there was a 10-cm postoperative scar in the lower abdomen due to previous cesarean sections. The abdominal examination was unremarkable with no organomegaly.

Laboratory examinations
Laboratory testing revealed a hemoglobin level of 85 g/L (normal, 115–150 g/L) suggestive of moderate anemia. The white blood cell and platelet counts were normal. The following tumor markers were within the normal range: serum carcinoembryonic antigen (0.58 ng/mL, normal < 5.0 ng/mL); cancer antigen (CA) 125 (9.46 U/mL, normal < 35 U/mL); alpha fetoprotein (5.38 ng/mL, normal < 20 ng/mL); and CA19-9 (5.97 U/mL, normal < 37 U/mL). The coagulation profile and liver function tests were within normal limits.

To determine the cause of the anemia, the patient underwent a bone marrow biopsy and smear examination, which revealed iron deficiency anemia.

Imaging examinations
On abdominal ultrasound, a splenic lesion 5.9 cm × 5.1 cm in size and hypoechoic in nature was found at the upper pole of the spleen. A computed tomography (CT) scan showed a hypodense solid lesion, 5.9 cm × 5.1 cm, located at the upper pole of the liver.
spleen in the non-contrast phase (Figure 1A) and mild progressive enhancement in the contrast-enhanced phase (Figure 1B).

**FINAL DIAGNOSIS**

A final diagnosis of splenic tumor was made.

**TREATMENT**

With a provisional diagnosis of splenic tumor, the patient was scheduled for laparoscopic splenectomy. The patient and her relatives were informed about the increased risk of overwhelming post-splenectomy infection (OPSI) after splenectomy. They were also informed about the need for an intraoperative histopathological examination of the spleen, and if the tumor was benign, a spleen autotransplantation would be considered\[2\]. However, due to the possibility of missing a malignancy on intraoperative histopathological examination and the low risk of OPSI in adults, the patient and her family members insisted on splenectomy and declined an intraoperative histopathological examination.

During the operation, a mass lesion measuring 7 cm × 5.5 cm × 5 cm was found at the upper pole of the spleen. Laparoscopic splenectomy was performed and the resected spleen was sent for histological examination. The operative time was 85 min, and estimated blood loss was 60 mL. The postoperative course was uneventful, with a hospital stay of 7 d.

On macroscopic examination, the splenic lesion was well encapsulated, off-white and dull-red in color, and firm in consistency (Figure 2). On microscopic examination, there were multiple rounded hemangiomatous nodules surrounded by fibrosclerotic stroma (Figure 3). Immunohistochemistry revealed the following findings (Figure 4): cluster of differentiation (CD) 31 (+), CD34 (+), CD68 (+), Ki67 (1%), and smooth-muscle actin (SMA) (+). Based on these findings, a pathological diagnosis of SANT was made.

**OUTCOME AND FOLLOW-UP**

At the 6-mo follow-up, the patient remained disease-free and her anemia had resolved.

**DISCUSSION**

SANT is a rare benign lesion of the spleen. It was initially named multinodular hemangioma by Rosai et al\[3\]. In 2004, Martel et al\[1\] coined the term SANT for the first time. Based on their study of 25 cases, the authors concluded that SANT is a benign vascular lesion of the spleen probably caused by a reactive process.

The exact pathogenesis of SANT is unknown. Some researchers have detected Epstein-Barr virus RNA in resected specimens, suggesting that its pathogenesis could be similar to that of inflammatory pseudotumors\[4\]. Other studies have found a large number of IgG4-positive plasma cells in SANT samples, suggesting that SANT may be associated with IgG4-related autoimmune diseases\[5\].

SANT occurs more frequently in women than men. It is most often asymptomatic and has no characteristic clinical features (Table 1). The most common complaint is abdominal pain. In our case, the patient was asymptomatic. Laboratory tests may show an elevated erythrocyte sedimentation rate, leukocytosis, and thrombocytopenia\[1\].

The most common imaging methods used for SANT are CT and magnetic resonance imaging of the abdomen (Table 2). In most of the reported cases, SANT presents as a solitary lesion but can be multifocal in rare cases. However, none of the radiological features are pathognomonic of SANT, and further studies are required to differentiate SANT from malignant lesions of the spleen. Raman et al\[6\] noted that it is difficult to differentiate SANT from other splenic diseases by radiological imaging alone. The final diagnosis is mainly based on histopathological and immunohistochemical examination of the resected specimen. The differential diagnosis of SANT includes
hemangioma, splenic hamartoma, angiosarcoma, hemangioendothelioma, and inflammatory pseudotumor.

On histological examination with hematoxylin and eosin staining, multiple hemangioma-like nodules, fissure-like or sinus-like vascular cavities are visible in the center of the nodules, with a small number of tissue cells scattered around the lacunae, and a dense concentric distribution of smooth muscle or collagen fibers around the nodules. On immunohistochemical staining, three types of vascular structures are seen in SANT nodules: A capillary network, sinusoid vascular spaces, and small venous vessels. The cells of all three structures are CD31-positive. Moreover, the cells of the capillary network are CD34-positive while the cells of the sinusoid vascular spaces are CD8-negative.

In addition, there are spindle cells around the nodules that are positive for CD68, SMA, and vimentin. The cell proliferation (Ki-67) index is usually < 5%.

SANT of the spleen is a benign disease that does not require surgery unless the patient is symptomatic. However, due to diagnostic dilemma, most patients undergo splenectomy to rule out malignancy or another pathological disease of the spleen. In our case, the patient underwent laparoscopic splenectomy and recovered without complications. At the 6-mo follow-up, the patient was free of disease.

**Table 1 Clinical features of sclerosing angiomatoid nodular transformation reported in the literature**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>n</th>
<th>Mean age, yr</th>
<th>Gender, F/M</th>
<th>Clinical features (n cases)</th>
<th>Recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martel et al(^{[1]})</td>
<td>25</td>
<td>48</td>
<td>17/8</td>
<td>Incidental finding on physical examination (14); Abdominal discomfort (6); Splenomegaly (4); Fever (1);</td>
<td>No</td>
</tr>
<tr>
<td>Diebold et al(^{[2]})</td>
<td>16</td>
<td>44</td>
<td>9/7</td>
<td>Incidental finding on physical examination (7); Splenomegaly with anemia (5); Abdominal pain (2); Fever (2)</td>
<td>No</td>
</tr>
<tr>
<td>Hou et al(^{[3]})</td>
<td>10</td>
<td>42</td>
<td>8/2</td>
<td>Incidental finding on physical examination (8); Abdominal pain (1); Upper left abdominal pain (1)</td>
<td>No</td>
</tr>
<tr>
<td>Nomura et al(^{[4]})</td>
<td>71</td>
<td>46</td>
<td>27/44</td>
<td>Incidental finding on imaging studies (33); Abdominal or back discomfort, weight loss, fever (27); Not described (11)</td>
<td>NA</td>
</tr>
<tr>
<td>Pelizzo et al(^{[5]})</td>
<td>1</td>
<td>9 wk</td>
<td>1/0</td>
<td>Severe abdominal distension and rectal bleeding (1)</td>
<td>No</td>
</tr>
<tr>
<td>Liao et al(^{[6]})</td>
<td>1</td>
<td>50</td>
<td>1/0</td>
<td>Persistent neutrophilia and unintentional weight loss (1)</td>
<td>No</td>
</tr>
<tr>
<td>Sánchez Belmar et al(^{[7]})</td>
<td>1</td>
<td>42</td>
<td>0/1</td>
<td>Vomiting and headaches and intravenous drug user (1)</td>
<td>No</td>
</tr>
<tr>
<td>Jin et al(^{[8]})</td>
<td>37</td>
<td>45</td>
<td>16/19</td>
<td>Incidental finding on imaging studies (35); Fever and leukocytosis (1); Abdominal pain (1)</td>
<td>NA</td>
</tr>
<tr>
<td>Chikhladze et al(^{[9]})</td>
<td>2</td>
<td>45</td>
<td>1/1</td>
<td>Lasting feeling of abdominal fullness (1); Weight loss and recurring vomiting (1)</td>
<td>No</td>
</tr>
</tbody>
</table>

All cases treated by splenectomy. NA: Information not available.

**Table 2 Radiological characteristics of sclerosing angiomatoid nodular transformation reported in the literature**

<table>
<thead>
<tr>
<th>Previous reports</th>
<th>Radiological characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Li et al(^{[10]})</td>
<td>Low density with small calcification on plain CT scan and progressive enhancement of the lesion after enhancement</td>
</tr>
<tr>
<td>Zeeb et al(^{[11]})</td>
<td>Edge enhancement in arterial and portal phases. A stellate low-density region can be seen in the center of the delayed phase of the lesion</td>
</tr>
<tr>
<td>Thacker et al(^{[12]})</td>
<td>Persistent stellate low-density areas can be seen in the center of the lesion</td>
</tr>
<tr>
<td>Bamboat et al(^{[13]})</td>
<td>MRI T2-WI showed that the center of the lesion was stellate and low-density, and it appeared as a spoke-wheel configuration</td>
</tr>
<tr>
<td>Karaosmanoglu et al(^{[14]})</td>
<td>MRI and CT enhancement patterns of marginal enhancement and progressive spoke-wheel enhancement towards the center of the lesion</td>
</tr>
<tr>
<td>Nomura et al(^{[15]})</td>
<td>CT: Lesion is well circumscribed and of lower attenuation compared to the background spleen, and the mass becomes isodense in the delayed phase. MRI: On fat-saturated precontrast T1-weighted images SANT presented as a central hyperintense area consistent with hemorrhage, and on T2-weighted images, the lesion appeared as a spoke wheel pattern.</td>
</tr>
</tbody>
</table>

SANT: Sclerosing angiomatoid nodular transformation; CT: Computed tomography; MRI: Magnetic resonance imaging.
Figure 1 Computed tomography of the abdomen showing the hypodense splenic lesion on non-contrast and contrast-enhanced images. A: Non-contrast phase of computed tomography showed a hypodense solid lesion, 5.9 cm × 5.1 cm, located at the upper pole of the spleen; B: Contrast-enhanced image showed a mild progressive enhancement of the lesion.

Figure 2 Cut section of the spleen showing well encapsulated splenic lesion, off-white and dull-red in color, and firm in consistency.

Figure 3 Microscopic appearance of the splenic lesion showing multiple rounded hemangiomatous nodules surrounded by fibrosclerotic stroma (hematoxylin and eosin, 100 ×).

CONCLUSION

SANT is a rare benign disease of the spleen that mimics malignant tumors on radiological imaging. Clinical differentiation between SANT and other splenic diseases is difficult. Splenectomy is both diagnostic and therapeutic in symptomatic cases. A definitive diagnosis can be made only with histopathological and immunohistochemical examination of the resected spleen.
Figure 4 Immunohistochemical analysis showed positive staining of the splenic tumor tissues for the following stains. A: CD31, B: CD34, C: CD68, D: Smooth-muscle actin.

REFERENCES


transformation of spleen: a clinicopathologic study of 10 cases with review of literature. Zhonghua Bing Li Xue Za Zhi 2010; 39: 84-87 [PMID: 20388372]


