MINIREVIEWS

1 Omicron variant (B.1.1.529) of SARS-CoV-2: Mutation, infectivity, transmission, and vaccine resistance
   *Ren SY, Wang WB, Gao RD, Zhou AM*

12 Hepatitis B virus reactivation in rheumatoid arthritis
   *Wu YL, Ke J, Zhang BY, Zhao D*

23 Paradoxical role of interleukin-33/suppressor of tumorigenicity 2 in colorectal carcinogenesis: Progress and therapeutic potential
   *Huang F, Chen WY, Ma J, He XL, Wang JW*

ORIGINAL ARTICLE

Case Control Study

35 Changes in rheumatoid arthritis under ultrasound before and after sinomenine injection
   *Huang YM, Zhuang Y, Tan ZM*

43 Benefits of multidisciplinary collaborative care team-based nursing services in treating pressure injury wounds in cerebral infarction patients
   *Gu YH, Wang X, Sun SS*

Retrospective Study

51 Outcomes and complications of open, laparoscopic, and hybrid giant ventral hernia repair
   *Yang S, Wang MG, Nie YS, Zhao XF, Liu J*

62 Surgical resection of intradural extramedullary tumors in the atlantoaxial spine *via* a posterior approach
   *Meng DH, Wang JQ, Yang KX, Chen WY, Pan C, Jiang H*

71 Vancomycin lavage for the incidence of acute surgical site infection following primary total hip arthroplasty and total knee arthroplasty
   *Duan MY, Zhang HZ*

79 Distribution of transient receptor potential vanilloid-1 channels in gastrointestinal tract of patients with morbid obesity
   *Atas U, Erin N, Tazegul G, Elpek GO, Yildirim B*

91 Value of neutrophil-lymphocyte ratio in evaluating response to percutaneous catheter drainage in patients with acute pancreatitis
Influence of overweight and obesity on the mortality of hospitalized patients with community-acquired pneumonia
Wang N, Liu BW, Ma CM, Yan Y, Su QW, Yin FZ

Minimally invasive open reduction of greater tuberosity fractures by a modified suture bridge procedure
Kong LP, Yang JJ, Wang F, Liu FX, Yang YL

Increased levels of lactate dehydrogenase and hypertension are associated with severe illness of COVID-19

Age, alcohol, sex, and metabolic factors as risk factors for colonic diverticulosis
Yan Y, Wu JS, Pan S

Evaluation of right-to-left shunt on contrast-enhanced transcranial Doppler in patent foramen ovale-related cryptogenic stroke: Research based on imaging
Xiao L, Yan YH, Ding YF, Liu M, Kong LJ, Hu CH, Hui PJ

Characterization of focal hypermetabolic thyroid incidentaloma: An analysis with F-18 fluorodeoxyglucose positron emission tomography/computed tomography parameters
Lee H, Chung YS, Lee JH, Lee KY, Hwang KH

Clinical Trials Study
Low-dose intralesional injection of 5-fluorouracil and triamcinolone reduces tissue resident memory T cells in chronic eczema

Observational Study
Alterations in blink and masseter reflex latencies in older adults with neurocognitive disorder and/or diabetes mellitus

Predicting adolescent perfectionism: The role of socio-demographic traits, personal relationships, and media
Livazović G, Kuzmanović K

Novel m.4268T>C mutation in the mitochondrial tRNAlle gene is associated with hearing loss in two Chinese families
Zhao LJ, Zhang ZL, Fu Y

Superior mesenteric venous thrombosis: Endovascular management and outcomes
Alnahhal K, Toskich BB, Nassbaum S, Li Z, Erben Y, Hakaim AG, Farres H

Randomized Controlled Trial
Zinc carnosine-based modified bismuth quadruple therapy vs standard triple therapy for Helicobacter pylori eradication: A randomized controlled study
Ibrahim N, El Said H, Choukair A
CASE REPORT

236 Acquired coagulation dysfunction resulting from vitamin K-dependent coagulation factor deficiency associated with rheumatoid arthritis: A case report

Huang YJ, Han L, Li J, Chen C

242 Intraoperative thromboelastography-guided transfusion in a patient with factor XI deficiency: A case report

Guo WJ, Chen WY, Yu XR, Shen L, Huang YG

249 Positron emission tomography and magnetic resonance imaging combined with computed tomography in tumor volume delineation: A case report

Zhou QP, Zhao YH, Gao L

254 Successful response to camrelizumab in metastatic bladder cancer: A case report

Xie C, Yuan X, Chen SH, Liu ZY, Lu DL, Xu F, Chen ZQ, Zhong XM

260 HER2 changes to positive after neoadjuvant chemotherapy in breast cancer: A case report and literature review

Wang L, Jiang Q, He MY, Shen P

268 Hyper-accuracy three-dimensional reconstruction as a tool for better planning of retroperitoneal liposarcoma resection: A case report

Ye MS, Wu HK, Qin XZ, Luo F, Li Z

275 Recurrent postmenopausal bleeding - just endometrial disease or ovarian sex cord-stromal tumor? A case report

Wang J, Yang Q, Zhang NN, Wang DD

283 Complex proximal femoral fracture in a young patient followed up for 3 years: A case report

Li ZY, Cheng WD, Qi L, Yu SS, Jing JH

289 Bilateral Hypertrophic Olivary Degeneration after Pontine Hemorrhage: A Case Report

Zheng B, Wang J, Huang XQ, Chen Z, Gu GF, Luo XJ

296 Clinical characteristics and outcomes of primary intracranial alveolar soft-part sarcoma: A case report

Chen JY, Cen B, Hu F, Qiu Y, Xiao GM, Zhou JG, Zhang FC

304 Removal of laparoscopic cerclage stitches via laparotomy and rivanol-induced labour: A case report and literature review

Na XN, Cai BS

309 Cerebral venous sinus thrombosis in pregnancy: A case report

Zhou B, Huang SS, Huang C, Liu SY

316 Eustachian tube teratoma: A case report

Li JY, Sun LX, Hu N, Song GS, Dou WQ, Gong RZ, Li CT
**Contents**

**World Journal of Clinical Cases**

**Weekly Volume 10 Number 1 January 7, 2022**

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>331</td>
<td>Lunate dislocation with avulsed triquetral fracture: A case report</td>
<td>Li LY, Lin CJ, Ko CY</td>
</tr>
<tr>
<td>361</td>
<td>Diagnostic and surgical challenges of progressive neck and upper back painless masses in Madelung’s disease: A case report and review of literature</td>
<td>Yan YJ, Zhou SQ, Li CQ, Ruan Y</td>
</tr>
<tr>
<td>371</td>
<td>Suspected cerebrovascular air embolism during endoscopic esophageal varices ligation under sedation with fatal outcome: A case report</td>
<td>Zhang CMJ, Wang X</td>
</tr>
<tr>
<td>381</td>
<td>An atypical primary malignant melanoma arising from the cervical nerve root: A case report and review of literature</td>
<td>Shi YF, Chen YQ, Chen HF, Hu X</td>
</tr>
<tr>
<td>388</td>
<td>Epidural blood patch for spontaneous intracranial hypotension with subdural hematoma: A case report and review of literature</td>
<td>Choi SH, Lee YY, Kim WJ</td>
</tr>
</tbody>
</table>
ABOUT COVER
Editorial Board Member of World Journal of Clinical Cases, Ravi Kant, MD, Associate Professor, Division of Endocrinology, Diabetes and Metabolism, Medical University of South Carolina/Anmed Campus, Anderson, SC 29621, United States. rkant82@hotmail.com

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, Scopus, PubMed, and PubMed Central. The 2021 Edition of Journal Citation Reports® cites the 2020 impact factor (IF) for WJCC as 1.337; IF without journal self cites: 1.301; 5-year IF: 1.742; Journal Citation Indicator: 0.33; Ranking: 119 among 169 journals in medicine, general and internal; and Quartile category: Q3. The WJCC’s CiteScore for 2020 is 0.8 and Scopus CiteScore rank 2020: General Medicine is 493/793.

RESPONSIBLE EDITORS FOR THIS ISSUE
Production Editor: Lin-YuTong Wang; Production Department Director: Xiang Li; 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
Weekly

EDITORS-IN-CHIEF
Bao-Gan Peng

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

PUBLICATION DATE
January 7, 2022

COPYRIGHT
© 2022 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.f6publishing.com
Hyper-accuracy three-dimensional reconstruction as a tool for better planning of retroperitoneal liposarcoma resection: A case report

Mu-Shi Ye, Hao-Kai Wu, Xing-Zhang Qin, Fan Luo, Zhuo Li

Abstract

BACKGROUND
Well-differentiated liposarcoma is the second most common pathologic type of retroperitoneal sarcoma. It is characterized by a huge mass, but multiple organ invasions are common. Surgery is the only treatment option for potential cure. Hyper-accuracy three-dimensional (3D) reconstruction is widely used in robotic partly nephrectomy owing to its ability to visualize overlapping anatomy.

CASE SUMMARY
A 54-year-old man was admitted for progressive abdominal distension over the preceding 2 mo. Computed tomography revealed a 32 cm × 21 cm × 12 cm lipomatous mass. Hyper-accuracy 3D reconstruction was performed because of the complex relationship between the mass and nearby tissue. The patient underwent surgical resection, and the tumor did not recur for over 16 mo.

CONCLUSION
Hyper-accuracy 3D reconstruction is useful for operative planning owing to its intuitiveness and precise determination of anatomical structures in both tumors and nearby tissues.

Key Words: Well-differentiated liposarcoma; Hyper-accuracy three-dimensional reconstruction; Surgical resection; Case report

©The Author(s) 2022. Published by Baishideng Publishing Group Inc. All rights reserved.
widely used in robotic partial nephrectomy for its ability to visualize overlapping anatomy. Here, we report a case of giant WDLPS in the retroperitoneum treated by surgical resection using hyper-accuracy 3D reconstruction. To the best of our knowledge, our case was the first to use this technique for giant retroperitoneal WDLPS. We expect our case to highlight the value of hyper-accuracy 3D reconstruction for complicated open surgery and provide a basis for retroperitoneal liposarcoma treatment.

Citation: Ye MS, Wu HK, Qin XZ, Luo F, Li Z. Hyper-accuracy three-dimensional reconstruction as a tool for better planning of retroperitoneal liposarcoma resection: A case report. World J Clin Cases 2022; 10(1): 268-274
URL: https://www.wjgnet.com/2307-8960/full/v10/i1/268.htm
DOI: https://dx.doi.org/10.12998/wjcc.v10.i1.268

INTRODUCTION
Retroperitoneal pathologic processes might be asymptomatic and often present as large masses at initial imaging evaluation[1]. Retroperitoneal sarcomas accounts for 9% to 15% of all adult soft-tissue sarcomas[2], including liposarcoma, leiomyosarcoma, and malignant fibrous histiocytoma/undifferentiated pleomorphic sarcoma[3]. Retroperitoneal liposarcoma is the second most common, accounting for 45%[4]. Hyper-accuracy three-dimensional (3D) reconstruction is based on contrast-enhanced computed tomography (CT), including arterial and delayed phases. It provides surgeons with three key anatomic aspects, including 3D surface-rendered and semitransparent organs and tumors, and the 3D course of extra- and intrarenal arteries [5]. It is now widely used in robotic partly nephrectomy owing to its ability to visualize overlapping anatomy[6,7].

CASE PRESENTATION

Chief complaints
A 54-year-old man was admitted to our department for progressive abdominal distension over the preceding 2 mo.

History of present illness
The patient started to feel abdominal distension and noted his abdomen’s volume increasing 2 mo before presentation. He denied diarrhea, vomiting, abdominal pain, or constipation. He also denied any changes in bowel habits. He lost approximately 5 kg in the previous 2 mo.

History of past illness
The patient was previously healthy.

Personal and family history
The patient had smoked for approximately 30 years, and his family history was unremarkable.

Physical examination
The patient was afebrile with stable vital signs. He was 163 cm in height and 56 kg in weight. Abdominal physical examination revealed a fixed abdominal mass with ill-defined margins occupying the entire abdomen. No other abnormal signs were found.

Laboratory examinations
Laboratory tests showed a normal white count and hemoglobin level of 103.0 g/L (reference range, 120-160 g/L for man). His 8 AM cortisol level was 2.06 μg/dL (reference range, 8.7-22.4 μg /dL) and adrenocorticotrophic hormone level was 6.14 pg/mL (reference range, 0-46 pg/mL). The albumin level decreased slightly (30.9 g/L;
Figure 1 Imaging findings before treatment. A and C: Computed tomography angiography showed a massive lipoma-like mass extending from the sub-hepatic space to the pelvic cavity, with multiple organs dislocated; B and D: Intravenous pyelography with radiocontrast agent confirmed the displacement of the right kidney to the left lower quadrant and its excretion function was good.

reference range, 35.0-54.0 g/L), with no other liver function and kidney function abnormalities.

Imaging examinations
Abdominal CT angiography revealed a 32 cm × 21 cm × 12 cm lipoma-like mass extending from the sub-hepatic space to the pelvic cavity. There were no enlarged lymph nodes. Radiocontrast agent confirmed the displacement of the right kidney to the left lower quadrant (Figure 1). Because of the complex relationship between the mass and nearby tissue, we performed a hyper-accuracy three-dimensional reconstruction (Figure 2). This study revealed that the mass received blood vessels from a branch of the right renal artery. The celiac trunk, the superior mesenteric, the inferior vena cava, and the pancreas were displaced and compressed.

Histological examination
Pathological examination revealed well-differentiated liposarcoma (WDLPS). Macroscopically, the mass appeared oval but was separated into irregular lobulations. Its size was 37 cm × 26 cm × 10 cm and it weighed approximately 11 kg. The surface of the mass was covered with a smooth and grayish capsule. The mass wrapped the adrenal gland. Microscopically, the tumor was composed of well-differentiated adipocytes and spindle-shaped cells. Areas of necrosis were rare. Nuclear degeneration was found in some areas (1/10 high-powered fields). Immunohistochemically, the tumor was partly positive for MDM2, S100, CK34, and CKD4, with a low grade of dedifferentiation (Ki-67: 20%) (Figure 3).

FINAL DIAGNOSIS
WDLPS.
Figure 2 Hyper-accuracy three-dimensional reconstruction. A: Three-dimensional surface-rendered organs and tumor; B: Semitransparentizing liver revealed the relationship between the tumor and liver; C and D: Semitransparentizing or hiding tumor revealed the detail variations regarding anatomical structures. More details: http://www.cas.hisense.com:10052/?id=VnVmmZSzhCbl8zODQ1&type=newCode.

Figure 3 Pathological examination results. A: Pathological examination revealed well-differentiated liposarcoma. Macroscopically, the mass appeared oval but was separated into irregular lobulations; B-E: The epithelial component showed a low grade of dedifferentiation. Immunohistochemically, the tumor was partly positive for MDM2, S100, CK34, and CKD4, with a low grade of dedifferentiation (Ki-67: 20%).

**TREATMENT**

Explorative laparotomy was performed. We chose a median abdominal incision from the xiphoid process to the pubic symphysis. No signs of infiltration or metastasis were found in the abdominal cavity. Because we ensured that the tumor was localized in the retroperitoneum, we opened the retroperitoneum in the paracolic recess. After liberating the ascending colon and partial transverse colon and fully exposing the tumor, we began to liberate the tumor from the right iliac vessel. Finally, we released the tumor from the right kidney, inferior vena cava, and abdominal aorta. The
operation took 6 h and the volume of blood loss was 100 mL approximately.

OUTCOME AND FOLLOW-UP

The hemoglobin level was 91.0 g/L (reference range, 120-160 g/L in men) on the 1st postoperative day. The postoperative course was uneventful, and the patient was discharged on the 6th postoperative day. At the final follow-up (about 16 mo after surgery), he was in good general condition, and a CT scan revealed no signs of tumor recurrence (Figure 4).

DISCUSSION

WDLPS is the second most common liposarcoma arising in the retroperitoneum[8]. WDLPS in the retroperitoneum carries higher risks of relapse[9-11]. Surgical resection is the standard of cure[11,12]. Macroscopic complete resection is essential to curative treatment[13]. Compared to complete resection, aggressive surgical policies reduce the local recurrence rate of primary retroperitoneal sarcomas, but it has not improved overall survival[14,15]. As for its asymptomatic nature in the early stage, WDLPS in the retroperitoneum is often diagnosed with a massive size[16]. Resection in such situations may involve multiple organs and vasculature, making it difficult to achieve clear resection margins[17]. It also carries a high risk of massive hemorrhage and hemodynamic instability. Contrast-enhanced CT is the most useful and widely available primary imaging technique[18]. The appearance of WDLPS on CT is a bland fat density mass[18]. CT provides size, consistency, and relations between the tumor and the adjacent tissue[19]. Hyper-accuracy three-dimensional reconstruction is a tool that provides more full-scale information of organs than does traditional CT. Three-dimensional reconstruction is also more helpful for diagnosis and operative planning[20]. It provides the surgeon with more detail regarding anatomical structures and more macroscopic images to select better surgery approaches and determine resection ranges. In our case, hyper-accuracy three-dimensional reconstruction of the abdomen revealed the intimate relationships between the adjacent organs and crucial vascular structures. This modality revealed that the right renal artery’s feeding artery had three branches, from the upper to the lower pole of the tumor. We also noted that the inferior vena cava and the right kidney adhered extensively with the tumor but had defined borders. The right kidney was displaced to the left lower quadrant and was partly involved by the tumor. The anatomical position of the left kidney was not affected. Because its density was similar to that of the tumor, we could not observe the right adrenal gland. We speculated that the tumor had already invaded the adrenal gland. According to the three-dimensional images, we identified and ligated the feeding artery precisely; this allowed us to minimize bleeding during the separation of the tumor and shortened the operative time substantially. Just as we observed preoperatively, the adventitia of the inferior vena cava and capsule of the right kidney were completely enclosed. Finally, we released the tumor from the adhesions to organs including the inferior vena cava, abdominal aorta, pancreas, and right kidney, with subsequent removal en bloc with the adrenal gland, which we confirmed on postoperative pathology.

CONCLUSION

Surgical resection of WDLPS is critical because of the high risk of recurrence. Retroperitoneal masses can complicate anatomical relationships, especially with blood vessels. Hyper-accuracy three-dimensional reconstruction of the abdomen or tumor is useful for operative planning owing to its intuitiveness and precise information regarding anatomical structures in both the tumor and nearby tissues. We recommend hyper-accuracy three-dimensional reconstruction when the tumor is large, and its anatomical relationships with nearby tissue are complex.
Figure 4 Contrast enhanced computed tomography images. A: Contrast enhanced computed tomography (CT) 3 mo after surgery; B: Contrast enhanced CT 16 mo after surgery.

REFERENCES


Mu-Shi Ye et al. Hyper-accuracy 3D reconstruction in surgical resection


