Contents

Semimonthly Volume 8 Number 19 October 6, 2020

OPINION REVIEW
4280 Role of monoclonal antibody drugs in the treatment of COVID-19
Ucciferri C, Vecchiet J, Falasca K

MINIREVIEWS
4286 Review of simulation model for education of point-of-care ultrasound using easy-to-make tools
Shin KC, Ha YR, Lee SJ, Ahn JH
4303 Liver injury in COVID-19: A minireview
Zhao JN, Fan Y, Wu SD

ORIGINAL ARTICLE
Case Control Study
4311 Transanal minimally invasive surgery vs endoscopic mucosal resection for rectal benign tumors and rectal carcinoids: A retrospective analysis
Shen JM, Zhao JY, Ye T, Gong LF, Wang HP, Chen WJ, Cai YK

Impact of mTOR gene polymorphisms and gene-tea interaction on susceptibility to tuberculosis

Retrospective Cohort Study
4331 Establishment and validation of a nomogram to predict the risk of ovarian metastasis in gastric cancer: Based on a large cohort
Li SQ, Zhang KC, Li JY, Liang WQ, Gao YH, Qiao Z, Xi HQ, Chen L

Retrospective Study
4342 Predictive factors for early clinical response in community-onset Escherichia coli urinary tract infection and effects of initial antibiotic treatment on early clinical response
Kim YJ, Lee JM, Lee JH
4349 Managing acute appendicitis during the COVID-19 pandemic in Jiaxing, China
Zhou Y, Cen LS
4360 Clinical application of combined detection of SARS-CoV-2-specific antibody and nucleic acid
Meng QB, Peng JJ, Wei X, Yang JY, Li PC, Qu ZW, Xiong YF, Wu GJ, Hu ZM, Yu JC, Su W

4370 Prolonged prothrombin time at admission predicts poor clinical outcome in COVID-19 patients
## Contents

**World Journal of Clinical Cases**

Semimonthly Volume 8 Number 19 October 6, 2020

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>4380</td>
<td>Percutaneous radiofrequency ablation is superior to hepatic resection in patients with small hepatocellular carcinoma</td>
<td>Zhang YH, Su B, Sun P, Li RM, Peng XC, Cai J</td>
</tr>
<tr>
<td>4388</td>
<td>Clinical study on the surgical treatment of atypical Lisfranc joint complex injury</td>
<td>Li X, Jia LS, Li A, Xie X, Cui J, Li GL</td>
</tr>
<tr>
<td>4410</td>
<td>Optimal hang time of enteral formula at standard room temperature and high temperature</td>
<td>Lakananurak N, Nalinthassanai N, Suansawang W, Panarat P</td>
</tr>
<tr>
<td>4416</td>
<td>Meta-analysis reveals an association between acute pancreatitis and the risk of pancreatic cancer</td>
<td>Liu J, Wang Y, Yu Y</td>
</tr>
<tr>
<td>4431</td>
<td>Global analysis of daily new COVID-19 cases reveals many static-phase countries including the United States potentially with unstoppable epidemic</td>
<td>Long C, Fu XM, Fu ZF</td>
</tr>
<tr>
<td>4443</td>
<td>Left atrial appendage aneurysm: A case report</td>
<td>Belov DV, Moskalev VI, Garbuzenko DV, Arefyev NO</td>
</tr>
<tr>
<td>4466</td>
<td>Primary rhabdomyosarcoma: An extremely rare and aggressive variant of male breast cancer</td>
<td>Satală CB, Jung I, Bara TJ, Simu P, Simu I, Vlad M, Szodorai R, Gurzu S</td>
</tr>
<tr>
<td>4475</td>
<td>Bladder stones in a closed diverticulum caused by <em>Schistosoma mansoni</em>: A case report</td>
<td>Alkhamees MA</td>
</tr>
<tr>
<td>4481</td>
<td>Cutaneous ciliated cyst on the anterior neck in young women: A case report</td>
<td>Kim YH, Lee J</td>
</tr>
<tr>
<td>4488</td>
<td>Extremely rare case of successful treatment of metastatic ovarian undifferentiated carcinoma with high-dose combination cytotoxic chemotherapy: A case report</td>
<td>Kim HB, Lee HJ, Hong R, Park SG</td>
</tr>
</tbody>
</table>
### Contents

**Semimonthly Volume 8 Number 19 October 6, 2020**

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>4494</td>
<td>Acute amnesia during pregnancy due to bilateral fornix infarction: A case report</td>
<td>Cho MJ, Shin DI, Han MK, Yum KS</td>
</tr>
<tr>
<td>4512</td>
<td>Spontaneous resolution of idiopathic intestinal obstruction after pneumonia: A case report</td>
<td>Zhang BQ, Dai XY, Ye QY, Chang L, Wang ZW, Li XQ, Li YN</td>
</tr>
<tr>
<td>4521</td>
<td>Successful pregnancy after protective hemodialysis for chronic kidney disease: A case report</td>
<td>Wang ML, He YD, Yang HX, Chen Q</td>
</tr>
<tr>
<td>4527</td>
<td>Rapid remission of refractory synovitis, acne, pustulosis, hyperostosis, and osteitis syndrome in response to the Janus kinase inhibitor tofacitinib: A case report</td>
<td>Li B, Li GW, Xue L, Chen YY</td>
</tr>
<tr>
<td>4544</td>
<td>Severe fundus lesions induced by ocular jellyfish stings: A case report</td>
<td>Zheng XY, Cheng DJ, Lian LH, Zhang RT, Yu XY</td>
</tr>
<tr>
<td>4550</td>
<td>Application of ozonated water for treatment of gastro-thoracic fistula after comprehensive esophageal squamous cell carcinoma therapy: A case report</td>
<td>Wu DD, Hao KN, Chen XJ, Li XM, He XF</td>
</tr>
<tr>
<td>4558</td>
<td>Germinomas of the basal ganglia and thalamus: Four case reports</td>
<td>Huang ZC, Dong Q, Song EP, Chen ZJ, Zhang JH, Hou B, Lu ZQ, Qin F</td>
</tr>
<tr>
<td>4579</td>
<td>Therapy-related acute promyelocytic leukemia with FMS-like tyrosine kinase 3-internal tandem duplication mutation in solitary bone plasmacytoma: A case report</td>
<td>Hong LL, Sheng XF, Zhuang HF</td>
</tr>
<tr>
<td>4588</td>
<td>Metastasis of esophageal squamous cell carcinoma to the thyroid gland with widespread nodal involvement: A case report</td>
<td>Zhang X, Gu X, Li JG, Hu XJ</td>
</tr>
</tbody>
</table>
### Contents

#### Semimonthly Volume 8 Number 19 October 6, 2020

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>4595</td>
<td>Severe hyperlipemia-induced pseudoerythrocytosis - Implication for misdiagnosis and blood transfusion: A case report and literature review</td>
<td>Zhao XC, Ju B, Wei N, Ding J, Meng FJ, Zhao HG</td>
</tr>
<tr>
<td>4603</td>
<td>Novel brachytherapy drainage tube loaded with double 125I strands for hilar cholangiocarcinoma: A case report</td>
<td>Lei QY, Jiao DC, Han XW</td>
</tr>
<tr>
<td>4615</td>
<td>Primary hepatic myelolipoma: A case report and review of the literature</td>
<td>Li KY, Wei AL, Li A</td>
</tr>
<tr>
<td>4624</td>
<td>Endoscopic palliative resection of a giant 26-cm esophageal tumor: A case report</td>
<td>Li Y, Guo LJ, Ma YC, Ye LS, Hu B</td>
</tr>
<tr>
<td>4633</td>
<td>Solitary hepatic lymphangioma mimicking liver malignancy: A case report and literature review</td>
<td>Long X, Zhang L, Cheng Q, Chen Q, Chen XP</td>
</tr>
<tr>
<td>4644</td>
<td>Intraosseous venous malformation of the maxilla after enucleation of a hemophilic pseudotumor: A case report</td>
<td>Cai X, Yu JJ, Tian H, Shan ZF, Liu XY, Jia J</td>
</tr>
<tr>
<td>4660</td>
<td>Bochdalek hernia masquerading as severe acute pancreatitis during the third trimester of pregnancy: A case report</td>
<td>Zou YZ, Yang JP, Zhou XJ, Li K, Li XM, Song CH</td>
</tr>
<tr>
<td>4667</td>
<td>Localized primary gastric amyloidosis: Three case reports</td>
<td>Liu XM, Di LJ, Zhu JX, Wu XL, Li HP, Wu HC, Tuo BG</td>
</tr>
<tr>
<td>4676</td>
<td>Displacement of peritoneal end of a shunt tube to pleural cavity: A case report</td>
<td>Liu J, Guo M</td>
</tr>
<tr>
<td>4681</td>
<td>Parathyroid adenoma combined with a rib tumor as the primary disease: A case report</td>
<td>Han L, Zhu XF</td>
</tr>
</tbody>
</table>
ABOUT COVER

Peer-reviewer of World Journal of Clinical Cases, Professor Adrián Ángel Inchauspe, obtained his MD in 1986 from La Plata National University (Argentina), where he remained as Professor of Surgery. Study abroad, at the Aachen and Tubingen Universities in Germany in 1991, led to his certification in laparoscopic surgery, and at the Louis Pasteur University in Strasbourg France, led to his being awarded the Argentine National Invention Award in 1998 for his graduate work in tele-surgery. He currently serves as teacher in the Argentine Acupuncture Society, as Invited Foreigner Professor at the China National Academy of Sciences and Hainan Medical University, and as editorial member and reviewer for many internationally renowned journals. (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-Xiaojuan 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

October 6, 2020

COPYRIGHT

© 2020 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

© 2020 Baishideng Publishing Group Inc. All rights reserved. 7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
E-mail: bpgoffice@wjgnet.com  https://www.wjgnet.com
Parathyroid adenoma combined with a rib tumor as the primary disease: A case report

Lu Han, Xiao-Feng Zhu

ORCID numbers: Lu Han 0000-0002-0773-3886; Xiao-Feng Zhu 0000-0003-0168-4291.

Author contributions: Zhu XF performed the operation; Han L collected the case data and drafted the article; Zhu XF made critical revisions to the manuscript; all authors issued final approval for the version to be submitted.

Informed consent statement: Informed consent was obtained from the patient.

Conflict-of-interest statement: The authors declare that they have no conflicts of interest to disclose.

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 accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the

Abstract

BACKGROUND
Parathyroid adenoma is a benign parathyroid tumor, with serum parathyroid hormone and calcium ion concentrations as the typical basis for diagnosis. Its clinical manifestations are complex and changeable; thus it is easily missed or misdiagnosed. Approximately 85% of patients with parathyroid adenoma develop primary hyperparathyroidism, and abnormalities in bones, kidneys and other organs can occur. Brown tumors are rare.

CASE SUMMARY
We report a rare case of fibrocystic osteitis associated with a parathyroid adenoma, which was discovered by chance due to a rib tumor. Abnormally elevated serum parathyroid hormone and calcium ion were found before surgery. We suspected primary hyperparathyroidism, and color Doppler ultrasound suggested the presence of a thyroid mass. With informed consent by the patient and her family, we first removed the rib tumor, and one week later, resection of the parathyroid adenoma and thyroid mass was performed on both sides, and the patient recovered well after surgery.

CONCLUSION
In the case of parathyroid adenoma combined with brown tumor, the bone cyst will gradually decrease in size with time without treatment. If not, surgery should be performed as soon as possible.

Key Words: Parathyroid adenoma; Rib; Brown tumor; Primary hyperparathyroidism; Treatment; Operation; Case report
Core Tip: We report a rare and interesting case of fibrocystic osteitis associated with a parathyroid adenoma, which was discovered by chance due to a rib tumor. The patient only had respiratory symptoms. Computed tomography examination revealed a huge mass on the right rib and a suspected giant cell tumor of the bone. Interestingly, abnormal serum parathyroid hormone and calcium ion were found preoperatively and further examination revealed primary hyperparathyroidism. The pathology of the rib tumor showed a bone cyst, suggesting that this rib tumor was likely related to parathyroid adenoma.

INTRODUCTION
Parathyroid adenoma is a benign parathyroid lesion, which is sporadic in the population. The incidence rate of parathyroid adenoma in the Asian population is lower than that in the Caucasian population, especially in middle-aged women. Parathyroid adenoma lacks typical clinical features in the early stage, and is easily neglected. It is worth noting that abnormal serological indicators often have important roles in the diagnosis of parathyroid adenoma, including significantly increased serum parathyroid hormone (PTH) and calcium, and enlarged parathyroid gland on auxiliary ultrasound, which often indicates abnormal parathyroid function.

Primary hyperparathyroidism (PHPT), often secondary to parathyroid adenoma, is often accompanied by structural and functional abnormalities of the corresponding target organs. At present, only a few cases of PHPT with pathological changes of bone tissue have been reported, and most of these changes are osteoporosis or fractures, and costal tumors are very rare.

We report a unique case of parathyroid adenoma which was found by chance after the diagnosis of a rib tumor.

CASE PRESENTATION
Chief complaints
The patient had a cough and sputum production for 20 d. Computed tomography (CT) identified a right rib tumor.

History of present illness
On August 17, 2019, a 53-year-old woman attended the Respiratory Department of our hospital for treatment due to a cough and sputum production for 20 d, occasionally yellow sticky sputum. Self-static anti-inflammatory, expectorant and other symptomatic drugs were administered (specific drug and dosage are unknown). Two days previously, CT examination of the chest in our hospital suggested a mass of the right rib, bone destruction and expansive growth. The right lower lobe of the lung showed a scattered area in the form of a cord and an increase in light lamellar density. The patient was admitted for thoracic surgery. Since the onset, the patient has had a normal diet and no significant weight loss. On preoperative examination, it was found that the patient's serum PTH was 527.60 pg/mL (reference range: 15-65 pg/mL) and serum calcium ion was 3.67 mmol/L (reference range: 2.2-2.7 mmol/L). Abnormal parathyroid gland function was suspected. We then invited the general surgeon to consult. HPHT was suspected, and after consultation with the family, it was decided to transfer the patient to general surgery for further treatment after thoracic surgery.

After undergoing rib tumor resection, anti-inflammatory, expectorant and other drugs were administered. The patient was in a stable condition and was transferred to general surgery for further treatment.
Physical examination
The superficial lymph nodes in the entire body were not enlarged, the neck was soft, the jugular veins were not filled or dilated, the trachea was centered, and there was no obvious enlargement of bilateral thyroid. In the left lying position, with the muscles relaxed, the inner edge of the shoulder blade on the right thorax could touch the local ridge of the sixth rib. The thoracic cage was normal with no intercostal space widening. The lungs were percussively unvoiced, breathing unvoiced, no dry and wet rales, and no wheeze.

Laboratory examinations
PTH was 527.60 pg/mL (reference range: 15-65 pg/mL), serum calcium ion was 3.67 mmol/L (reference range: 2.2-2.7 mmol/L), alkaline phosphatase was 455 U/L (reference range: 50-135 U/L), uric acid was 440.3 μmol/L (reference range: 155-357 μmol/L), serum phosphorus was 0.70 mmol/L (reference range: 0.85-1.51 mmol/L), triglyceride was 4.32 mmol/L (reference range: Cholesterol: 5.75 mmol/L (reference range: 2.3-5.18 mmol/L), and no obvious abnormalities in other indicators were found.

Imaging examinations
CT scan of the chest revealed right rib bone destruction with expansive growth, visible separation, and tracheobronchial patency. The shadow in the lung hilum was not large. In the right lower lung, there were strip-like, increased flaky density shadows, fuzzy edges, and no obvious thickening of bilateral pleura (Figure 1). Thyroid color Doppler ultrasound showed a solid mixed tumor of the right thyroid leaf cyst (TI-RADS: Class 3) (Figure 2).

FINAL DIAGNOSIS
The diagnosis of parathyroid adenoma with brown tumor was considered, but the nature of the tumor was unclear.

TREATMENT
The patient was admitted for thoracic surgery on August 19, 2019. The tumor was removed on August 22. A right posterolateral chest wall incision was selected, and it was found that the irregular mass in the posterior costal part of the right 6th rib was approximately 10 cm long, with an uneven internal density, invasion of the parietal pleura, abundant nourishing blood vessels and bleeding. Complete resection of the damaged rib tissue was performed, followed by postoperative chest CT (Figure 3), and pathology showed an aneurysmal bone cyst (Figure 4). The patient underwent parathyroidectomy in the general surgery department on August 30. The right thyroid mass was removed during the operation. Intraoperative pathology indicated a right thyroid follicular tumor (1.5 cm in diameter), with abundant cells and cystic changes, and infiltration of the capsule is not excluded in the cell. Another tumor 1.5 cm x 1.0 cm in size was removed during surgery. The pathological results showed that the tumor was a parathyroid adenoma (Figure 5).

OUTCOME AND FOLLOW-UP
On September 2, 2019, serum PTH (28.71 pg/mL) and calcium (2.43 mmol/L) were in the normal range. The patient was discharged on September 6, 2019, with regular follow-up.

DISCUSSION
Parathyroid adenoma is a common benign parathyroid tumor. Eighty-five percent of patients can have PHPT[1-3]. The symptoms involve multiple systems, including hypercalcemia and urinary tract abnormalities. Stones caused by calcium salt deposition can also manifest as osteoporosis, pathological fractures and other symptoms. Most patients have symptoms at the time of consultation. A few patients
lack typical clinical manifestations, and often have kidney, bone and other diseases\(^3\). According to the different manifestations of affected organs, PHPT can be divided into bone disease-based types, where patients may have bone pain, are prone to fracture, and fibrocystic osteitis is a typical skeletal lesion of PHPT combined with bone cysts, brown tumors, osteoporosis and fragile fractures, as shown by conventional bone radiography\(^4\). The primary target organ of PHPT is the kidney, which can develop into kidney stones\(^5\). It can also manifest as urinary calculi and osteolytic bone changes, as well as other systemic lesions\(^6,^7\).

In the present case, the patient presented with a rib tumor, and CT was suggestive of giant cell tumor of bone, and osteolytic changes on admission. Preoperative
examination revealed a significant increase in serum calcium and serum PTH. We considered this to be parathyroid gland dysfunction. With the consent of the patient and her family, we first performed rib tumor resection, and the pathology revealed a cyst. The patient was in good physical condition after surgery. Parathyroidectomy was subsequently performed in the general surgery department. Postoperative serum calcium and serum PTH levels decreased. We consider that the rib tumor may have been fibrocystic osteitis secondary to parathyroid adenoma.

Fibrocystic osteitis, also known as brown tumor, mostly manifests in the middle and late stages of hyperparathyroidism, and is a metabolic bone disease caused by calcium and phosphorus abnormalities[8]. Fibrocystic osteitis occurs in the clavicle, long bones, and pelvis[9]. The imaging manifestations of osteolytic bone destruction include clear boundaries and it often causes bone expansion, and other subperiosteal bone resorption. It is not a real tumor, but abnormally increased PTH in the body stimulates osteoclast activity, which leads to osteolysis and destruction[10].

At present, there is no clear treatment plan for parathyroid adenoma complicated with fibrocystic osteitis, and there is no consistent guideline recommendation whether to treat fibrocystic osteitis surgically. Parathyroidectomy was performed in this patient with PHPT and fibrocystic osteitis. Postoperative blood calcium returned to normal levels and bone changes were reversed. In such patients, parathyroidectomy is the first treatment choice for fibrocystic osteitis. Postoperative PTH is reduced, bone destruction is controlled, fracture risk is reduced, and bone density gradually increased in the later stage, thereby completely inhibiting fibrocystic changes. During the development of osteitis, Vander Walde found that irrespective of age, and blood calcium levels, patients with surgically removed parathyroid glands have a lower risk
of fractures than those without surgery; thus, surgical treatment of fibrocystic osteitis can be eliminated[11]. Of course, different patients have different outcomes due to the severity of the disease, whether they have fractures, and their vitamin status. When pathological fractures occur, the reversion time of bone lesions is relatively long, which may be related to the slow recovery of cortical bone density. However, for obvious local bone and joint pain, pathological fracture or high fracture risk, and recurrence after reversal, orthopedic surgery can be performed to relieve the symptoms of local pain and fix the fracture, but only if the diagnosis is clear, in order to reduce secondary damage to patients caused by overtreatment.

Agarwal G followed the clinical recovery, bone turnover, bone mineral density, and biochemical indicators on bone radiology of 51 patients with PHPT and fibrocystic cysts[12]. Qualitative destruction recovered, and bone tumors persisted in a few patients, requiring further surgical intervention. Wang performed a large rib brown tumor resection in patients who had been treated with zoledronic acid for 17 mo with elevated serum calcium and PTH. One patient reported hip pain and abnormal pelvic X-rays after surgery. A parathyroid adenoma was subsequently found. Pain relief was achieved after adenoma resection. It took at least 2 years for fibrotic osteitis to recover[13]. Khalil reported a patient with brown tumor lesions in the right pelvis, and surgery was considered due to a persistent increase in focal pain. Pain was relieved postoperatively. When there is a high risk of pathological fractures or patients have persistent focal bone pain, surgery should be considered at the appropriate site[14]. Satpathy reported a case of parathyroid adenoma with mandibular fibrocystic osteitis. After parathyroidectomy, the patient’s bone lesions were significantly reduced during the 6 mo of regular follow-up, while complete bone reconstruction took longer. The author believed that the removal of parathyroid adenomas and achieving normal blood calcium levels are options for treating parathyroid glands with fibrocystic osteitis. If primary bone disease does not shrink significantly after 6 mo of treatment, surgical curettage should be considered[15].

As the incidence of fibrocystic osteitis is extremely low, and the primary manifestations in parathyroid glands are not fully understood, doctors are often confused by the association with bones. Surgical removal of bone tumors does not include a comprehensive preoperative examination. Although the pain caused by the patient's skeletal disease can be relieved temporarily, after a period of time, the bone disease will recur and brown tumors in other areas can occur. Therefore, an appropriate preoperative examination is necessary to diagnose parathyroid adenoma with fibrocystic osteitis and plan reasonable treatment. Giant cell tumors of bone and brown tumors have osteolytic lesions of cortical bone, which often confuse doctors and can be misdiagnosed. Therefore, it is necessary to combine the patient's other clinical manifestations, medical history, and reasonable examination methods for the diagnosis of brown tumors, such as preoperative color Doppler ultrasound. With regard to the treatment of parathyroid adenoma with fibrocystic osteitis, previous studies have reported that skeletal lesions will gradually be controlled and bone cysts will be reversed in the majority of patients. However, the reconstruction of intact bone takes a long time, and long-term skeletal lesions cannot be completely controlled, which may cause pathological fractures, and although there are certain risks, surgical intervention is still required. Some brown tumors can occur on the face. If they cannot be treated within a short time, they will also affect the patient's mental status. Therefore, surgical removal can be performed at the patient's request, and the disease should be detected early to establish a correct diagnosis. The patient's symptoms should be comprehensively evaluated, not only to avoid misdiagnosis, but also to reduce trauma.

CONCLUSION

Parathyroid adenoma with brown tumor is relatively rare, a comprehensive preoperative physical examination and evaluation of the patient's condition are conducive to a more accurate diagnosis and treatment. At present, in patients with a brown tumor, most are treated with parathyroid adenoma resection, and after a period of time, the brown tumor may gradually disappear. However, if the brown tumor does not improve and the patient’s physical condition is affected, surgical treatment with regular follow-up is necessary.
REFERENCES


