

# World Journal of *Clinical Cases*

*World J Clin Cases* 2019 November 6; 7(21): 3384-3682



**EDITORIAL**

- 3384** Current controversies in treating remnant gastric cancer: Are minimally invasive approaches feasible?  
*Ma FH, Liu H, Ma S, Li Y, Tian YT*

**ORIGINAL ARTICLE****Retrospective Study**

- 3394** Efficient management of secondary haemophagocytic lymphohistiocytosis with intravenous steroids and  $\gamma$ -immunoglobulin infusions  
*Georgiadou S, Gatselis NK, Stefos A, Zachou K, Makaritsis K, Rigopoulou EI, Dalekos GN*
- 3407** Impress of intergenerational emotional support on the depression in non-cohabiting parents  
*Jia YH, Ye ZH*
- 3419** Nomograms for pre- and postoperative prediction of long-term survival among proximal gastric cancer patients: A large-scale, single-center retrospective study  
*Chen QY, Hong ZL, Zhong Q, Liu ZY, Huang XB, Que SJ, Li P, Xie JW, Wang JB, Lin JX, Lu J, Cao LL, Lin M, Tu RH, Zheng CH, Huang CM*

**Observational Study**

- 3436** Modified Cortex Mori Capsules improving the successful rate of functional filtering blebs after reclinical glaucoma filtering surgery  
*Yu J, Qiu LX, Qing GP, Zhao BW, Wang H*
- 3446** Effect of cognitive behavior therapy combined with exercise intervention on the cognitive bias and coping styles of diarrhea-predominant irritable bowel syndrome patients  
*Zhao SR, Ni XM, Zhang XA, Tian H*

**Prospective Study**

- 3463** Normal values of shear wave velocity in liver tissue of healthy children measured using the latest acoustic radiation force impulse technology  
*Sun PX, Tong YY, Shi J, Zhang H, Liu SJ, Du J*

**SYSTEMATIC REVIEW**

- 3474** Characteristics of clear cell renal cell carcinoma metastases to the thyroid gland: A systematic review  
*Khaddour K, Marernych N, Ward WL, Liu J, Pappa T*
- 3486** Irritable bowel syndrome and functional constipation management with integrative medicine: A systematic review  
*Dai L, Zhong LL, Ji G*

- 3505** How about the reporting quality of case reports in nursing field?

*Yang KL, Lu CC, Sun Y, Cai YT, Wang B, Shang Y, Tian JH*

### CASE REPORT

- 3517** Gastro-gastric intussusception in the setting of a neuroendocrine tumor: A case report

*Zhornitskiy A, Le L, Tareen S, Abdullahi G, Karunasiri D, Tabibian JH*

- 3524** Retroperitoneal perivascular epithelioid cell tumours: A case report and review of literature

*Touloumis Z, Giannakou N, Sioros C, Trigka A, Cheilakea M, Dimitriou N, Griniatsos J*

- 3535** First Italian outbreak of VIM-producing *Serratia marcescens* in an adult polyvalent intensive care unit, August-October 2018: A case report and literature review

*Iovene MR, Pota V, Galdiero M, Corvino G, Di Lella FM, Stelitano D, Passavanti MB, Pace MC, Alfieri A, Di Franco S, Aurilio C, Sansone P, Niyas VKM, Fiore M*

- 3549** Transfemoral aortic valve implantation in the case of pre-existing mitral prosthesis and pure aortic regurgitation: A case report

*Erdem A, Esen Zencirci A, Ozden K, Terzi S*

- 3553** Methotrexate-related lymphoproliferative disorders in the liver: Case presentation and mini-review

*Mizusawa T, Kamimura K, Sato H, Suda T, Fukunari H, Hasegawa G, Shibata O, Morita S, Sakamaki A, Yokoyama J, Saito Y, Hori Y, Maruyama Y, Yoshimine F, Hoshi T, Morita S, Kanefuji T, Kobayashi M, Terai S*

- 3562** Re-revision surgery for re-recurrent valgus deformity after revision total knee arthroplasty in a patient with a severe valgus deformity: A case report

*Du YQ, Sun JY, Ni M, Zhou YG*

- 3569** Liver transplantation for severe portopulmonary hypertension: A case report and literature review

*Chen XJ, Zhu ZJ, Sun LY, Wei L, Zeng ZG, Liu Y, Qu W, Zhang L*

- 3575** Leiomyosarcoma of the stomach: A case report

*Kang WZ, Xue LY, Tian YT*

- 3583** Out-of-hospital cardiac arrest in a young adult survivor with sequelae of childhood Kawasaki disease: A case report

*Zhu KF, Tang LJ, Wu SZ, Tang YM*

- 3590** Squamous cell carcinoma of the nail bed: A case report

*Li PF, Zhu N, Lu H*

- 3595** Multidisciplinary treatment of a patient with necrotizing fasciitis caused by *Staphylococcus aureus*: A case report

*Xu LQ, Zhao XX, Wang PX, Yang J, Yang YM*

- 3603** Myocardial ischemic changes of electrocardiogram in intracerebral hemorrhage: A case report and review of literature  
*Lin XQ, Zheng LR*
- 3615** Adenomyoma of the distal common bile duct demonstrated by endoscopic ultrasound: A case report and review of the literature  
*Xu LM, Hu DM, Tang W, Wei SH, Chen W, Chen GQ*
- 3622** Child with Wiskott–Aldrich syndrome underwent atypical immune reconstruction after umbilical cord blood transplantation: A case report  
*Li BH, Hu SY*
- 3632** Epiphyseal distraction and hybrid reconstruction using polymethyl methacrylate construct combined with free non-vascularized fibular graft in pediatric patients with osteosarcoma around knee: A case report  
*Liang YH, He HB, Zhang C, Liu YP, Wan J*
- 3639** Bilateral common carotid artery common trunk with aberrant right subclavian artery combined with right subclavian steal syndrome: A case report  
*Sun YY, Zhang GM, Zhang YB, Du X, Su ML*
- 3649** Giant gastroduodenal trichobezoar: A case report  
*Dong ZH, Yin F, Du SL, Mo ZH*
- 3655** Compound heterozygous mutation of *MUSK* causing fetal akinesia deformation sequence syndrome: A case report  
*Li N, Qiao C, Lv Y, Yang T, Liu H, Yu WQ, Liu CX*
- 3662** Hypoparathyroidism with Fahr's syndrome: A case report and review of the literature  
*Zhou YY, Yang Y, Qiu HM*
- 3671** Primitive neuroectodermal tumors of the abdominal wall and vulva in children: Report of two cases and review of the literature  
*Xu QQ, Xing WW, Chen G, Dang YW, Luo YG, Chen P, Liang SW, Chen JB*

**ABOUT COVER**

Editorial Board Member of *World Journal of Clinical Cases*, Shiu-Yin Cho, MSc, Doctor, Department of Health, 286 Queen's Road East, Hong Kong, China

**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 PubMed, PubMed Central, Science Citation Index Expanded (also known as SciSearch®), and Journal Citation Reports/Science Edition. The 2019 Edition of Journal Citation Reports cites the 2018 impact factor for WJCC as 1.153 (5-year impact factor: N/A), ranking WJCC as 99 among 160 journals in Medicine, General and Internal (quartile in category Q3).

**RESPONSIBLE EDITORS FOR THIS ISSUE**

Responsible Electronic Editor: *Yan-Xia Xing*

Proofing Production Department Director: *Xiang Li*

**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, Bao-Gan Peng, Sandro Vento

**EDITORIAL BOARD MEMBERS**

<https://www.wjnet.com/2307-8960/editorialboard.htm>

**EDITORIAL OFFICE**

Jin-Lei Wang, Director

**PUBLICATION DATE**

November 6, 2019

**COPYRIGHT**

© 2019 Baishideng Publishing Group Inc

**INSTRUCTIONS TO AUTHORS**

<https://www.wjnet.com/bpg/gerinfo/204>

**GUIDELINES FOR ETHICS DOCUMENTS**

<https://www.wjnet.com/bpg/GerInfo/287>

**GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH**

<https://www.wjnet.com/bpg/gerinfo/240>

**PUBLICATION MISCONDUCT**

<https://www.wjnet.com/bpg/gerinfo/208>

**ARTICLE PROCESSING CHARGE**

<https://www.wjnet.com/bpg/gerinfo/242>

**STEPS FOR SUBMITTING MANUSCRIPTS**

<https://www.wjnet.com/bpg/GerInfo/239>

**ONLINE SUBMISSION**

<https://www.f6publishing.com>



## Giant gastroduodenal trichobezoar: A case report

Zhi-Hui Dong, Feng Yin, Shi-Lin Du, Zhe-Heng Mo

**ORCID number:** Zhi-Hui Dong (0000-0002-9790-3059); Feng Yin (0000-0001-6481-0836); Shi-Lin Du (0000-0002-7342-7502); Zhe-Heng Mo (0000-0002-8452-149X).

**Author contributions:** Dong ZH and Feng Y contributed equally to this paper and should be regarded as co-first authors; Dong ZH, Mo ZH, and Du SL performed the operation and wrote the paper; Feng Y helped draft the manuscript and prepared the figures; all the authors read and approved the final manuscript.

**Informed consent statement:** Written informed consent was obtained from the patient for publication of this report and any accompanying images.

**Conflict-of-interest statement:** No potential conflicts of interest relevant to this article are reported.

**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 which was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution Non Commercial (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 original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

**Zhi-Hui Dong, Shi-Lin Du, Zhe-Heng Mo,** Department of Radiology, Luoyang Central Hospital Affiliated to Zhengzhou University, Luoyang 471009, Henan Province, China

**Feng Yin,** Pharmacology Department, Luoyang Central Hospital Affiliated to Zhengzhou University, Luoyang 471009, Henan Province, China

**Corresponding author:** Zhi-Hui Dong, PhD, Associate Professor, Surgeon, Department of Radiology, Luoyang Central Hospital Affiliated to Zhengzhou University, No. 288, Zhongzhou Zhong Road, Luoyang 471009, Henan Province, China. [dongzhih@163.com](mailto:dongzhih@163.com)  
**Telephone:** +86-379-63892008  
**Fax:** +86-379-63892003

### Abstract

#### BACKGROUND

We report a case of giant gastroduodenal trichobezoar, an extremely rare upper gastrointestinal bezoar due to trichotillomania and trichophagia.

#### CASE SUMMARY

The patient was a 10-year-old girl who presented with an abdominal mass that was discovered at palpation and noninvasive imaging examinations. Computed tomography (CT) showed a well-circumscribed heterogeneous mass extending from the stomach into the duodenum. The patient underwent a laparotomy to pull out the trichobezoar. Although these imaging findings are nonspecific, trichobezoar should be included in the differential diagnosis of gastric mass, especially with the history of an irresistible urge to pull out and swallow their hair.

#### CONCLUSION

Laparotomy is useful and practical for the management of giant gastroduodenal trichobezoar.

**Key words:** Tomography; X-ray; Trichobezoar; Trichotillomania; Trichophagia; Case report

©The Author(s) 2019. Published by Baishideng Publishing Group Inc. All rights reserved.

**Core tip:** A case of giant gastroduodenal trichobezoar, an extremely rare upper gastrointestinal bezoar due to trichotillomania and trichophagia, is reported. The patient was a 10-year-old girl who presented with an abdominal mass that was discovered at palpation and noninvasive imaging examinations. Computed tomography showed a well-circumscribed heterogeneous mass extending from the stomach into the duodenum. Laparotomy is useful and effective for the treatment of giant gastroduodenal



**Manuscript source:** Unsolicited manuscript

**Received:** August 18, 2019

**Peer-review started:** August 18, 2019

**First decision:** September 9, 2019

**Revised:** September 23, 2019

**Accepted:** October 5, 2019

**Article in press:** October 5, 2019

**Published online:** November 6, 2019

**P-Reviewer:** Ishibashi H, Zimmerman M

**S-Editor:** Wang JL

**L-Editor:** Wang TQ

**E-Editor:** Liu MY



trichobezoar.

**Citation:** Dong ZH, Yin F, Du SL, Mo ZH. Giant gastroduodenal trichobezoar: A case report. *World J Clin Cases* 2019; 7(21): 3649-3654

**URL:** <https://www.wjnet.com/2307-8960/full/v7/i21/3649.htm>

**DOI:** <https://dx.doi.org/10.12998/wjcc.v7.i21.3649>

## INTRODUCTION

A trichobezoar is a rarely encountered mass of hair, wool, and similar material in the stomach and intestine of some patients with trichotillomania and trichophagia. The accumulated hair within the stomach and intestine is resistant to digestion, which occasionally presents as trichobezoar-induced bowel or gastric outlet obstruction<sup>[1-6]</sup>. Moreover, trichobezoar frequently leads to a spectrum of nonspecific clinical findings, including early satiety, anorexia, vomiting, and vague abdominal pain<sup>[7,8]</sup>. Clinically, most of the trichobezoars are usually found in young females between 15 and 20 years of age because of their nonspecific presentations or even lack of clinical symptoms in the early stage<sup>[9,10]</sup>. Herein, we describe the clinical and imaging features of a 10-year-old girl determined as having a giant gastroduodenal trichobezoar with a history of an uncontrolled urge to pull out her hair (trichotillomania) and swallow it (trichophagia).

## CASE PRESENTATION

### Chief complaints

A ten-year-old girl presented to our emergency department with a one-day history of abdominal pain after intermittent vomiting of gastric contents and inappetence for approximately 9 d.

### History of present illness

Acute gastritis was initially suspected, while it was not supported by the symptoms and therapy history.

### History of past illness

It is noteworthy that her mother admitted that this girl had developed an irresistible habit of pulling and swallowing her hair from two years old, which mainly happened unconsciously during sleep or when she was lonely.

### Personal and family history

Her parents had no history of swallowing hair.

### Physical examination

On physical examination, a movable mass was palpable in the left upper quadrant, and no sign of a rebound, peritonitis, or apparent hair loss was noted.

### Laboratory examinations

Laboratory results indicated anemia, hypoproteinemia, and hyponatremia, with a hemoglobin level of 115 g/L (normal range, 120-160 g/L), hematocrit 33.5% (normal range, 35.0%-49.0%), total protein 58 g/L (normal range, 63-82 g/L), albumin 28 g/L (normal range, 35-50 g/L), and sodium 136 mEq/L (normal range, 137-145 mEq/L). An elevated white blood cell count of 10050/ $\mu$ L (normal range, 4000-10000/ $\mu$ L) and a neutrophil ratio of 80% (normal range, 50.0%-70.0%) were demonstrated.

### Imaging examinations

Noninvasive imaging examinations were performed, including plain chest radiography, ultrasound, and computed tomography (CT). Plain radiographs showed that the chest was normal. Abdominal ultrasound demonstrated an intragastric hyperechoic mass, with a prominent posterior acoustic shadow of 13 cm in the maximum diameter. The residual dual gastric cavity could be detected at the fundus of 1.3 cm in width after drinking 300 mL of water. Noncontrasted-enhanced CT clearly showed a heterogeneous, meshlike mass with air sign filling the gastric cavity,

from the fundus to the pylorus, measuring approximately 12.7 cm × 9.4 cm × 5.3 cm in size (Figure 1). On the coronal CT images, the mass extended from the stomach into the duodenum (Figure 2). Furthermore, the well-defined margin of the mass was outlined by the surrounding air in the stomach on the three-dimensional (3D) maximum intensity projection images (Figure 3).

## FINAL DIAGNOSIS

Based on the clinical, imaging, and surgical outcomes, the final diagnosis was a giant gastroduodenal trichobezoar due to trichotillomania and trichophagia.

## TREATMENT

Since the mass was so large, laparotomy was considered (Figure 4). Under general anesthesia, all the imaging findings mentioned above were confirmed during the surgical process.

## OUTCOME AND FOLLOW-UP

The postoperative course was uneventful, and the girl was referred to behavioral and mental health providers after discharge.

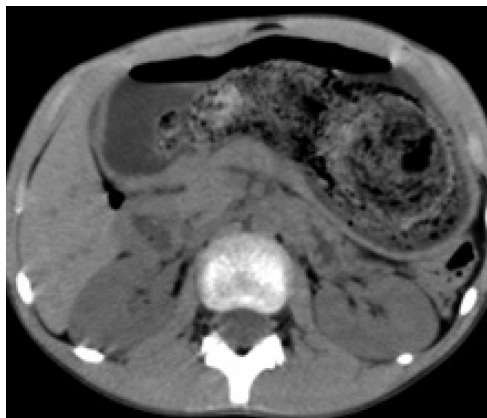
## DISCUSSION

In 1779, Baudamant described the first case of trichobezoar that is one of the bezoars with intraluminal accumulations of indigestible ingested hair. Trichotillomania is an uncommon disorder affecting about 1% of the population, and one-third of these patients have trichophagia<sup>[11]</sup>. It usually occurs in patients with mental retardation, personality or psychiatric abnormalities, and sufferers have an irresistible urge to pull out and swallow their hair, termed as trichotillomania and trichophagia. Occasionally, Rapunzel syndrome is encountered as an infrequent complication of trichobezoar formation in which the gastric bezoar is extended into the duodenum and small intestine, which can increase the risk of complications such as obstruction and perforation. Trichobezoar with Rapunzel syndrome is predominantly found in emotionally disturbed or developmentally disabled youngsters because of their nonspecific presentations or even lack of clinical symptoms in the early stage<sup>[12]</sup>.

Clinically, patients with trichobezoar frequently present nonspecific symptoms and signs including loss of appetite, weight loss, vomiting, and abdominal pain<sup>[10,13,14]</sup>. After long periods of time, the epigastric mass can be palpable when it is gradually enlarged, even associated with trichobezoar-induced gastric pylorus or bowel obstruction. In clinical practice, early diagnosis may be difficult for these nonspecific symptoms and signs. However, advanced noninvasive imaging modalities, including conventional upper gastrointestinal radiography, ultrasound, CT, and nuclear magnetic resonance imaging (MRI), are beneficial for making preoperative diagnosis and clinical management decision as previously reported<sup>[13,15-19]</sup>. In our case, the little girl was initially suspected with acute gastritis based on the nonspecific symptoms and laboratory results such as abdominal pain, anemia, hypoproteinemia, and hyponatremia. Fortunately, ultrasound and CT provided the positive information for the diagnosis, especially combined with 3D reconstructed CT images. As a noninvasive and nonirradiated tool, MRI is also useful for detecting this entity, especially in the pediatric population<sup>[20]</sup>. More importantly, the history of mental disorder, the uncontrolled urge to pull out one's hair and swallow it, is vital as a critical clue for making a clinical diagnosis. After the diagnosis is made, treatment modalities, including observation, dissolution, and surgery, could be considered. When a thickened mass is detected, surgical approach severing as an optimal choice could either be laparoscopic or open laparotomy<sup>[6,8,12,21,22]</sup>. Before the operation, noninvasive imaging modalities are beneficial for the pre- and post-operative assessment of trichobezoar and its possible complications, which can help make management decisions to reduce the frequency of clinical hazards.

## CONCLUSION





**Figure 1** Axial computed tomography image showing a hairball in the stomach.

As above, laparotomy is useful and practical for the treatment of giant gastroduodenal trichobezoar.

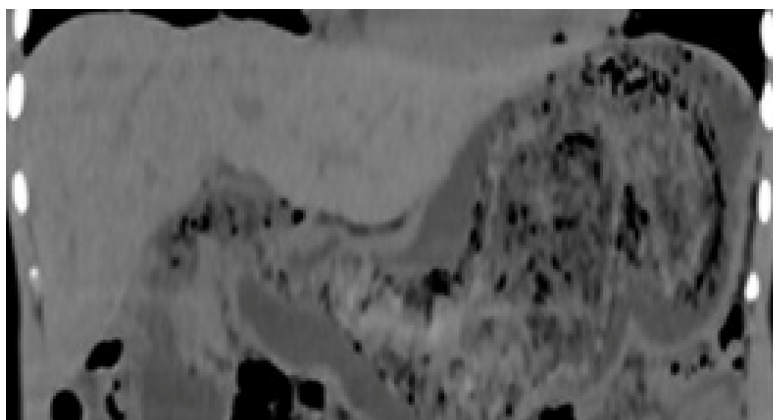


Figure 2 Coronal multiplanar reconstruction computed tomography image showing the extension of a hairball from the stomach into the second part of the duodenum.

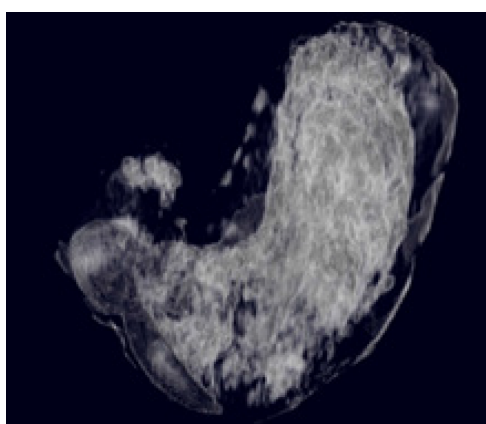


Figure 3 Three-dimension maximum intensity projection image showing the outline of a hairball defined by the air pockets in it.

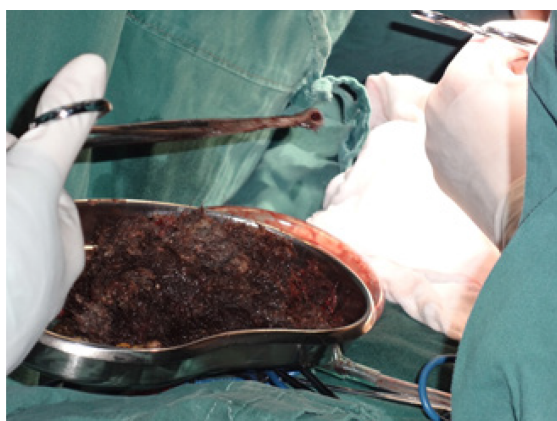


Figure 4 Postoperative photograph of the hair pulled from the stomach.

## REFERENCES

- 1 Al-Wadan AH, Al-Absi M, Al-Saadi AS, Abdoulgafour M. Rapunzel syndrome. *Saudi Med J* 2006; **27**: 1912-1914 [PMID: [17143376](#) DOI: [10.4103/0256-4947.51511](#)]
- 2 Balik E, Ulman I, Taneli C, Demircan M. The Rapunzel syndrome: a case report and review of the literature. *Eur J Pediatr Surg* 1993; **3**: 171-173 [PMID: [8353119](#) DOI: [10.1055/s-2008-1063536](#)]
- 3 Dalshaug GB, Wainer S, Hollaar GL. The Rapunzel syndrome (trichobezoar) causing atypical intussusception in a child: a case report. *J Pediatr Surg* 1999; **34**: 479-480 [PMID: [10211659](#) DOI: [10.1016/s0022-3468\(99\)90504-3](#)]
- 4 Dindyal S, Bhuvu Nj, Dindyal S, Ramdass M, Narayansingh V. Trichobezoar presenting with the 'comma

- sign' in Rapunzel Syndrome: a case report and literature review. *Cases J* 2008; **1**: 286 [PMID: [18973682](#) DOI: [10.1186/1757-1626-1-286](#)]
- 5 **Duncan ND**, Aitken R, Venugopal S, West W, Carpenter R. The Rapunzel syndrome. Report of a case and review of the literature. *West Indian Med J* 1994; **43**: 63-65 [PMID: [7941500](#)]
- 6 **Hassan AA**, Panesar KJ. The Rapunzel syndrome: a rare presentation of trichobezoar. *Ulster Med J* 1989; **58**: 94-96 [PMID: [2672527](#)]
- 7 **Fallon SC**, Slater BJ, Larimer EL, Brandt ML, Lopez ME. The surgical management of Rapunzel syndrome: a case series and literature review. *J Pediatr Surg* 2013; **48**: 830-834 [PMID: [23583142](#) DOI: [10.1016/j.jpedsurg.2012.07.046](#)]
- 8 **Gorter RR**, Kneepkens CM, Mattens EC, Aronson DC, Heij HA. Management of trichobezoar: case report and literature review. *Pediatr Surg Int* 2010; **26**: 457-463 [PMID: [20213124](#) DOI: [10.1007/s00383-010-2570-0](#)]
- 9 **Lalith S**, Gopalakrishnan KL, Ilangoan G, Jayajothi A. Rapunzel Syndrome. *J Clin Diagn Res* 2017; **11**: TD01-TD02 [PMID: [29207806](#) DOI: [10.7860/jcdr/2017/28593.10594](#)]
- 10 **Mathai J**, Chacko J, Kumar TS, Scott JX, Agarwal I, Varkki S. Rapunzel syndrome: a diagnosis overlooked. *Acta Paediatr* 2007; **96**: 135-137 [PMID: [17187622](#) DOI: [10.1111/j.1651-2227.2007.00012.x](#)]
- 11 **Frey AS**, McKee M, King RA, Martin A. Hair apparent: Rapunzel syndrome. *Am J Psychiatry* 2005; **162**: 242-248 [PMID: [15677585](#) DOI: [10.1176/appi.ajp.162.2.242](#)]
- 12 **Gonuguntla V**, Joshi DD. Rapunzel syndrome: a comprehensive review of an unusual case of trichobezoar. *Clin Med Res* 2009; **7**: 99-102 [PMID: [19625498](#) DOI: [10.3121/cmr.2009.822](#)]
- 13 **Mehta P**, Bhutiani R. The Rapunzel syndrome: is it an Asian problem? (case report and review of literature). *Eur J Gastroenterol Hepatol* 2009; **21**: 937-940 [PMID: [19322101](#) DOI: [10.1097/MEG.0b013e3283140ed2](#)]
- 14 **Middleton E**, Macksey LF, Phillips JD. Rapunzel syndrome in a pediatric patient: a case report. *AANA J* 2012; **80**: 115-119 [PMID: [22586880](#)]
- 15 **Nour I**, Abd Alatef M, Megahed A, Yahia S, Wahba Y, Shabaan AE. Rapunzel syndrome (gastric trichobezoar), a rare presentation with generalised oedema: case report and review of the literature. *Paediatr Int Child Health* 2019; **39**: 76-78 [PMID: [29057712](#) DOI: [10.1080/20469047.2017.1389809](#)]
- 16 **Obinwa O**, Cooper D, Khan F, O'Riordan JM. Rapunzel syndrome is not just a mere surgical problem: A case report and review of current management. *World J Clin Cases* 2017; **5**: 50-55 [PMID: [28255548](#) DOI: [10.12998/wjcc.v5.i2.50](#)]
- 17 **Palanivelu C**, Rangarajan M, Senthilkumar R, Madankumar MV. Trichobezoars in the stomach and ileum and their laparoscopy-assisted removal: a bizarre case. *Singapore Med J* 2007; **48**: e37-e39 [PMID: [17304375](#)]
- 18 **Tayyem R**, Ilyas I, Smith I, Pickford I. Rapunzel syndrome and gastric perforation. *Ann R Coll Surg Engl* 2010; **92**: W27-W28 [PMID: [20056057](#) DOI: [10.1308/147870810x476700](#)]
- 19 **Western C**, Bokhari S, Gould S. Rapunzel syndrome: a case report and review. *J Gastrointest Surg* 2008; **12**: 1612-1614 [PMID: [18027058](#) DOI: [10.1007/s11605-007-0408-4](#)]
- 20 **Ben Cheikh A**, Gorincour G, Dugoueat-Pilleul F, Dupuis S, Basset T, Pracros JP. [Gastric trichobezoar in an adolescent presenting with anemia: ultrasound and MRI findings]. *J Radiol* 2004; **85**: 411-413 [PMID: [15213652](#) DOI: [10.1016/S0221-0363\(04\)97601-9](#)]
- 21 **Jones GC**, Coutinho K, Anjaria D, Hussain N, Dholakia R. Treatment of recurrent Rapunzel syndrome and trichotillomania: case report and literature review. *Psychosomatics* 2010; **51**: 443-446 [PMID: [20833945](#) DOI: [10.1176/appi.psy.51.5.443](#)]
- 22 **Morales-Fuentes B**, Camacho-Maya U, Coll-Clemente FL, Vázquez-Minero JC. Trichotillomania, recurrent trichobezoar and Rapunzel syndrome: case report and literature review. *Cir Cir* 2010; **78**: 265-266 [PMID: [20642912](#)]



Published By Baishideng Publishing Group Inc  
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA  
Telephone: +1-925-2238242  
E-mail: [bpgoffice@wjgnet.com](mailto:bpgoffice@wjgnet.com)  
Help Desk: <https://www.f6publishing.com/helpdesk>  
<https://www.wjgnet.com>

