

This article is licensed under the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC) (<http://www.karger.com/Services/OpenAccessLicense>). Usage and distribution for commercial purposes requires written permission.

## Single Case

# Trichotillomania in Celiac Disease

Abeer Ayad Al Lihabi

KSA-Madina Almownwara, Tiabah University, Madinah, Saudi Arabia

## Keywords

Trichotillomania · Obsessive-compulsive and related disorder · Celiac disease · Case report

## Abstract

Trichotillomania is an underreported and underdiagnosed condition associated with significant impairments in social and functional relationships. The connection between celiac disease and trichotillomania is not yet established clearly. Only a few cases of trichotillomania have been reported to date. Here, we report the case of a 22-year-old Saudi female, who presented with celiac disease and trichotillomania to the psychiatry clinic. This is the first report of its kind in Saudi Arabia. By reporting this case, I highlight the importance of psychiatric and comprehensive approaches in patients with celiac disease.

© 2016 The Author(s)  
Published by S. Karger AG, Basel

## Introduction

Celiac disease (CD), an inflammatory disorder of the upper small intestines, is characterized by intestinal villous atrophy and crypt hyperplasia and is caused by an abnormal immune reaction to wheat gliadin. It may be associated with different symptoms and signs, depending on the degree of intestinal involvement. The damage to the intestine makes it difficult for the body to absorb nutrients, especially fat, calcium, iron, and folate. This often results in diarrhea, abdominal distension, generalized malnutrition and failure to thrive, or subclinical deficiencies along with isolated nutrient deficiencies such as anemia, aphthous ulcer, bone pain, etc. It is also associated with increased incidence of gastrointestinal carcinoma or lymphoma [1]. The prevalence of CD is high in Saudi patients (4%) [2] when com-

pared to the prevalence rates reported from the USA and Europe (i.e., 3%) [3] and is comparable to the rates reported from other tropical countries. Moreover, a high prevalence of serological markers of CD has been reported among patients with autoimmune thyroid disease [2]. Osteomalacia and iron deficiency anemia were common clinical presentations of adult CD in Saudi Arabia. Hence, the presence of either one of these presentations in a female patient should raise the possibility of CD [4].

Trichotillomania has been classified as an obsessive-compulsive and related disorder (DSM-5) that is characterized by recurrent body-focused repetitive behavior (hair pulling) and repeated attempts to decrease or stop the behavior. It may result in impairment in important areas of functioning, such as relationships, social functioning, etc. [5]. In addition, it is 7 times more prevalent in children (peak prevalence observed between 4–17 years of age) than in adults. Moreover, this disorder is often chronic and is difficult to treat. Hair pulling in early childhood (<5 years of age) can be regarded as a distinct clinical entity that tends to be self-limiting without the need for intervention [6]. However, pathological hair pulling has been observed in 1.5% of adult males and 3.4% adult females [7]. Trichotillomania is typically confined to one or two sites, frequently affecting the scalp, but it can also involve the eyelashes, eyebrows, pubic hair, body hair, and facial hair [8, 9]. The patients tend to be highly secretive about the condition and regard their behavior as shameful. Many hair pullers exhibit additional stereotypic movements such as nail biting, knuckle cracking, touching or playing with pulled hair, and hair eating (trichophagia).

Insufficient data exist on the association of CD with various neurological disorders, including certain common and 'soft' neurological conditions such as headache, learning disorders, attention deficit hyperactivity disorder, and tic disorders, in children, adolescents, and young adults [10]. To the best of our knowledge, there are only four articles that have reported on the association between CD and trichobezoars [11–14].

### Case Presentation

A 22-year-old Saudi female university student presented with CD and complaints of an uncontrollable, irresistible, and repetitive urge to pull her scalp hair. This condition started 15 years ago with the pulling of hair on the legs and then shifted to scalp hair 2 years ago after a year of no hair pulling. The hair pulling had currently become distressing, problematic, and 'out of control'. In addition, there was a significant deterioration in her academic performance and social adjustment.

The patient engaged in hair pulling on a daily basis for 1–3 h irrespective of whether she was relaxed (like watching TV) or under stress (like preparing for exams). However, when she was anxious during her exams or when assigned a project (with minor changes in sleep and appetite), her hair pulling behavior increased. Immediately before pulling her hair, she felt a mounting tension, which was relieved with the successful pulling out of a hair root. She carefully examined the hair root but did not ingest them. If the hair root remained intact and instead the hair shaft was broken, she repetitively pulled the hairs until successful. She felt guilty and embarrassed by her hair pulling behavior and wore a head scarf most of the time to cover the bald patches of 1–2 cm on her scalp. The hair, particularly on the top of her head, was very thin, brittle and uneven.

Two years ago, she was diagnosed with CD and had symptoms like digestive problems (abdominal bloating, pain, and gas), skin eczema and psoriasis, iron deficiency anemia, and

diarrhea. She then started a gluten free diet and noticed a decrease in the frequency of symptoms and hair pulling. She has no family history of medical or psychiatric illness.

Different instruments were applied to measure trichotillomania severity, anxiety, and depression. The Trichotillomania Symptom Severity Scale showed that the patient had moderate symptoms (20 out of 30). The Hamilton Anxiety Rating Scale showed mild anxiety and the Hamilton rating scale of depression showed no depression in the patient.

## Discussion

Trichotillomania is associated with significant social and functional impairment [5, 6]. Along with the cosmetic and psychosocial consequences, this disorder is also associated with certain medical complications, including infection, permanent loss of hair, repetitive stress injury, carpal tunnel syndrome [15], and gastrointestinal obstruction with bezoars as a result of trichophagia [16]. The patients actively disguise their symptoms to avoid disclosure, and clinicians should be vigilant when patients present with inappropriate or unusual head coverings. In addition, the assessment of such disorders requires great clinical sensitivity as patients frequently regard their behavior as shameful.

CD has long been associated with emotional, cognitive, and neurodegenerative disorders [10]. Studies have reported a history of psychiatric disorders in a high proportion of adults who were newly diagnosed with CD [17].

In our case, trichotillomania was more likely due to the behavioral disorders secondary to CD. This was further supported by the fact that her symptoms improved when she started a gluten-free diet.

## Conclusion

Screening for comorbid anxiety disorders, obsessive-compulsive and related disorders, and depression in patients with CD by general practitioners and gastroenterologists is recommended.

## Ethics Statement

The author has no ethical conflicts to disclose.

## Disclosure Statement

There are no competing interests and funding.

## References

- 1 Trier JS: Celiac sprue. *N Engl J Med* 1991;325:1709–1717.
- 2 Al Attas RA: How common is celiac disease in Eastern Saudi Arabia? *Ann Saudi Med* 2002;22:315–319.
- 3 Hill I, Fasano A, Schwartz R, Counts D, Glock M, Howath K: The prevalence of celiac disease in at risk group of children in the United States. *J Pediatr* 2000;136:86–90.
- 4 Qari FA: Clinical presentation of adult celiac disease in Western Saudi Arabia. *Saudi Med J* 2002;23:1514–1517.
- 5 American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Washington, DC, American Psychiatric Association, 2013, pp 251–254.
- 6 Keuthen NJ, O’Sullivan RL, Sprich-Buckminster S: Trichotillomania: current issues in conceptualization and treatment. *Psychother Psychosom* 1998;67:202–213.
- 7 Christenson GA, Pyle RL, Mitchell JE: Estimated lifetime prevalence of trichotillomania in college students. *J Clin Psychiatry* 1991;52:415–417.
- 8 Cohen LJ, Stein DJ, Simeon D, Spadaccini E, Rosen J, Aronowitz B, Hollander E: Clinical profile, comorbidity, and treatment history in 123 hair pullers: a survey study. *J Clin Psychiatry* 1995;56:319–326.
- 9 Du Toit PL, van Kradenburg J, Niehaus DJ, Stein DJ: Characteristics and phenomenology of hair-pulling: an exploration of subtypes. *Compr Psychiatry* 2001;42:247–256.
- 10 Zelnik N, Pacht A, Obeid R, Lerner A: Range of neurologic disorders in patients with celiac disease. *Pediatrics* 2004;113:1672–1676.
- 11 Larsson LT, Nivenius K, Wettrell G: Trichobezoar in a child with concomitant coeliac disease: a case report. *Acta Paediatr* 2004;93:278–280.
- 12 Marcos Alonso S, Bravo Mata M, Bautista Casasnova A, Pavón Belinchón P, Monasterio Corral L: Gastric trichobezoar as an atypical form of presentation of celiac disease (in Spanish). *An Pediatr (Barc)* 2005;62:601–602.
- 13 McCallum IJ, Van zanten C, Inam IZ, Craig W, Mahdi G, Thompson RJ: Trichobezoar in a child with undiagnosed coeliac disease. *J Paediatr Child Health* 2008;44:524–525.
- 14 Irastorza I, Tutau C, Vitoria JC: A trichobezoar in a child with undiagnosed celiac disease: a case report. *World J Gastroenterol* 2014;20:1357–1360.
- 15 Frey AS, McKee M, King RA, Martin A: Hair apparent: Rapunzel syndrome. *Am J Psychiatry* 2005;162:242–248.
- 16 Bouwer C, Stein DJ: Trichobezoars in trichotillomania: case report and literature overview. *Psychosom Med* 1998;60:658–660.
- 17 Hallert C, Derefeldt T: Psychic disturbances in adult coeliac disease. I. Clinical observations. *Scand J Gastroenterol* 1982;17:17–19.