



ASSIUT UNIVERSITY DRUG INFORMATION BULLETIN



Ass. Uni. D.I. Bull., Vol. 10 No. 2, June 2014

كلية الصيدلة

Trichotillomania

Trichotillomania is an impulse-control disorder (a psychological condition) is characterized by the persistent and excessive pulling of one's own hair. Patients are unable to stop this behavior, even as their hair becomes thinner, resulting in noticeable hair loss. The scalp is the most common area, followed by the eyelashes and eyebrows. The alopecia that results from hair pulling can range from small undetectable areas of hair loss to total baldness.



Trichotillomania is 7 times as prevalent in children as in adults, with the peak prevalence between the ages of 4 and 17 years. It can cause a child to experience distress and may result in moderate impairment in social or academic functioning. Additionally, trichotillomania may result in impairment in other important areas of functioning, such as family relationships.

Etiology

The etiology of trichotillomania is largely unknown, though both environmental and genetic causes have been suspected. Explanations that have been proposed for the onset and maintenance of the hair-pulling behavior include the following:

- Coping mechanism for anxiety or stressful events
- A benign habit that developed from a sensory event (e.g., itchy eyelash) or another event and resulted in trichotillomania.
- Co-occurring with another habitual behavior (i.e., thumbsucking) in young children
- Serotonin deficiency - A link may exist between a deficiency of the neurotransmitter serotonin (5-hydroxytryptamine [5-HT]) and trichotillomania.
- Structural brain abnormalities - Magnetic resonance imaging (MRI) studies have demonstrated that some individuals with trichotillomania have abnormalities of the lenticulate.
- Abnormal brain metabolism - Positron emission tomography (PET) scans have revealed that some individuals with trichotillomania have a high metabolic glucose rate in the global, bilateral, cerebellar, and right superior parietal areas.
- Genetic susceptibility : There is reported evidence that genetic vulnerability plays a role; trichotillomania occurs more frequently in people with obsessive-compulsive disorder (OCD) and their first-degree relatives.

In This Issue

Trichotillomania.....	1
Terminology.....	4
FDA News.....	5
Test Your Knowledge.....	5
Real Enquiries.....	6
Ask the Expert.....	6
Complementary medicine	7
Did You Know?.....	8

- Psychological factors - Several psychological theories (e.g. psychodynamic, behavioral, and ethologic) have attempted to explain trichotillomania in children; such theories have included stress reduction, emotional regulation, and sensory stimulation.

Diagnostic criteria (DSM-5)

The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), places trichotillomania in the category of obsessive-compulsive and related disorders and notes that it is characterized by recurrent body-focused repetitive behavior (hair pulling) and repeated attempts to decrease or stop the behavior. The behavior can occur during both relaxed and stressful times, but there is often a mounting sense of tension before hair pulling occurs or when attempts are made to resist the behavior.

Symptoms

Symptoms usually begin before age 17. The hair may come out in round patches or across the scalp. The effect is an uneven appearance. The person may pluck other hairy areas, such as the eyebrows, eyelashes, or body hair.

These symptoms are:

- An uneven appearance to the hair
- Bare patches or all around (diffuse) loss of hair
- Bowel blockage (obstruction) if people eat the hair they pull out.
- Constant tugging, pulling, or twisting of hair
- Denying the hair pulling.
- Hair regrowth that feels like stubble in the bare spots.
- Increasing sense of tension before the hair pulling
- Other self-injury behaviors.
- Sense of relief, pleasure, or gratification after the hair pulling.



Most people with this disorder also have problems with feeling sad or depressed, anxiety and poor self image.

Pathophysiology

From a dermatologic standpoint, trichotillomania is a form of traumatic alopecia. The trauma to the hair occurs as a result of the patient's repetitive hair-pulling behavior. The hair pulling may be one of several phenomenologically related grooming behaviors, such as nail biting and skin picking. Trichotillomania results in highly variable patterns of hair loss. The scalp is the most common area of hair pulling, followed by the eyebrows, eyelashes, pubic and perirectal areas, axillae, limbs, torso, and face. The resulting alopecia can range from thin unnoticeable areas of hair loss to total baldness in the area(s) being plucked. In addition, trichophagia (ie, mouthing or ingesting hair) is common in persons who pull out their hair. This chewing or mouthing behavior can frequently lead to the formation of trichobezoars (ie, hair casts) in the stomach or small intestines. Trichobezoars can result in anemia, abdominal pain, hematemesis, nausea or vomiting, bowel obstruction, perforation, gastrointestinal (GI) bleeding, acute pancreatitis, and obstructive jaundice.

Prognosis

In very young children, the prognosis is excellent; hair pulling that occurs in young children may be described more accurately as a short-term habit disorder. In late childhood and adolescence, the prognosis is usually good but should be considered guarded; the alopecia quite often continues for months or a couple of years and then

recurs after a variable time. In adult patients, the prognosis is poor, and permanent recovery is uncommon.

Trichotillomania results in highly variable patterns of hair loss, ranging from small undetectable patches of hair loss to total baldness. Ingestion of the pulled hair can result in trichobezoar formation and subsequent anemia, abdominal pain, hematemesis, nausea or vomiting, bowel obstruction, perforation, GI bleeding, pancreatitis, and obstructive jaundice.

Trichotillomania can become a chronic and persistent condition of hair pulling. Specifically, symptoms of trichotillomania can persist for weeks to decades. Therefore, comprehensive treatment planning is critical and may require consultations with mental health professionals. Treating trichotillomania in children may be difficult because of the low reliability and validity of self-report.

Mortality is not reported with trichotillomania. Most patients with trichotillomania in dermatologic clinics are children and early adolescents. Patients may try to conceal the alopecic area and may have some restrictions in their school activities. In adult patients, trichotillomania may cause distress and impairment in occupational and social or marital relations.

Physical Examination

Physical signs of trichotillomania may include the following:

- Alopecia - This can range from barely noticeable areas of hair loss to total baldness;
- Friar Tuck sign - This common presentation consists of areas of hair loss with broken hairs of varying lengths arranged in a circular pattern, with unaffected hairs surrounding the area of hair loss .
- Hair regrowth - Hairs of varying lengths may be noted during the regrowing phase
- Absence of skin abnormalities or inflammation - The signs of excoriation or other dermatologic pathology that may be common in individuals with tinea capitis are typically absent in people with trichotillomania .
- Hair abnormalities - These may include empty and/or damaged hair follicles; twisted or broken hairs of varying length, and wavy, wrinkled, or corkscrew-shaped hair shafts
- Trichobezoars - These are typically found in the stomach and intestines of patients who chew or mouth their pulled hairs and may give rise to anemia, abdominal pain, hematemesis, nausea and vomiting, bowel obstruction, perforation, GI bleeding, pancreatitis, or obstructive jaundice.

For dermatologists who pay close attention to morphology, diagnosing trichotillomania usually is not difficult. The general morphology of an individual lesion, showing a geometric shape and incomplete nonscarring alopecia of the involved area, typically identifies the condition.

Treatment:

1) Behavioral Interventions

In current practice, behavioral treatment seems to be the most powerful treatment, even for patients older than age 16 years. Effective behavioral strategies in the treatment of trichotillomania in children include the following:

- Habit reversal - This is a set of procedures taught to a child that includes the following components: increasing awareness of the habit; teaching a competing response to practice when the child feels the urge to engage in the habit, in situations where the habit historically occurs or for 1 minute after the occurrence of the habit; practicing stress and anxiety reduction procedures on a daily basis; and support and encouragement from parents.

- Self-monitoring - This involves systematically observing and discriminating when the behavior occurs, recording the responses, and evaluating one's own behavior
- Competing reaction training - This is a component of habit reversal that is occasionally used alone; a child is taught a socially appropriate alternative behavior or response and encouraged to practice it on a daily basis when they feel the urge to engage in the habit, in situations where the habit historically occurs or for 1 minute after the occurrence of the habit .
- Relaxation training - This involves helping children identify their own bodily sensations associated with tension and then employ procedures designed to induce relaxation; typically, it is individualized and may include such procedures as deep-breathing strategies and systematic muscle tensing and relaxation
- Psychotherapy - This process involves direct communication (mainly talking) between a therapist and a child and makes use of various techniques to help solve behavioral and other psychological problems; one of its most popular forms is cognitive-behavioral therapy (CBT).
- Hypnosis - This is a process of controlling physiologic responses by focusing attention on specific mental images for therapeutic purposes, typically to gain more control over behavior, emotions, or physical well-being; in a hypnotized state, the subject is more open than usual to suggestions (provided by the hypnotist) for subsequent changes in behavior .

2) Pharmacologic Therapy

Few drug studies on trichotillomania in children and adults exist. The primary agents used are selective serotonin reuptake inhibitors (SSRIs). These agents have demonstrated a degree of effectiveness in some patients with trichotillomania, but a positive treatment response is not consistent. In children, SSRIs (eg, fluoxetine, sertraline, and fluvoxamine) may be more advantageous as a medication choice than tricyclic antidepressants (TCAs) because of their milder adverse effects.

Antidepressants in pediatric patients

Physicians are advised to be aware of the following information and to use appropriate caution when considering treatment with antidepressants in the pediatric population.

In December 2003, the UK Medicines and Healthcare Products Regulatory Agency (MHRA) issued an advisory stating that most SSRIs are not suitable for use by persons younger than 18 years for treatment of "depressive illness." After review, this agency decided that the risks SSRIs pose to pediatric patients outweigh the benefits of treatment, except in the case of fluoxetine, which appears to have a positive risk-benefit ratio in the treatment of depressive illness in patients younger than 18 years.

References:

1-<http://emedicine.medscape.com/article/1071854-overview>

2- <http://www.mayoclinic.org/diseases-conditions/trichotillomania/basics/definition/con->

3- <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002485/>



Terminology

Sjogren's Syndrome

A disorder of connective tissue, with dryness of the mouth (xerostomia) and dryness of the eye (kerato conjunctivitis sicca) occurring in association with Rheumatoid Arthritis. It occurs in approximately 10 per cent of patients with the latter condition, but it can occur – and frequently does so – independently of rheumatoid disease. The lack of tears gives rise to symptoms of dryness and grittiness of the eyes; the dry mouth can occasionally be so severe as to cause a Dysphagia. The disease is due to the autoimmune destruction of

the salivary glands and the lacrimal glands. The disorder is usually associated with specific human leukocyte antigen (HLA) antigen . Treatment is unsatisfactory and is limited to oral and ocular hygiene as well as the provision of artificial tears in the form of cellulose eye drops.

Reference: 1) Marcovitch H. 2005. *Black's Medical Dictionary*. 41th ed. London: A&C Black Publishers Limited. p 647



FDA News

All manufacturers of prescription combination drug products with more than 325 mg of acetaminophen have discontinued marketing

[03-26-2014] FDA and industry have taken action to protect consumers from the risk of severe liver damage, which can result from taking too much acetaminophen. All manufacturers of prescription combination drug products with more than 325 milligrams (mg) of acetaminophen per tablet, capsule, or other dosage unit have discontinued marketing these products. While all of these products have been discontinued and are no longer available, there are a few remaining manufacturers that have not taken the necessary administrative steps to voluntarily withdraw their applications.

FDA issued two Federal Register notices to formally withdraw the applications for all prescription combination drug products that contain more than 325 mg of acetaminophen per tablet, capsule, or other dosage unit. The first notice immediately withdraws FDA approval of those products for which the manufacturers asked to voluntarily withdraw their applications. The second notice addresses the applications of six manufacturers who have discontinued marketing their products but have not correctly withdrawn their applications, and announces FDA's intention to begin a process to withdraw approval of those applications. FDA is also reminding manufacturers to update their drug listing files to reflect the withdrawal of their prescription combination drug products containing more than 325 mg of acetaminophen from the market.

FDA had asked manufacturers to voluntarily withdraw these products from the market to reduce the risk of severe liver injury from inadvertent acetaminophen overdose, which can lead to liver failure, liver transplant, and death. Many consumers are unaware that multiple drug products they take (both prescription and over-the-counter) may contain acetaminophen, making it easy to accidentally take too much.

Source: <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm390509.htm>

Test Your Knowledge

1. Precipitants of acute pulmonary oedema include:

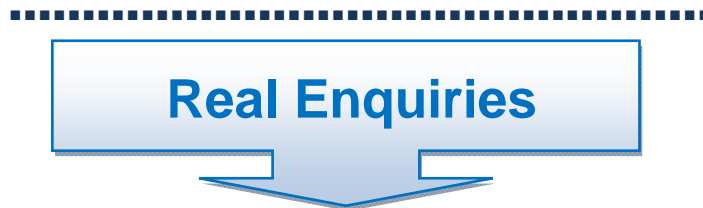
- | | | |
|--------------------|-----------------------------|--------------|
| 1 - hypothyroidism | 2 - excessive infusion rate | |
| 3 - heart failure | | |
| A- 1, 2, 3 | B - 1, 2 only | C- 2, 3 only |
| D - 1 only | E - 3 only | |

2. Which of the following is the antidote for the toxin Lead?

- | | |
|------------|-------------|
| A. Naloxon | B. Nitrite |
| C. CaEDTA | D. Dialysis |



3. Which of the following is not directly related to a drug toxicity of Ibuprofen?
- A. Nausea
B. Renal dysfunction
C. Anemia
D. Muscle wasting
4. A male Patient is undergoing chemotherapy may be given the drug allopurinol (Allopurinol inhibits the synthesis of uric acid).Concomitant administration of allopurinol prevents:
- A. Myelosuppression.
B. Gout and hyperuricemia.
C. Pancytopenia.
D. Cancer cell growth and replication



At the "Drug Information Center", we respond to enquiries from the professional health team as well as from others. Here's one of the enquiries received at the center!

Enquiry received from Ph. Huda El-sayed - Assiut Univ. Hospital- Cardiology dept.

Enquiry : How Clexan (enoxaparine) dose is adjusted for a patient with CrCl <30 ml/min?

Summary of Answer:

Clexan should be used with caution in renal impairment patients.

No dosage adjustments necessary in patients with mild (CrCl 50-80ml/min) or moderate (CrCl 30-50ml/min) renal impairment.

In patients with severe renal impairment (CrCl<30ml/min), dose is 30mg once daily. In treatment of deep venous thrombosis with or without pulmonary embolism, when CrCl <30ml/min, 1mg/kg once daily, in conjunction with warfarin therapy.

In treatment of unstable angina and Non-ST Segment elevation myocardial infarction when CrCl <30ml/min, 1mg/kg once daily, in conjunction with aspirin therapy.



Ask the expert- Clinical Nutrition

What is the role of protein in the treatment of burns?

Protein requirements are also increased in burn patients because of the increased catabolism of skeletal muscles, leading to average losses of 260mg protein/kg/hr. Protein intake should vary between 1.5–2.0 g/kg of ideal body weight on a daily basis. Nitrogen balance should be assessed on a daily or weekly basis, using the Waxman equation. The rate of protein breakdown into amino acids and the reincorporation of these amino acids are important for collagen synthesis in wound healing as well as for the maintenance of visceral proteins for optimal organ function, especially the immune system. Maintenance of diaphragm and intercostal muscle mass is also important for survival to avoid the reduction of vital capacity and respiratory efficiency. In addition to the urinary losses from the degradation of muscle mass, nitrogen is lost from wound exudate, excision of burns and blood loss during surgery, leading to an extraordinarily negative nitrogen balance.



References: Katsilambrose .N. , 2010, *Clinical Nutrition In Practice*. A John Wiley & Sons, Ltd., Publication, p.157

Complementary medicine

Milk Thistle

(*Silybum [Carduus] marianus*) is a spiny European plant with white-veined leaves and milky sap, the seed of which is used orally can be extracted from the seeds (fruit) of the milk thistle plant, is believed to be the biologically active part of the herb. The seeds are used to prepare capsules, extracts, and infusions (strong teas). The extract consists of about 65–80% silymarin (a flavonolignan complex) and 20–35% fatty acids, including linoleic acid. Silymarin is a complex mixture of polyphenolic molecules.



Mechanism of Action

Silymarin is thought to protect the liver by preventing the entry of toxins into the hepatocyte and by stimulating nucleolar polymerase A, which, in turn, increases protein synthesis and liver regeneration. Silymarin undergoes enterohepatic circulation, increasing its concentration in hepatocytes. It is also an antioxidant in its own right and is considered to have some cytoprotective effect against carcinogens.

What it is used For?

Protective effects on the liver and improves its function. It is typically used to treat liver cirrhosis, chronic hepatitis (liver inflammation), and gallbladder disorders. Treatment claims also include Lowering cholesterol levels, Reducing insulin resistance in people with type 2 diabetes who also have cirrhosis, Reducing the growth of cancer cells in breast, cervical, and prostate cancers.

Adverse Reactions

Milk thistle appears to be remarkably safe, with loose stools due to increased bile solubility and occasional allergic reactions being the common side effects. It has not been evaluated in children or in pregnant women. There are no known serious drug or herb interactions.

Dosage

Dry extract capsules standardized to 70% silymarin (calculated as silibinin) are administered at 200 to 400 mg/day or 12 to 15 g of dried seed per day. Teas are not recommended, since silymarin is not water soluble.

Conclusion

Milk thistle has shown promise in improving liver function parameters in various hepatotoxic situations, and mushroom poisoning. It is still unclear whether it will offer protection against viral hepatitis and various nephrotoxic agents.

Reference:

- 1- *Herbs a quick guide to herbal supplements at a glance national center for complementary and alternative medicine.2009.p.70*
- 2- *Craig C.R. Modern pharmacology with clinicalApplications.2003. 6th-ed.*

Answers:

Q1: (C) An acute attack of pulmonary oedema may develop due to progressive heart failure or when the patient is not compliant with medication, particularly the diuretic therapy. It may also occur due to hypervolaemia, such as when compromised and non-compromised patients are exposed to an excessive fluid infusion rate or to a high sodium intake. Conditions that lead to an increased metabolic demand, such as high fever and hyperthyroidism, may also precipitate acute pulmonary oedema.

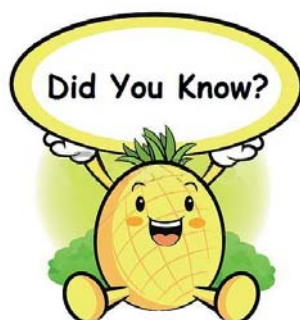
Q2: (C) Ca EDTA

Q3: (D) Muscle wasting is not directly related to a drug toxicity of Ibuprofen.

Q4: (B) Prevent uric acid nephropathy, uric acid lithiasis, and gout during cancer therapy since chemotherapy causes the rapid destruction of cancer cells leading to excessive purine catabolism and uric acid formation. Allopurinol can induce myelosuppression and pancytopenia.

Did you know?

King of fruits pineapples have lots of important properties that are essential in keeping you healthy. Here are some of the main nutritional benefits of pineapples:



1- The Bromelain enzyme is generally found in the stem or core of a pineapple and helps to digest food by breaking down the protein particles within it. Promoting a healthy digestive system, it's great for a natural detox and has also been known for its anti-inflammatory and anti-clotting properties.

2- Pineapple is low in calories, sodium, saturated fats and cholesterol while being a rich source of fibre, so it's the perfect weight loss food .

3- An excellent source of Vitamin C and other antioxidants

essential for collagen synthesis, Vitamin C also helps to maintain the integrity of blood vessels, skin, organs and bones.

4- Increasing your daily intake of antioxidants is also great for boosting the immune system, which means being able to fight off colds and flus during winter.

5- Pineapple is also known for its high level of manganese. The Manganese mineral is an essential element for energy production, while protecting your cells from free radicals. It helps the body use key nutrients including thiamine and biotin, keeps bones healthy.

6- Pineapple is also a rich source in Vitamin A and Beta-Carotene, which helps the immune system, eyesight and protects from free radicals; Vitamins B1 and B6 which are good for energy production and the breakdown of sugars and starches in the digestive system; copper, which helps red blood cell synthesis; and potassium, which assists in controlling the heart rate and blood pressure.

Editorial Board

Supervisors:

Prof. Zedan Zeid Ibraheim, Dean of Faculty of Pharmacy.

Prof. Tahani Hassan Elfaham, Director of DIC

Editors:

B.Sc. Wafaa Abd Elmoneim, Clinical Ph. Diploma

B.Sc. Heba Yousry Raslan, Clinical Ph. Diploma

M.Sc. Hanan Mohamed Gaber

This Bulletin is produced by the Drug Information Center - Faculty of Pharmacy, Assiut University. Tel.088/2357399 & 088/2411556

E-mail: clinipharm_assiut@yahoo.com, website: www.clinipharm.aun.edu.eg

رقم الإيداع: ١٢٦٣٢ لسنة ٢٠٠٥