ABSTRACT:
Black hairy tongue probably related to paroxetine use: a case report

Black hairy tongue (BHT), also known as “lingua villosa nigra,” is a benign and reversible disorder characterized by hypertrophy of filiform papillae (longer than 3 mm) on the surface of the tongue. Although BHT is usually asymptomatic, in some cases nausea, halitosis and gagging may accompany to BHT. Poor oral hygiene, smoking, alcohol, cancer, and drugs are important in etiology of BHT. Previously reported drugs associated with BHT are antibiotics and psychotropics such as olanzapine, fluoxetine, clonazepam, thiothixene, and benztpoine mesylate. BHT has not been reported with paroxetine before. Here we report a case of BHT occurred after initiation of paroxetine in a 30-year-old man for his anxiety disorder and disappeared after discontinuation, which identifies a probable association with paroxetine.

Keywords: paroxetine, black, hairy, tongue

INTRODUCTION
Black hairy tongue (BHT), also known as “lingua villosa nigra,” is a benign and reversible disorder characterized by excessively long and stained dark brown or black discoloration and hypertrophy of filiform papillae (longer than 3 mm) on the surface of the tongue. Amatus Lusinatus first described it. He noticed that hairs on a man’s tongue renewed themselves after pulling. While this disorder is described as “black” hairy tongue, yellow, green, and brown discolorations have also been reported. The course of BHT is usually asymptomatic, but it can be present with nausea, halitosis, dysgeusia, and gagging. BHT is usually common with aesthetic concerns and typically causes frequent dermatologist office visits. Predisposing factors to BHT could be sorted as smoking, alcohol use, cancer, and antibiotic use. As a drug side effect, BHT is rare. Drugs with anticholinergic properties are associated with BHT because they cause dry mouth. Previously reported psychotropic drugs associated with BHT are thiothixene hydrochloride, benztpoine mesylate, fluoxetine, olanzapine, and clonazepam. To the best of our knowledge there is no report of BHT induced by paroxetine.
treatment in PubMed or Google Scholar. Here, we report a 30 year-old man who has developed BHT 4 weeks after initiating paroxetine treatment.

CASE

The subject was a 30-year-old male patient, forwarded by a dermatologist to the psychiatry outpatient clinic. Dermatologist stated that patient was diagnosed as BHT due to paroxetine and asked us to manage psychiatric treatment. The patient was taking 20 mg/d paroxetine. He told us his symptoms started as attacks of feeling anxious, paresthesia in the arms, palpitations, nausea, and dizziness. These symptoms were starting as attacks lasting about 25-30 minutes. Because of these symptoms, he presented to the emergency service twice. He described no concerns about having another attack. He didn’t define agoraphobia. He was not feeling depressed, and he did not describe any other psychiatric conditions. Patient diagnosed as anxiety disorder, not otherwise specified. He also indicated that he was feeling very well 1 month after initiating paroxetine other than experiencing dry mouth as a side effect due to paroxetine. He has been smoking 10 cigarettes per day for 4 years; he has not been an alcohol drinker. He mentioned taking no other drugs before the initiation of paroxetine. The patient reported that the blackish pigmentation in the posterior aspect of the tongue started four weeks after paroxetine treatment was initiated. On examination of the oral cavity, black to brown discoloration was seen in the posterior aspect of the dorsal surface of tongue, with elongated and hypertrophied filiform papillae (Figure 1). Biochemical lab tests (including: Complete Blood Count, ferritin, folic acid, vitamin B12, thyroid hormones, glucose, AST, ALT, BUN, creatine etc.) were normal. Patient did not provide consent for biopsy of the lesion. During his psychiatric evaluation in our clinic, the patient was stable and free of anxiety symptoms. His oral hygiene was good and he was not a heavy smoker. We told him that the BHT was probably caused by the paroxetine. We offered to change his medication with another SSRI, but he refused, instead requested to stop the medication. We therefore stopped his medication and started periodic follow-up exams. Patient continued smoking 10 cigarettes per day. During his follow-up visits, BHT relieved significantly in two weeks. After one month, his BHT disappeared completely (Figure 2). Written
and verbal consents were obtained from the patient for publication of his case.

**DISCUSSION**

The exact mechanism behind drug-induced BHT is not known. Defective desquamation of the keratinized layer of the tongue leads to the excessive growth and thickening of filiform papillae of the tongue, which leads to a collection of microorganisms and/or foreign material. BHT typically presents in elderly males with poor oral hygiene who smoke heavily and take antibiotics or psychotropic drugs. The diagnosis of drug-induced BHT depends upon the visual inspection of the discolored, elongated, and hypertrophied filiform papillae. A detailed history of the patient helps us to identify the offending drug and the associated contributing factors. Antibiotics, antipsychotics, antidepressants, and anxiolytics have been reported to be associated with BHT. In a case report, Heymann reported BHT in a 36-year-old male after initiating fluoxetine hydrochloride, thiothixene hydrochloride, benztpine mesylate, and clonazepam for bipolar affective disorder. The patient’s oral hygiene was relatively poor, and he was smoking about a pack of cigarettes per day. In this case, BHT appeared several months after treatment. Another case report involved an antipsychotic medication which was olanzapine. This patient was a 25-year-old female diagnosed with bipolar disorder. In that case, the patient was on lithium (900 mg/day) and valproate (1000 mg/day) treatment. She was manic when she was admitted to the emergency service. Olanzapine (20 mg/day) was added to her treatment. BHT was noticed after olanzapine was added on and disappeared after discontinuation. We searched Google Scholar and PubMed with the keywords “paroxetine, black hairy tongue” and “paroxetine, lingua villosa nigra” We found no case reports. We believe this is the first case report of BHT associated with paroxetine. Paroxetine is a selective serotonin reuptake inhibitor widely used for treatment of major depression and anxiety disorders. The most common side effects of paroxetine are sedation, dry mouth, and nausea. Furthermore, angular cheilitis, burning mouth syndrome, and xerostomia are oral side effects associated with paroxetine. The patient was not on any other medications except paroxetine. Our patient’s Naranjo Adverse Drug Reaction Probability Scale score was 5, indicating that the BHT was likely induced by paroxetine. We think that, in our case, the potential mechanism of induced BHT is dry mouth caused by paroxetine. Other known causes of BHT like poor oral hygiene, Addison’s disease, pernicious anemia, antibiotic use, alcohol and HIV infection were ruled out. Previous reports of BHT were about patients taking three or four drugs. In our case, the relationship between paroxetine and BHT seems more obvious. Paroxetine is the only medication in our case, thus our case presents relatively strong association -in terms of drug induced BHT- compared to previous reports. As expected, dry mouth due to paroxetine occurred in our patient. Smoking could also be a predisposing factor in our case. However, after withdrawal of paroxetine, in spite of smoking continuation, BHT disappeared.

**CONCLUSION**

Paroxetine-induced BHT is a rare and benign disorder. Other predisposing factors should be excluded before diagnosing paroxetine-induced BHT. The patient on paroxetine therapy should be advised to maintain good oral hygiene to prevent the development of BHT. Further investigations are needed to find out the pathogenesis of paroxetine-induced BHT.

**References:**


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