

# Reversible Worsening of Parkinson Disease Motor Symptoms After Oral Intake of *Uncaria tomentosa* (Cat's Claw)

Carlos Cosentino, MD\*† and Luis Torres, MD\*

## Abstract

*Uncaria tomentosa* (UT), also known as cat's claw, is a Peruvian Rubiaceae species widely used in traditional medicine for the treatment of a wide range of health problems. There is no report about the use, safety, and efficacy of UT in neurological disorders. We describe reversible worsening of motor signs in a patient with Parkinson disease after oral intake of UT, and some possible explanations are discussed.

**Key Words:** *Uncaria tomentosa*, Parkinson disease, levodopa

(*Clin Neuropharmacol* 2008;31:293–294)

**U**ncaria tomentosa (UT), also known as cat's claw, is a Peruvian Rubiaceae species widely used in traditional medicine for the treatment of a wide range of health problems particularly cancer, gastritis, and arthritis.<sup>1</sup> Some of the beneficial effects observed in patients suggest an immunomodulatory capacity as well as cytostatic, anti-inflammatory, and antimutagenic properties of UT extracts. Analytical characterizations of its active constituents have identified a variety of classes of compounds of toxicological, pharmacological, and even nutritional interest including oxindole and indole alkaloids, flavonoids, glucosinolates, sterols, polyunsaturated fatty acids, carbolines, and other compounds. There is no report about the use, safety, and efficacy of UT in neurological disorders. We describe worsening of motor signs in a patient with Parkinson disease (PD) after oral intake of UT.

## CASE REPORT

This is a case of a 38-year-old man with PD since the age of 30. During first years of dis-

ease, motor symptoms were well controlled with low doses of levodopa. Some years later, motor fluctuations and peak-of-dose dyskinesia developed. Pergolide was added, and a left pallidotomy was performed. He has been well controlled, taking small frequent doses of levodopa and pergolide. He continued working, despite some mild-to-moderate peak-of-dose dyskinesia, wearing-off phenomena, and some "sudden off" episodes.

He was told by a friend to take cat's claw extracts, and although it is widely available in tablets in Peru, he decided to prepare hot extracts of the bark of cat's claw that were served in a cup and orally taken 3 times daily during almost 3 weeks. A few days after the first day of intake, tremor and hypokinesia markedly increased, being in off states most part of the days. Time and doses of levodopa and pergolide remained unchanged. He continued taking the beverage for 3 weeks with same poor response. After withdrawal of cat's claw extracts, he remained markedly hypokinetic for 1 more week. Then, and without any change in levodopa and pergolide daily dosing, motor symptoms progressively improved to reach the basal state previous to the intake of cat's claw.

## DISCUSSION

Historic medicinal practice has defined UT as an effective treatment for several health disorders including chronic inflammation, cancer, and even infections. *Uncaria tomentosa* contains about 60 active substances that are being tested widely for possible medicinal value. The efficacy of UT was originally believed to be due to the presence of oxindole alkaloids; nevertheless, some authors have demonstrated that the anti-inflammatory and antioxidant activities of UT are independent of their alkaloid content.<sup>2</sup> More recently, water-soluble extracts were shown not even to contain

\*Movement Disorders Unit, Instituto de Ciencias Neurologicas, and the †Complejo Hospitalario San Pablo, Lima, Peru.

Address correspondence and reprint requests to Carlos Cosentino, MD, Movement Disorders Unit, Instituto de Ciencias Neurologicas, Ancash 1271, Lima 1, Peru; E-mail: ccosentino@gmail.com.

Copyright © 2008 by Lippincott Williams & Wilkins

significant amounts of alkaloids and still were shown to be very efficacious.

There are some reports that have evaluated safety and clinical efficacy of UT extract in patients with chronic nonneurological diseases, and there are few controlled clinical studies that have evaluated efficacy of UT extract in reducing pain associated with various chronic inflammatory disorders like rheumatoid arthritis.<sup>3,4</sup> Besides the fact that there is still insufficient clinical data overall to draw firm conclusions for its anti-inflammatory effects, an important observation was that experimental results were often dependent upon the nature of the preparation used (ie, decoction, extract, tablets). So it appears that the presence of unknown substances may have an important role in the overall effects of UT extracts.<sup>5</sup> Recently, some studies indicate that some components of UT produce antinociception through mechanisms that involve an interaction with type 2 serotonin receptors.<sup>6</sup> It remains to be determined whether known alkaloids or unknown compounds may act in central nervous system through neurotransmitter syntheses and/or receptors. It should be mentioned that UT extract is also used in some severe "intestinal derangements" because of its ability to cleanse the entire intestinal tract.

Despite the geographic sourcing from remote regions of the tropical Peruvian Amazon, UT or cat's claw is widely available commercially in industrialized countries and currently is in demand as tea, tablets, or capsules in Peru and in more than 30 countries outside Peru. For now, at least, UT seems to be virtually nontoxic and safe to use up to as much as 20 g/d for several weeks to several months at a time. This is the amount gen-

erally used by the indigenous people of Peru, who boil inner bark and/or root in a liter of water for 30 minutes and then consume this decoction throughout the day for a variety of illnesses.

To the best of our knowledge, there is no previous report about the relationship between UT, levodopa, and PD motor signs. In the case reported here, a possible explanation of worsening of parkinsonism and/or poor response to dopaminergic drugs could be an unknown interaction of UT extract within the dopaminergic nigrostriatal pathway (postsynaptic receptor blockade, impaired dopamine release, etc) or an impaired intestinal absorption of levodopa and pergolide due to UT extract. Because worsening of motor signs was reversible, the latter could be the most likely explanation, although further studies are needed.

## REFERENCES

1. Hardin S. Cat's claw: an Amazonian vine decreases inflammation in osteoarthritis. *Complement Ther Clin Pract* 2007;13:25–28.
2. Sandoval M, Okuhama NN, Zhang XJ, et al. Anti-inflammatory and antioxidant activities of cat's claw (*Uncaria tomentosa* and *Uncaria guianensis*) are independent of their alkaloid content. *Phytomedicine* 2002;9:325–337.
3. Piscocoya J, Rodriguez Z, Bustamante SA, et al. Efficacy and safety of freeze-dried cat's claw in osteoarthritis of the knee: mechanisms of action of the species *Uncaria guianensis*. *Inflamm Res* 2001;50:442–448.
4. Mur E, Hartig F, Eibl G, et al. Randomized double blind trial of an extract from the pentacyclic alkaloid-chemotype of *Uncaria tomentosa* for the treatment of rheumatoid arthritis. *J Rheumatol* 2002;29:656–658.
5. Valerio LG, Gonzales GF. Toxicological aspects of the South American herbs cat's claw (*Uncaria tomentosa*) and Maca (*Lepidium meyenii*): a critical synopsis. *Toxicol Rev* 2005; 24:11–35.
6. Jurgensen S, Dalbo S, Angers P, et al. Involvement of 5-HT<sub>2</sub> receptors in the antinociceptive effect of *Uncaria tomentosa*. *Pharmacol Biochem Behav* 2005;81:466–477.