

#### **Ghost Pills**

#### Background

Some sustained-release formulations of oral medications are not fully digested.

### Purpose

To alert clinicians to concerns that some patients and their care givers have about these medications.

## **Case Report**

We prescribed a sustained-release form venlafaxine at a dose of 75mg once daily (Venlalic XL, DB Ashbourne Ltd) for a 71 year old man with Huntington's disease who was suffering from depression and anxiety. The patient's care giver expressed concern that the pills were being excreted, undigested, in his stool. She intrepidly isolated one pill and brought it to the clinic. Examination revealed an undigested pill casing looking very much like a fresh pill with a small hole through which the drug is designed to leach slowly (Figure A). Unlike a fresh pill, the retrieved pill was malleable to pressure (Figure B). The bisected pill was partially filled with insoluble matrix material into which the drug was originally dispersed (Figure C).

#### Discussion

Apparently undigested pills in the stool are known as "ghost pills."(1-5) They are expected with certain sustained-release preparations, and their presence does not indicate that the drug itself is not being absorbed. Patients taking such preparations should be counselled in advance about ghost pills.

## References

- 1. Anderson DT, Fritz KL, Muto JJ. Oxycontin: the concept of a "ghost pill" and the postmortem tissue distribution of oxycodone in 36 cases. *J Anal Toxicol*. 2002 Oct;26(7):448-59. PMID:12422999.
- 2. Tungaraza TE, Talapan-Manikoth P, Jenkins R. Curse of the ghost pills: the role of oral controlled-release formulations in the passage of empty intact shells in faeces. Two case reports and a literature review relevant to psychiatry. *Ther Adv Drug Saf.* 2013 Apr;4(2):63-71. doi: 10.1177/2042098612474681.
- Tongeji E. Tungaraza, Pravija Talapan-Manikoth, Yvonne M. Eboka, Nazima Mahmood, Sandeep K. Bains, Kiran Sihota. Ghost pill: knowledge and awareness of this phenomenon among health care professionals. *Int J Basic Clin Pharmacol.* 2014; 3(4): 602-607. doi: 10.5455/2319-2003.ijbcp20140803.
- Sun D, Wen H, Externbrink A, Gao Z, Keire D, Krauss G, Jiang W. Ghost-Pill-Buster: A Case Study of Intact Levetiracetam Extended-Release Tablets after Dissolution Testing. *CNS Drugs*. 2016 May;30(5):455-60. doi: 10.1007/s40263-016-0332-9.
- 5. <u>http://www.primetimehealthplan.com/Handlers/FormHandler.ashx?intFormId=7</u> <u>83</u>. Accessed November 4, 2016.

# Figure

