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Clinical Image Open Access

# *Balantidium coli* in the Urinse Sediment

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## Introduction

*Balantidium coli* is a ciliated protozoa which can infect humans. Although the infection is uncommon, it tends to be more frequent in the tropics and subtropical regions. It is often asymptomatic but may present with gastrointestinal symptoms. Few cases of urinary balantidiasis have been reported [1,2] but faecal contamination could cause diagnostic dilemma.

## Clinical Image

We report *Balantidium coli* in urine sediment from a 59-year-old woman who was seen in a Hospital at Porto Alegre (Rio Grande do Sul, Brazil), which serves a large rural and urban population. On March 20, 2009 the asymptomatic patient of low social class presented with a clinical history of uterine cervix carcinoma, obstructive uropathy (which required a permanent bilateral ureteric stenting) and recurrent urinary tract infection. She was admitted to our center for a general check-up.

The centrifuged urinary sediment (analyzed with a bright field microscope) contained many leukocytes and bacteria interminglexd with mites, yeasts, *Fusarium* fungi and a large number of a ciliated protozoa, whose morphology and rapid movements through the slide were all consistent with trophozoites and cysts of *Balantidium coli* (Figure 1). All these findings were confirmed in a new sample supplied in the afternoon of the same day. There was no specific treatment for *Balantidium coli* but a repeat urine sample was collected six days later after properly educating the patient on the methods of urine collection. This new urine sample revealed only bacteria and leukocytes but no *Balantidium coli*, no mites, yeasts or *Fusarium*. Urine culture was positive for *Serratia* sp. which was treated with i.v. amikacin.

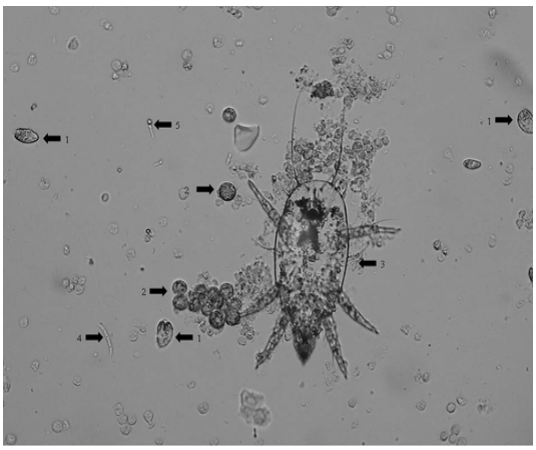

**Figure 1:** Image of the first sample. Arrow 1: Trophozoites of Balantidium coli. Arrow 2: Cysts of Balantidiumcoli. Arrow 3: Mite. Arrow 4: Fusarium fungi. Arrow 5: Yeast (Bright field microscopy. Original magnification 100x).

## Discussion

Stimulated by the unusual findings described above, we checked the patient and found that the first two urine samples had been obtained without proper procedures about urine collection and that the urine had been collected in a container which was kept under the bed of the patient for hours before being transferred to the sterile capped container supplied by the hospital laboratory. On the contrary, the third urine sample had been collected directly in the container supplied by the laboratory and after the patient had been instructed about the correct procedure for urine collection [3].

The finding of a large variety of microorganism in the first two samples, coupled with the incorrect urine collection procedures used and the low social class of the patient, strongly suggest that the urine was heavily contaminated by particles coming from both the environment (eg, *Fusarium* fungi, which may exist in the soil of potted plants in hospital) [4] and/or the patient herself (eg, mites from pubis or perianal area [5], *Balantidium coli* from feces).

Maino et al. [1] reported urinary balantidiasis in an immunocompromised patient [1], while our case demonstrates just contamination. Various protozoa and helminthes can occasionally be found on urine sediment following contamination from faeces in the infested person or the environment [5]. Clear instructions must be given to patients on proper urine sample collection to avoid confusion on diagnosis.

### References

1. Maino A, Garigali G, Grande R, Messa P, Fogazzi GB (2010) Urinary balantidiasis: diagnosis at a glance by urine sediment examination. J Nephrol 23: 732-737.
2. Umesh S (2007) Balantidium coli on urine microscopy. Natl Med J India 20: 270.
3. European Confederation of Laboratory Medicine (2000) European urinalysis guidelines. Scand J Clin Lab Invest Suppl 231: 1-86.
4. Su CC, Hsu HJ, Wu JJ, Chou CW (2007) Diagnosis of fusariosis in urine cytology. J Clin Pathol 60: 422-424.
5. Cannon DC (1981) Parasites in Urine. Urinary Sediment: A textbook atlas. 1st ed. Chicago, Il: American Society of Clinical Pathologists 106-110.

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