

COMUNICACIONES

Balantidium coli (Vestibuliferida: Balantidiidae):
The persistence of an old problem

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Resumen: Se describe dos casos mortales de balantidiasis, un niño y un adulto, provenientes de poblaciones marginales. Se concluye que *Balantidium coli* constituye un problema raro e infrecuente y a la vez poco documentado en Costa Rica. Sin embargo, su presencia indica que las parasitosis intestinales siguen siendo un problema de salud que no debe descuidarse.

Key words: *Balantidium coli*, intestinal parasitosis, ultrastructure.

Balantidium coli is the only ciliated and the largest protozoan parasiting humans and the infection rate is low. Pigs, the natural hosts, are the most important infection source; person to person transmission has been also reported (Zaman 1978).

Human infections by *B. coli* are usually asymptomatic or cause mild diarrhea. Some patients present superficial erosion of the colonic mucosa and dysentery. In few cases, the lesions evolve to deep ulcerations and abscesses; rarely ending in fatality (Lee *et al.* 1990). Balantidiasis is considered rare, and some reports represent occasional autopsy findings. Lee *et al.* (1990) reported that less than 1000 human cases were described until 1988; they do not mentioned any report from Central America. Nevertheless, there are some reports from Costa Rica, that were reviewed by Hernández & Rivera 1992. Only two of these are histopathological descriptions (Céspedes and Morera 1955, Céspedes *et al.* 1967).

The documentation of fatal cases of balantidiosis is relevant because they are scarce. This report describes two dysentery cases associated with *B. coli*: an 8-year-old-boy and a 28-year-old man. Both were diagnosed *post mortem*.

The most important findings in both cases were colonic inflammation, wide areas of damaged tissue, deep ulcers, and abundant balantidia observed at the bottom of the crypts, submucosa, across the muscularis mucosae (Figs. 1 and 2), and in peritoneal lymph nodes of the adult case (Fig. 3). Probably, colonic ulcers in the child were the entrance way of *Staphylococcus aureus*, that was isolated from abscesses in spleen, liver and lung.

If it is true that the rate of intestinal parasitosis decreased in Costa Rica (Mata *et al.* 1985); it is also true that this improvement in public health did not reach some urban and rural marginal populations (Kossof *et al.* 1989). The two fatal balantidiasis cases reported here represent an indirect evidence of the recrudescence of intestinal parasitosis, at least in underprivileged population groups. This problem could be a consequence of the economical crisis and public health deterioration, probably increased by refugees coming from other Central American countries (Mata and Rosero 1988).

These balantidiasis cases seem to support the above argument. The younger patient was from a Nicaraguan immigrant family living in Upala (Northern Costa Rica), without basic

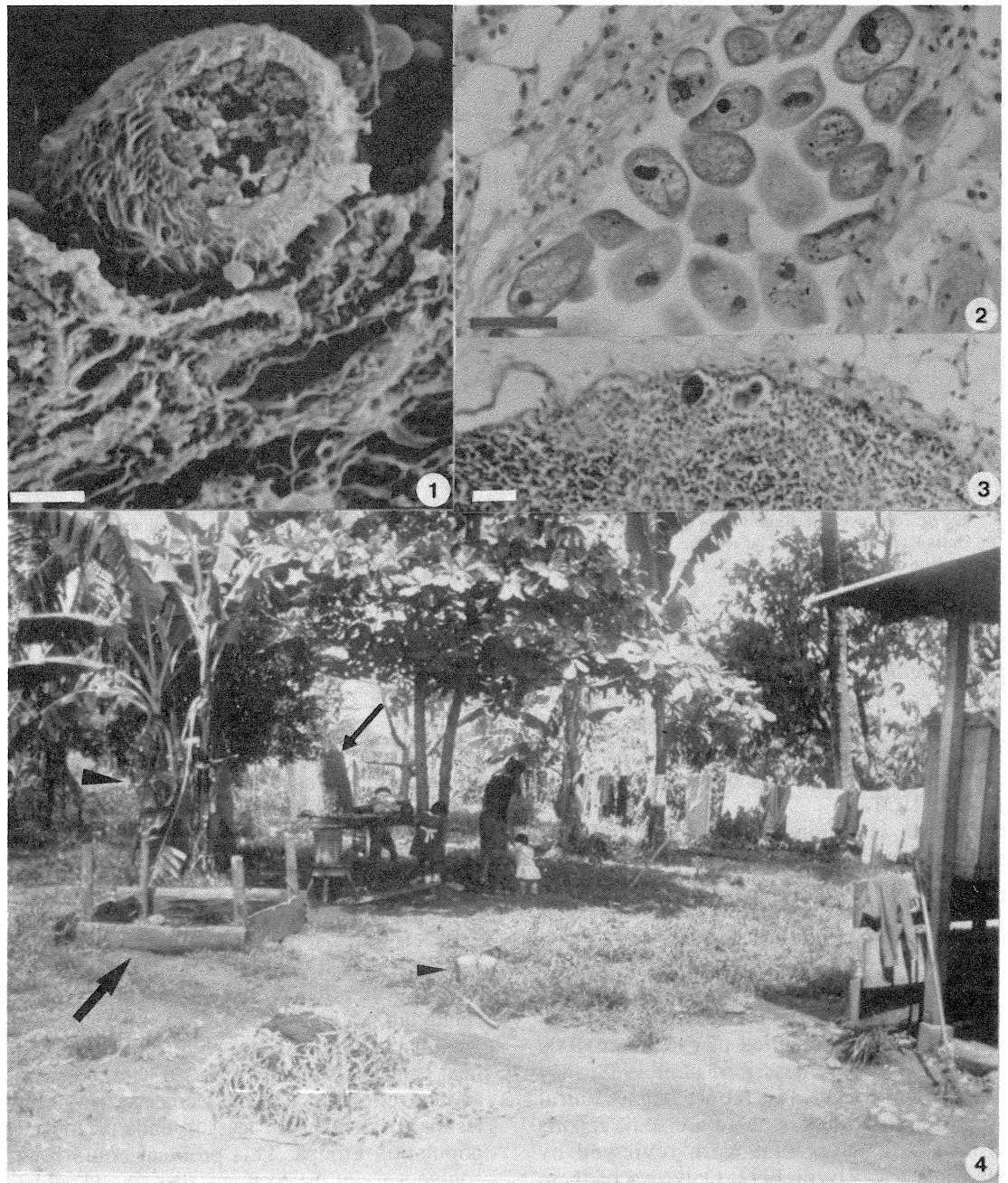


Fig. 1. Freeze cracking of colon, with a partially fractured trophozoite of *Balantidium coli* in the submucosa.(bar = 10 μ m).

Fig. 2. Lymph vessel in the submucosa of the colon of a child, with abundant balantidia (hematoxilin-eosin, bar = 50 μ m).

Fig. 3. Lymph node invaded by *Balantidium coli* (hematoxilin-eosin, bar = 50 μ m).

Fig. 4. Home of the child with balantidiasis with the source of well-water (arrow) used for cloth-washing (central part of the figure) and bathing (arrowhead). The small arrowhead points at the bucket used for collecting water. There is a latrine in the background (thin arrow)

sanitary facilities -21 persons dwelling in a four-room household-; they obtained water from a well contaminated with waste-water and separated only by about 10m from a latrine (Fig. 4). They came from Nicaragua, where they reared pigs, one year prior to the death of the child. *Endolimas nana*, *Entamoeba coli*, and *Ascaris lumbricoides* were found in other members of the family.

The second case, came from a squatter settlement in a rural area in Guápiles, Limón (Caribbean coast of Costa Rica), where some families had pigs. Therefore, pigs might be the infection source of *B. coli* in both cases.

Since intestinal parasitosis are considered a minor problem in Costa Rica, because of their low infection rate, it is possible that other cases, are frequently misdiagnosed, as in the cases described herein, basically because of the use of low-sensitivity techniques.

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