

## Human Bocavirus and Gastroenteritis

**To the Editor:** We read with great interest the recent study by Vicente and colleagues, who suspect the human bocavirus (HBoV), a newly detected parvovirus initially described as a respiratory pathogen, to be a possible causative agent of gastroenteritis in children (1). These researchers investigated the presence of HBoV DNA in 527 stool samples from ambulatory patients (<36 months of age) with unrelated respiratory symptoms. Of these stool samples, 48 (9.1%) were positive for HBoV DNA. Other enteric pathogens were found in 58% of all HBoV-positive fecal samples.

A close taxonomic relationship exists between HBoV and bovine parvovirus, an animal virus capable of causing gastrointestinal symptoms in cattle (2). Taking into account the assumed high tenacity of this parvovirus against environmental factors and hospital-grade disinfectants (3,4), we believe the possibility of fecal-oral transmission, in addition to transmission via respiratory droplets, has to be considered in interpreting the observations of Vicente et al. (1).

Gastroenteric symptoms have been described in up to 25% of all patients with respiratory HBoV infections (5–7). Although these observations suggest that HBoV may contribute to gastroenteritis or even be a causative agent, further studies are needed. Such studies should include control groups of asymptomatic patients and should test stool samples for HBoV. The correlation between detection of HBoV and clinical symptoms of gastroenteritis needs further confirmation in animal models, which are still not available. Nevertheless, the study by Vicente et al. did not clarify the extent of respiratory symptoms in patients with HBoV-positive stool samples. Taking into account the nature of parvovirus particles, we believe the virus

likely passed through the gastrointestinal tract, as patients frequently swallow virus-containing sputum or nasal secretions. Thus, the observation that HBoV is an enteric pathogen should be considered a preliminary finding. Finally, we suggest that the role of HBoV should be investigated through histologic examination of mucosa biopsy specimens (e.g., from patients with chronic gastrointestinal diseases) to confirm pathogenicity.

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**In Response:** We thank Schildgen et al. (1) for their comments on our study, with which we basically agree. Our main findings were the possibility of fecal–oral transmission of the recently discovered human bocavirus (HBoV) and the high frequency with which it has been detected in the feces of infants and young children with gastroenteritis (2). For us, this latter finding suggested that HBoV is an enteric pathogen, although we cannot rule out the possibility that the fecal elimination was unrelated to the diarrhea in these patients. The possible pathogenic role of this virus in acute respiratory infections has also been questioned; consequently, several types of studies have been proposed to obtain evidence of pathogenicity and proof of disease causation (3,4).

Schildgen et al. suggest the possibility that HBoV could be detectable in feces after patients swallow respiratory tract secretions. Most of the children with gastroenteritis in our study showed no signs of respiratory infection. Swallowing respiratory tract secretions when one does not have respiratory inflammation would probably produce a quantity of virus too small to be detected in feces in the high frequency with which it was detected in our study. Therefore, we believe that the fecal elimination was more likely produced by HBoV replication in the intestinal mucosa. The studies proposed by Schildgen et al. would undoubtedly help elucidate this issue.

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## Burning the Rat

AI Zolynas

I find him lying by the door,  
legs outstretched as if he died in mid-leap.  
I pick him up by the tail.  
He feels loose, beyond the first stiffness of death.  
His molecules have realized the futility of hanging on;  
they know the party's over, it's time to head home.

Suddenly, I want to burn this rat.  
I surprise myself at how much I want this.  
I want to save him from the slow  
decay, the fetid rearrangement  
of his parts --or so I tell myself.  
But mostly, I want to see him burn.

I drop him on the wire screen  
that covers the forty-gallon drum  
I use for burning garbage.  
I light the fire.  
I am strangely satisfied.  
As I expected, his whiskers furl  
into quick question marks and are gone;  
his fur bubbles, then turns black and dry.

The tail, the long nightmare of a tail,  
holds on longer than I thought.

Hours later, it is the only thing left,  
a white length of ash  
like the backbone of something prehistoric  
seen from a great distance.

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