Prevalence and clinical role of Human Bocavirus in bronchoalveolar lavages of adult patients

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SUMMARY

Introduction. Human Bocavirus (HBoV) is a ubiquitous parvovirus predominantly associated with respiratory tract infections in pediatric patients. The results of the few studies conducted in adult patients are conflicting, with data of prevalence around 0.8%, thus making difficult to evaluate the HBoV clinical role. In this study the prevalence and clinical role of HBoV in adult hospitalized patients were evaluated.

Methods. The presence of HBoV was evaluated in 514 bronchoalveolar lavages (BAL), obtained over a period of 24 months from 341 adult patients (mean age, 56.5 ± 16.2 years, range 19-85), by real-time TaqMan PCR. The BAL was performed for the presence of symptoms/signs of suspected infection of the lower airways or for surveillance in the transplanted lung patients (month 1 and every 3 months).

Results. 12/341 patients (3.5%) were positive for HBoV; in particular: 1/45 (2.2%) lung transplanted, 1/20 (5%) liver transplanted and 2/26 (7.7%) bone marrow transplanted, while no kidney (n=19) or heart (n=13) transplant patients resulted positive. 8/218 (3.6%) not transplant-patient were positive, in particular 1.8% patients with haematological cancers and 1.8% with other disease. The prevalence of HBoV did not differ between transplanted and not transplanted patients, depending on the type of transplant, and between immunocompetent and immunocompromised individuals.

Conclusions. HBoV can be detected at low frequency in BAL of adult patients with acute lower respiratory tract, further studies would show whether the virus plays a role as a single pathogen or whether the altered lung background could help the viral infection.