

Detection of human bocavirus mRNA in PBMCs from patient with acute lower respiratory tract infection

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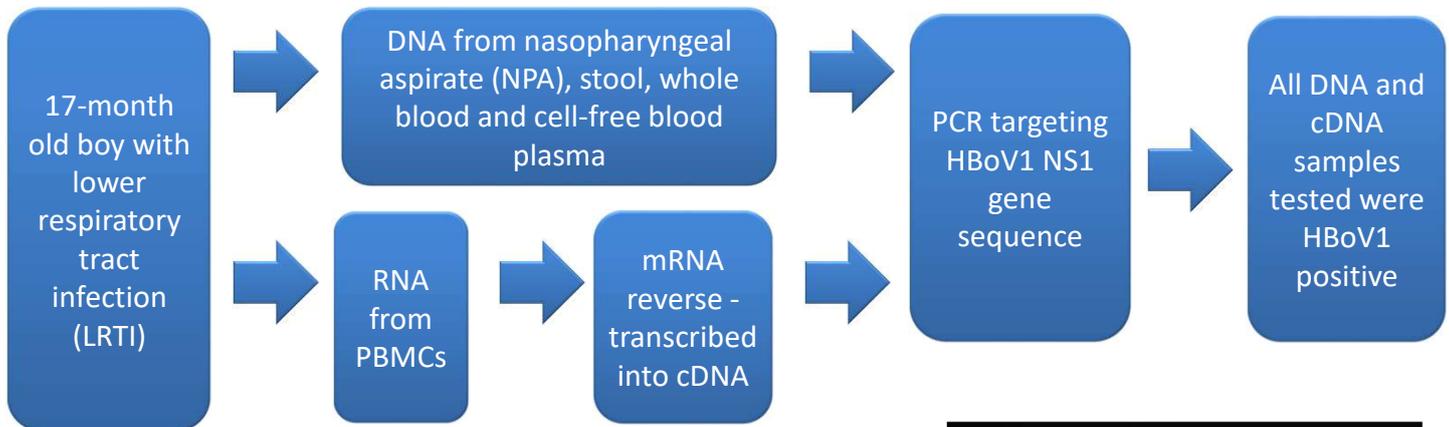
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Human bocavirus type one (HBoV1) is a parvovirus discovered in 2005 and is considered as a respiratory pathogen. Although HBoV1 genomic sequences are most commonly detected in samples from respiratory tract, the replication cycle and HBoV1 target cells are still not completely studied.

Case report:



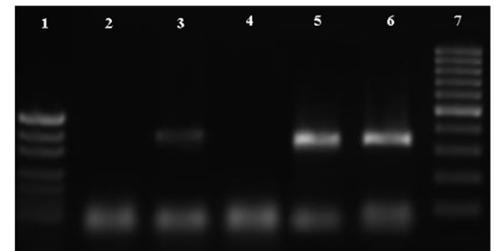
Clinical picture:

- respiratory rate 44 breaths/min (reference 20-30)
- heart rate 146 beats/min (reference 80-130)
- oxygen saturation 99% (with an oxygen flow of 5 liters/min via face mask)
- axillary temperature 38.7°C.
- bilateral wheezing and crepitation with severe intercostal and subcostal recessions
- the other organ systems were without pathology



Chest radiograph (anterioposterior view) of the patient on the first day of hospitalization, showing upper right-side pneumonia

Conclusion: Presence of HBoV1 DNA in whole blood and cell-free blood plasma shows that virus is not only present in respiratory tract but is also circulating in the blood. **To our knowledge this is the first time HBoV1 mRNA has been detected in PBMCs, suggesting active replication in PBMC.**



Electrophoretic visualization of amplification products in 1.7% agarose gel after PCR targeting HBoV1 NS1 gene

Legend: 1. pUC19 DNA/MspI (HpaII) marker; 2. DNase treated RNA sample without RT step; 3. cDNA sample synthesized from DNase treated RNA; 4. Negative control (molecular biology grade H₂O); 5., 6. Positive control (HBoV1 plasmid); 7. GeneRuler 100bp DNA Ladder