



Comparison of Epidemiologic and Clinical Characteristics of Enterovirus and Parechovirus Central Nervous System Infections in Kansas City Children during 2016



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INTRODUCTION

Human Parechovirus (HPeV) and Enterovirus (EV):

- Small, non-enveloped, single-stranded RNA viruses in the Picornaviridae family
- Similar presenting symptoms, including fever, irritability, rash, and poor feeding
- Self-resolving GI or respiratory infection to life-threatening meningitis, encephalitis, sepsis, or hepatitis
- Study compares epidemiological and clinical characteristics of patients infected by both EV and HPeV in 2016

METHODS

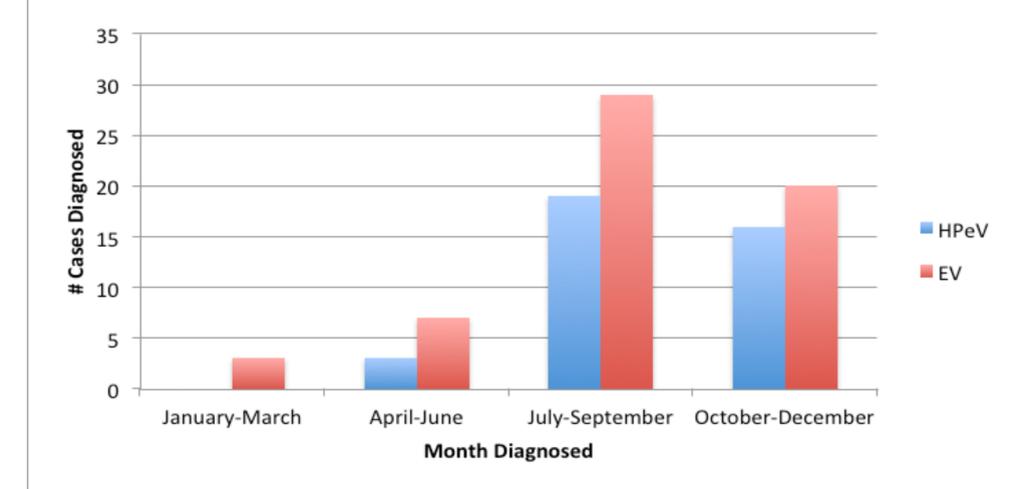
- Retrospectively abstracted a list of patients infected with HPeV and EV admitted to Children's Mercy Hospitals and Clinics in Kansas City in 2016
- Obtained demographics and clinical data from medical records
- Students' t-test used to compare clinical characteristics

RESULTS

- 40% HPeV positive (n=38) and 61% EV positive (n=59)
- HPeV patient median age was 31.5 days (range: 6 days to 69 days)
- EV patient median age was 35 days (range: 6 days to 5276 days)
- Longer ICU admissions for HPeV infections (p<0.0001)
- White blood count in both CSF (p=0.0009) and blood (p<0.0001) significantly elevated in EV infections compared to HPeV
- CSF protein (p=0.0162) higher in EV, while CSF glucose (0.0492) higher in HPeV

Clinical Feature	HPeV (n=38)	EV (n=59)	p
Male	21 (55%)	32 (54%)	NS; 0.24
Median Age (days)	31.5	35	
Age range (days)	6-69	6-5276	
#days hospitalized	3.3±1.8	2.8±1.5	NS; 0.14
ICU admission	3 (8%)	2 (3%)	NS; 0.75
#days in ICU	7.3±2.1	1.5±0.7	<0.0001
Rash	4 (11%)	7 (12%)	NS; 0.54
Temperature>100.4F	35 (92%)	54 (92%)	NS; 0.07
Maximum Temp	101.8±1.2	101.7±1.1	NS; 0.67
CSF WBC	4.03±5.53	204.16±358.64	0.0009
CSF Glucose	48.3±5.38	45.3±8.21	0.0492
CSF Protein	59.8±20.62	77.17±40.42	0.0162
CBC WBC	6.46±2.51	11.29±5.19	<0.0001

Distribution of EV and HPeV Cases



CONCLUSIONS

- EV and HPeV are important pediatric causes of febrile illness requiring hospitalization
- Though clinical presentation can be similar, noticeable differences include lab values and severity of the disease
- Early detection of these viruses can lead to decreased clinical complications and

CREDITS/DISCLOSURE/REFERENCES

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