Association of Paediatric Emergency Medicine

555 DOES POINT OF CARE TESTING FOR RESPIRATORY VIRUSES ALTER MANAGEMENT OF CHILDREN PRESENTING TO THE PAEDIATRIC ACCIDENT AND EMERGENCY DEPARTMENT?

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Background Febrile and respiratory illnesses constitute a high proportion of presentations to Paediatric Accident and Emergency (A+E).¹ The diagnostic challenge is to determine which of these illnesses have a viral aetiology, and can be managed supportively, and which require cultures and prompt antibiotic administration. Point of Care Testing (POCT) for respiratory viruses provides a rapid result and may support immediate clinical judgement, whereas traditional PCR testing takes 6 – 24 hours. POCT is however more expensive.

Objectives We aimed to assess the impact of rapid POCT for influenza and respiratory syncytial virus (RSV) on the management of patients attending the Paediatric A&E department at the Royal Victoria Infirmary, Newcastle-upon-Tyne, between December 2019 and January 2020.

Methods Patients eligible for testing were infants <3 months presenting with fever and respiratory symptoms, children with complex needs (i.e. significant neuro-disability or immunocompromise) and cases where testing was felt likely to alter management, based on consultant discretion.

Data were collected retrospectively about clinical presentation, investigations and antibiotic management.

Results 150 patients were included; most aged between one and four years (38%) followed by those aged <3 months (17%). On POCT, 24% were influenza positive, 31.3% RSV positive and 46% negative.

We found a reduction in blood cultures performed in the POCT positive cohorts (19.4% (flu positive group), vs 14.9% (RSV positive group) vs 34.8% (negative group)) and similarly, a reduction in the rate of baseline blood tests taken (25% (flu positive group) vs 27.7% (RSV positive group) vs 55.1% (negative group)).

Furthermore, there was a reduction in antibiotic administration in the POCT positive groups (30.6% (flu positive group), vs 40.4% (RSV positive group) vs 50.7% (negative group)).

In the <3 months cohort; 57.1% of the negative POCT group had cultures and antibiotics, vs 33.3% of the flu positive and 12.5% of the RSV positive infants. Fever appeared to be a key determinant for antibiotic use in the RSV positive infants.

5 patients of the 150 had a central line in-situ. All presented with fever, had cultures performed and received antibiotics for possible line-related sepsis. The one child with a flu positive POCT received tamiflu in light of their immunocompromise.

Patients with significant neuro-disability and a negative POCT were found more likely to receive antibiotics relative to the negative POCT cohort as a whole (63.6% vs 50.7%), which perhaps reflects the vulnerability of this group.

Conclusions POCT for influenza and RSV may help avoid septic screening of infants <3 months, and reduce unnecessary blood sampling and antibiotic prescriptions in older children. It is unlikely to be useful in patients with central line access aside from in the case of suspected influenza when tamiflu administration may be warranted. Standard laboratory respiratory virus PCR should be performed where a result is required but will not alter immediate management.

Our next objective is to determine the cost-effectiveness of permanent point-of-care testing within our Paediatric A&E department.

REFERENCE

1. <https://adc.bmj.com/content/84/5/390>

British Paediatric Neurology Association

557 RECURRENT CEREBRAL VENOUS SINUS THROMBOSES (CVST'S) AND LIVEDO RETICULARIS RASH – A CASE OF SNEDDON SYNDROME

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Background Sneddon syndrome is a rare, progressive small and medium-vessel vasculopathy characterized by the clinical occurrence of livedo racemosa and ischaemic cerebrovascular events.

Objectives We present the clinical course and management of this rare condition.

Methods An 18-year-old female of East Indian descent presented with the following:

CNS involvement: Recurrent Cerebral Venous Sinus Thromboses + Cognitive impairment

- Skin: Livedo reticularis rash
- Eyes: Bilateral optic nerves atrophy
- CVS: Mild to moderate LAD dilation (16/12/2020)
- MS: Polyarticular arthritis

She first presented at 8-years-old with new-onset squint, ataxia and fever and was treated as culture-negative meningitis (CSF white cells 1238 neutrophils, CSF protein 110mg/dL). At 16-years-old, she presented with expressive aphasia, headache, fever, left earache and was treated as acute mastoiditis.

Regarding the recurrent presentations of CVST's there was involvement of left transverse sinus (untreated 2 years ago), then over a 1-month period despite anticoagulation, right transverse sinus with extension into the right sigmoid sinus and left straight and posterior superior sagittal sinus. She presented with headache, vomiting and new-onset seizures (GTCS) prior to these presentations. An extension of this clot after being non-compliant with low-molecular weight heparin for 1 week resulted in a venous infarct with surrounding oedema. She presented with progressive right-sided weakness and expressive aphasia and within 24 hours,