Incidence and severity of new-onset paediatric Type 1 diabetes in the COVID-19 pandemic – a UK multicentre perspective.

Caroline Ponmani1, Sophia Sakka2,3, Chandu Wickramarachchi1, Yvete Redpath1, Michal Ajzensztejn2, Shankar Kanumakala4 and Tony Hulse3

1. Department of Paediatric Emergency Medicine, Barking Havering and Redbridge University Hospitals NHS Trust, London, UK
2. Department of Endocrinology and Diabetes, Evelina London Children’s Hospital, London, UK
3. GKT School of Medical Education, King’s College London Faculty of Life Sciences and Medicine, London, UK
4. Royal Alexandra Children’s Hospital, Brighton and Sussex University Hospitals NHS Trust, Brighton, UK

Background

• Paediatric diabetes has been the focus of attention during the COVID-19 pandemic.
• There are reports of increased incidence of new-onset type 1 paediatric diabetes and concerns about delayed presentations to the Emergency Department (ED) due to parental fears of SARS-CoV-2, resulting in an increase in the incidence and severity of DKA in children with new-onset diabetes.

Aims

- To investigate the perceptions
- To investigate the proposed relationship of new-onset T1DM with SARS-CoV-2
- To explore the incidence and severity of decompensation to DKA

Methods

Multicentre, retrospective data of new-onset T1DM during the COVID-19 pandemic in children aged 6 months to 17 years from 12 paediatric diabetes units (PDUs) across South London, Kent, Brighton, and North East London. We compared the characteristics of 178 children presenting with new-onset T1DM between January to July 2020 with those of 150 children who presented during the same period in 2019.

Results

- A significant increase in the incidence of DKA during the pandemic
- A significant increase in the absolute numbers of severe DKA: 2019 vs 2020

Conclusions

Increase in the number and severity of children presenting with DKA in 2020.

2020 was a high incidence year for new onset T1DM in children, however COVID-19 pandemic is not dramatically increasing incidence of paediatric T1DM.

A mix of qualitative and quantitative aspects gives a signal that there may be a link between COVID-19 and new onset T1DM in children.

Recommendations

1. We recommend universal COVID-19 serology testing in children with new-onset diabetes in the pandemic.
2. It is vital to emphasise early recognition and prevention of DKA in children with new-onset paediatric diabetes given the high incidence in the pandemic.