LETTERS TO THE EDITOR

Dear Editor,

PRESENTATION OF PAEDIATRIC TYPE 1 DIABETES IN MELBOURNE, AUSTRALIA DURING THE INITIAL STAGES OF THE COVID-19 PANDEMIC

Since the commencement of social isolation in the COVID-19 pandemic (first case, 25 January; restrictions commenced, 13 March), paediatric diabetes centres across Australia have voiced concerns about an apparent reduction in new presentations of type 1 diabetes mellitus (T1DM).

Reports from Italy and the USA have described delayed hospital presentations with severe diabetic ketoacidosis (DKA) at first presentation with T1DM during the COVID-19 pandemic. To date, there are no published Australian data on the impact of COVID-19 on childhood T1DM presentations.

Combined, the Royal Children’s Hospital Melbourne and Monash Children’s Hospital oversee the management of the majority of paediatric T1DM in Victoria (~80%). An audit of new presentations of T1DM (both total numbers and proportion presenting in DKA) was conducted across both sites from February to May for the years 2017–2020 inclusive. The severity of DKA at presentation (mild = pH 7.2–7.35, bicarbonate >10; moderate = pH 7.1–7.2, bicarbonate 5–10; severe = pH <7.1, bicarbonate <5) and admissions to the intensive care unit (ICU) were recorded.

The absolute number of new presentations of T1DM between February and May in 2020 was similar to previous years, although 2019 represented an unexplained relative increase in numbers (Table 1). DKA severity and ICU admissions were similar for all years. Based on a combined estimation from 2017 to 2019, there was no difference between the expected rate of DKA (42.5 vs. 51.7%, \( P = 0.2 \)) or severe DKA (37.2 vs. 43.3%, \( P = 0.5 \)) in 2020. No individual was diagnosed with COVID-19.

The overall incidence of paediatric T1DM is increasing, but total numbers and severity of presentations fluctuate over time. Concerns regarding increased severity at presentation with paediatric T1DM (due a perceived reduction in access to health-care services and broader community fear in the setting of the pandemic) have not been borne out in this data. While no statistical difference in the proportion of new presentations requiring ICU admission was seen in 2020, the twofold increase in ICU admissions may reflect the unexpected increase in bed capacity (possibly due to decreased surgical procedures and a reduction in ED presentations). The successful avoidance of the projected pandemic-related health-care crisis in Australia in the period reported herein may explain the difference compared to reports from more severely impacted regions. The potential impact of the COVID-19 pandemic and subsequent societal changes on paediatric T1DM presentations in Australasia is not yet known and ongoing collaborative data collection at a national or Australasian level is required.

Conflict of interest: None declared.

References

1. Lazzerrini M, Barbì E, Apicella A, Marchetti F, Cardinale F, Trobia G. Delayed access or provision of care in Italy resulting from fear of COVID-19. Lancet Child Adolesc. Health 2020; 4: e10–11.
2. Cherubini V, Gahi A, Addala A et al. Unintended consequences of COVID-19: Remember general pediatrics. J. Pediatr. 2020; 223: 197–8.
We present a rare case of Pott’s disease caused by BCG vaccine. Although magnetic resonance imaging is the imaging modality of choice for Pott’s disease, with high sensitivity and specificity,¹ our case suggests that its presentation can mimic spinal tumours. BCG vaccine is a live attenuated strain of Mycobacterium bovis, and is routinely administered at birth to all newborns in Singapore since the mid-1950s to prevent tuberculosis.² Although generally well tolerated, local complications, such as ulcers, abscesses or regional suppurrative lymphadenitis may occur.³ In view of the current considerations that immune-boosting properties from BCG vaccine can act as a protective measure against COVID-19 infection,⁴ it is important to note that rare, severe and potentially fatal complications such as disseminated BCG infection may occur, even in otherwise immunocompetent individuals. Correct diagnosis and initiation of appropriate therapy in BCG Pott’s disease is important to reduce the risk of permanent deformities and paraplegia. Patients should also be concurrently investigated for an underlying immunodeficiency.

Conflict of interest: None declared.

Fig 1  (a,b) Representative magnetic resonance imaging spine images showing a soft tissue mass in the spinal canal from C5 to T4, extending per-vertebrally anteriorly and involving T1-2 vertebral bodies, with spinal cord compression in sagittal (a) and axial at T1/2 level (b) views. (c) Haematoxylin and eosin stain photomicrograph showing necrotizing granulomatous inflammation (×100). Inset – Ziehl-Neelsen stain reveals an acid-fast bacillus (arrow).