

Severity of presentation with diabetes ketoacidosis at diagnosis of diabetes; India compared with the UK

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Introduction

The incidence of diabetic ketoacidosis (DKA) in the UK is increasing[1] and international comparisons can be revealing. We collected information on children newly presenting with diabetes to urban paediatric hospitals in India (Delhi) and the UK (Manchester). The aim was to gain insight into possible mechanisms for presentation with DKA.

Key Points

- Capillary pH, blood glucose concentrations and HbA1c levels at presentation with DKA were similar between the two groups.
- Frequency of recurrent admission with DKA was significantly elevated in the Delhi group during follow-up

Methods

Between 2005 and 2014, we collected data from St Stephen's hospital in Delhi on pH, blood glucose and HbA1c levels at presentation, any subsequent admissions and current insulin regimen. This dataset was compared with a comparable collection from Caucasian children from Greater Manchester over a similar time period,[2].

Results

	Delhi n=25		Manchester n=94		
	Mean	SD	Mean	SD	P-value
Female (%)	53		54		
Age at presentation with diabetes (yrs)	7.5	4.3	7.9	4.4	0.7
pH at presentation	7.2	0.2	7.1	0.1	0.3
Blood glucose at presentation (mmol/L)	28.8	5.9	26.7	9.8	0.4
HbA1c at presentation (%)	10.4	2.2	10.4	1.7	0.9
Started on intensive insulin therapy (%)	27.8		26.4		0.9
Recurrent admission with DKA (%)	60.0		10.7		0.001



Going forward

- In both India and the UK, programmes to increase primary care and parental awareness of childhood DKA are required.
- In India, there is an added need to identify methods to reduce admissions with recurrent DKA, possibly through improved family education at diagnosis.

References

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