

## Introduction

- DKA is the most common acute hyperglycaemic emergency in children and adolescents with diabetes mellitus
- It is characterized by the biochemical triad of hyperglycaemia, ketonaemia and acidaemia
- Careful, timely, and accurate DKA management is important for prevention complications, prolonged hospital stays, and excessive costs

## Objectives

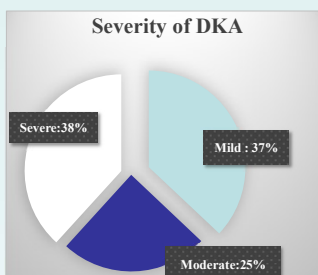
To study the profile of children admitted with DKA to Leeds Childrens hospital

## Methodology

- **Study design:** Retrospective analysis
- **Study period:** March 2020-March 2022
- **Inclusion criteria:** Patients < 18 years admitted with DKA to the Paediatric department
- **Method:** Relevant data about the identified patients were retrieved from the hospital electronic records

## Results

- Total number of DKA admissions: 81
- Males :40
- Females : 41
- Type 1 DM : 80
- Type 2 DM : 1
- Newly diagnosed DM : 44
- Known DM : 37



## Results

- Average duration of admission: 5.5 day

### •Location of admission

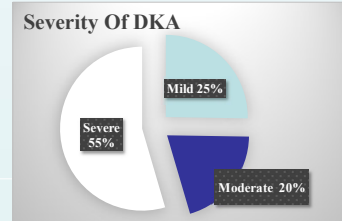
Ward : 65 %      ICU : 4%

HDU : 31 %

Complications	Number
Hypokalaemia	9
AKI	3
Cerebral oedema	1
DVT	1
Hyponatremia	2
Hypophosphatemia	2
Transaminitis	2
Hyperlipidaemia	1

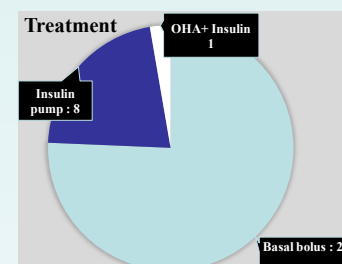
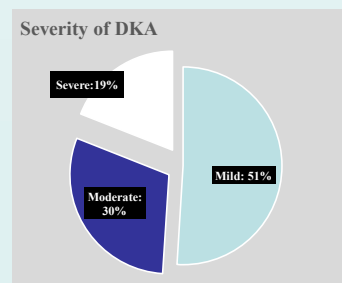
### DKA in New onset Diabetes

Total incidence : 44



### DKA in known Diabetics

Total incidence : 37



### DKA in known Diabetics

- Average HBA1C at admission:12.2% (109 mmol/mol)
- Average last clinical attendance: 77 days

Triggers	Numbers
Infections	7
Poor compliance due to social issues	15
Pump issues	4
Alcohol Intake	3

### Recurrent (>=2) admission

- 21 admissions contributed by 6 patients
- Age range : 12 -16 years
- Social/ mental health issues leading to poor compliance
- Average time since diagnosis: 4.3 years

## Conclusions

- Majority of new onset diabetics presented in severe DKA, while most of known diabetics presented in mild DKA. This could be due to increased awareness in this group.
- The most common complication was hypokalaemia, however its also important to monitor for rarer complications like Cerebral oedema, DVT and AKI
- Adolescents especially those with social and mental health issue were noted to have serious compliance issues leading to DKA, highlighting the need of good social and psychological support
- Although rare Type 2 DM can be associated with DKA

## References

Kostopoulou E, et al. Diabetic Ketoacidosis in Children and Adolescents; Diagnostic and Therapeutic Pitfalls. Diagnostics [Internet]. 2023 Jan 1;13(15):2602. Available from: <https://www.mdpi.com/2075-4418/13/15/2602#B1-diagnostics-13-02602>