

# DEALING WITH HYPOGLYCAEMIA DURING ACUTE DKA MANAGEMENT BY PAEDIATRIC RESIDENTS FROM BAHRAIN, IRAQ AND SAUDI ARABIA

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## INTRODUCTION

During management of DKA, and after starting the insulin infusion, it is crucial to monitor the blood glucose level frequently. If the glucose level drops quickly or below certain limit when there is still an evidence of ketonemia, it is recommended to add dextrose to the maintenance fluids and continuing the insulin infusion to switch off the ketosis process. However certain measures are required when the glucose continues to drop, and the patient becomes truly hypoglycaemic with a glucose level below 4mmol/L. These measures include giving a dextrose bolus intravenously, stopping the insulin infusion temporarily and adding more dextrose to the maintenance fluids.

## AIM

This study aims to evaluate the performance of Bahraini, Iraqi, and Saudi paediatric residents throughout their different levels of training (year 1 to 4), regarding how to manage a DKA patient who drops a glucose below 4mmol/L whilst the patient is still ketonemic and still on intravenous fluids and insulin.

## METHOD

An online survey using SurveyMonkey was sent out to the paediatric residents practicing in Bahrain, Iraq, and Saudi Arabia between May and July 2020, giving a scenario to evaluate their management when a DKA patient drops the glucose below 4mmol/L. Responses received anonymously.

142

Number of responded  
paediatric residents



41



41



60

**Scenario:** what to do when a patient with a DKA on IV fluids and insulin infusion, but the glucose dropped below 4 mmol/L and ketonemia is still evident.

Give IV fluid bolus only	10/41, (24%)	13/41, (32%)	9/60, (15%)
Just stopping the insulin infusion temporary	5, (12%)	4/41, (10%)	6/60, (10%)
Correct answers	11, (27%)	8/41 ,(19%)	13/60, (22%)

## CONCLUSIONS

Gap in knowledge of managing hypoglycaemia during the treatment of DKA was evident among junior and senior residents from the three studied countries. Further training and education are recommended, and perhaps adding more details about management of hypoglycaemia to the existing protocols in the studied countries will raise more awareness and give guidance on dealing with the possible outcomes and complications.

## CONTACT INFORMATION

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