



## ADVERSE EVENT NOTICE

# SGLT-2 Inhibitors & Euglycaemic Diabetic Ketoacidosis



Greater Manchester  
Critical Care  
& Major Trauma



July 2019

**STOP**

**Suspected DKA  
Acute illness  
Major Surgery**

### Mechanism of Action

- Act on the kidney
- Lower blood glucose by preventing reabsorption of filtered glucose

### The 'Gliflozins'

*Dapagliflozin*  
*Canagliflozin*  
*Empagliflozin*



## Sodium-Glucose co-transporter 2 (SGLT-2) Inhibitors

A new class of oral anti-diabetic agent  
Licenced in adults with type 2 diabetes to  
improve glycaemic control



## Euglycaemic DKA

DKA in the absence of marked  
hyperglycaemia (blood glucose  
< 11.1 mmol/l)

**Well described serious  
complication of SGLT2  
inhibitors**

### Risk factors

Low carbohydrate intake  
Severe dehydration  
Acute illness  
Peri-operative period  
Low B cell function

### Pathophysiology

- Increased urinary glucose loss
- Decreased endogenous glucose production



**Consider DKA in  
ALL unwell  
patients on SGLT2  
inhibitors**

**Life threatening cases of DKA have been reported across the region in patients taking  
SGLT-2 inhibitors**

**Yellow Card** All adverse events must be reported to the MHRA via the Yellow Card Scheme