


NaHCO₃ in ED : To Use or To Pause?

NaHCO₃ in Metabolic Acidosis

 BICAR- ICU Trial, RCT Phase III
Trial in 26 French ICUs

 **ICU patients** (N=389) with:
pH <7.20, HCO₃<20mmol/L,
pCO₂ <45mmHg

 Excluded **RESPIRATORY ACIDOSIS,**
KETOACIDOSIS, STAGE IV CKD,
urinary and digestive loss of HCO₃-

 NaHCO₃ **has no effect** for 28- day
mortality and **organ failure**

 In AKI KDIGO Stage 2 or 3:

 Improved survival

 Reduced need for RRT



Trial was **not powered for AKI**
subgroup analysis (N= 182). Hence
requires further confirmation in RCT.

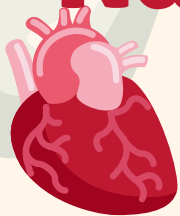


Trial conducted in ICU, focusing on
critically ill, intubated, AKI patients.
Findings **may not be directly**
generalizable to early ED presentation.


**So... Should we use
NaHCO₃ in patient
with Metabolic
Acidosis?**

YES and NO!
**Think before
NaHCO₃ push!**
**Check the patient's
criteria before you act.**


NaHCO₃ in Arrest!

 Routine use of NaHCO₃
NOT RECOMMENDED
in cardiac arrest.

(AHA 2023 Focused Update on Adult ACLS)

 No new evidence that routine
administration of NaHCO₃ improves
outcome.


 May worsen survival and neurological
recovery.

 Use of NaHCO₃ in Hyperkalemia and
drug overdose.



NaHCO₃ in Sepsis

**Surviving Sepsis
Campaign 2021**

 For adult with septic shock and
hypoperfusion- induced lactic
acidemia, **suggest against** using
NaHCO₃ to improve hemodynamics or
reduce vasopressor use.



Septic shock pH <7.2, AKIN Score 2
or 3, **suggest to use** NaHCO₃ therapy

Now you know where this is from
(Hint: BICAR-ICU Trial)



Infographic by: Dr Salha Mohd Fadil (PPUM)

Endorsed by: College of Emergency Physicians Malaysia