Introduction:
Cardiac Arrest (CA) is a global ischemia-reperfusion injury syndrome. The aim of the study is to evaluate the incidence of AKI in comatose patients resuscitated from CA

Methods:
We performed retrospective study of consecutive comatose patients resuscitated from CA and admitted to our ICU from January 2013 to May 2019 inclusive. Data obtained at baseline, 24 hrs, 48 hrs, and 72 hrs included: temperature trend and rate, serum creatinine, MAP, VIS, PEEP, diuretic use, urine output, fluid balance (FB). AKI was defined according to KDIGO criteria.

Results:
Thirty-six patients were treated with TH 33°C out of 46 ICU admissions (78%). Fifty-four patients were treated with TTM 35°C out of 106 ICU admission (51%) while fifty-two were not treated with temperature management (49%). The incidence of AKI was 17.35 at 24h for NO TTM group, 13.9% for TH group and 14.9% for TTM group. At 48h the incidence of AKI increased at 41.7% for TH, 37.1% for TTM while in NO TTM group increased less (18.8%). At 72h the incidence of AKI was 33.3% for TH group, 27.8% for TTM group and 32.7% for NO TTM group. SCR at baseline, at admission at 24 and 48h was not significant different in the three groups. Median cumulative FB was significant different in the TH group at 48h 1522 (488 – 2236) compared to 382 (-397 – 1553) in TTM group and 228 (-393 – 1530) in NO TTM group (p< 0.003). Twenty-four patients (16.9%) required RRT in the overall population. Urinary TIMP-2 e IGFBP7 was 1.54 (0.8 – 3.46) in TTM group and 1 (0.19 – 2.18) in TH group (p = 0.105).

Conclusion:
AKI occurred in more than 30% of patient after CA even if there are no clear impairment of serum creatinine, AKI can show in a subclinical way and determine an alteration of FB, hemodynamic function, and chronic renal loss of function

References: