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INTRODUCTION

Episodes of acute kidney injury (AKI) can increase the developing of chronic kidney disease (CKD) or even aggravate the stage of CKD. One of the proposed hypotheses is chronic hypoxia based on primary glomerular injury leading to reduction of post-glomerular flow, culminating in loss of peritubular capillary.

OBJECTIVES

To determine the association of AKI and CKD in patients who have suffered a previous acute insult; assess which risk factors present during the episode of AKI that may be involved in the development of CKD.

METHODS

- Patients who presented episodes of renal failure during hospitalization and were accompanied by the Nephrology Service for over a year and the last three years.
- Cases that progressed to death at follow-up by the nephrology service and patients with CKD stage 5 identified at admission were excluded.
- Was evaluated etiology of AKI, use of vasoactive drugs, mechanical ventilation for 48 h, need for dialysis, site of hospitalization, comorbidities, mortality after hospital discharge.
- GFR was calculated by CKD-EPI, those who had basal serum creatinine (sCr), sCr on the admission, at discharge and last sCr, obtained in the database of laboratory and outpatient nephrology.
- Patients with AKI were evaluated outcomes for death and progression to CKD and those who already had GFR < 60 ml / min were staged and evaluated the progression to a more severe stage of the disease.

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RESULTS

Table 1. Clinical characteristics of patients who had AKI (n=207)

Age (years)	70.15 ± 13.15
Male (n=111)	53.6%
Duration of AKI (days)	9.85 ± 11.67
Length of stay (days)	30.96 ± 33.05
Follow-up with nephrology (days)	9 ± 8.72
Post-hospital survival (days)	250 ± 294.36

Table 2. Creatinine levels at follow-up of patients with AKI

Baseline sCr (mg/dl)	1.27 ± 0.41
Hospitalization sCr (mg/dl)	2.89 ± 2.68
Assessment of Nephrology sCr (mg/dl)	3.33 ± 2.52
Discharge sCr (mg/dl)	1.66 ± 0.85

Table 3. Correlation between clinical characteristics and progression to CKD using the last CKD-EPI monitoring in patients with AKI

		All patients		CKD-EPI <60 ml/min		p
		n= 207	%	n= 152	%	
Gender	Female	96	46.37	58	60.41	0.01*
	Male	111	53.63	94	84.68	
Comorbidities	Hypertension	132	64.10	97	73.48	0.57
	Diabetes	57	27.70	47	82.45	0.06
	Vasculopathy	34	16.40	22	64.70	0.17
	Heart failure	37	17.90	28	75.67	0.20
	Cancer	31	15.00	23	74.19	0.01*
	Cirrhosis	15	7.20	13	86.66	0.06
	Nephrolithiasis	12	5.80	10	83.33	0.28
Place of admission	Other causes	18	8.70	15	83.33	0.32
	Ward	132	63.80	105	79.54	<0.04*
	Intensive Care unit	41	20.30	25	59.52	
Emergency room	33	15.90	22	66.55		
Etiology of Acute Kidney Injury	Nephrotoxicity	23	11.10	18	78.26	0.54
	Prerenal	88	42.51	66	75.00	0.49
	Obstructive	24	11.60	22	91.66	0.03*
	Sepsis	68	32.85	43	67.18	0.01*
	Urinary tract infection	25	12.10	19	76.00	0.35
	Acute interstitial nephritis	7	3.50	4	57.14	0.30
	Ischemic	5	2.40	3	60	0.16
Other causes	23	11.10	18	78.26	0.40	

* p>0.05

CONCLUSIONS

The presence of an acute insult on renal function led to the evolution of CKD or worsening stage of CKD, especially in elderly, male patients with cancer and AKI induced by sepsis.