

Title: The Impact of Routine Cardiology Consultation on Critically Ill Patients with Elevated Troponin Levels.

Background: Cardiac troponin (T) is used to diagnose acute coronary syndrome. However, T can also be elevated in critically ill patients secondary to demand ischemia or myocardial injury. The impact of routine cardiology consultation on the clinical outcomes of critically ill patients with elevated T is unclear.

Methods: We conducted a retrospective analysis of all patients admitted to the intensive care unit and had an elevated T level between January 2013 and December 2018. We collected demographic and clinical characteristics of these patients. We excluded patients with acute coronary syndrome. Patients were divided into two groups based on documentation of cardiology consultation. The primary endpoint was in-hospital, 30-day and 1-year mortality, length of stay (LOS), further cardiac testing, and 30-day readmission rate.

Results: A total of 766 patients were included in the study, of whom 484 (63.2%) had cardiology consultation (CC), and 282 (36.8%) did not have cardiology consultation (NCC). As shown in (Figure1-A), patients in the CC group had more comorbidities, higher T values, and higher 30-day readmission rate for a non-cardiac cause. CC group had longer LOS and underwent more cardiac testing during the index hospitalization. No difference in mortality was noted. (Figure1-B)

Conclusions: Our analysis shows that routine cardiology consultation for elevated T in critically ill patients resulted in increased cardiac testing and LOS, without significant effect on the mortality.

Figure 1- A

	NCC Group (n=282)	CC Group (n=484)	P-Value
Age in years	65	71	<0.001
Female	44.8%	40.5%	0.241
Obese (BMI>30)	42.7%	42.4%	0.935
Hypertension	64.9%	76.45	<0.001
Diabetes Mellitus	31.9%	36.5%	0.198
Chronic Kidney Disease	27%	36.7%	0.006
Hyperlipidemia	44.3%	59.8%	<0.001
History of Coronary Artery Disease	14.2%	33.1%	<0.001
History of Atrial Fibrillation	14.9%	26.7%	<0.001
History of Valvular Heart Disease	4.3%	13.0%	<0.001
Tobacco abuse	53.9%	53.6%	0.941
Baseline Left Ventricular Ejection Fraction	55	55	0.001
Troponin on Admission	0.10	0.18	<0.001
Peak troponin During the Admission	0.17	0.58	<0.001
Creatinine on Admission	1.32	1.42	0.103
Hemoglobin on Admission	11.4	11.4	0.993
Length of Stay in Days	5	7	0.007
30-day Readmission for Non-Cardiac Cause	6.4%	15.5%	<0.001
Additional Cardiac Testing During Admission	67.7%	90.3%	<0.001

NCC= Non-cardiology consult. CC= Cardiology Consult

Median or % values shown

Figure 1- B

Mortality	Adjusted OR (95% CI)	P-Value
In-hospital mortality	0.64 (0.67-1.12)	0.117
30-Day mortality	0.80 (0.47-1.37)	0.425
One-Year mortality	1.38 (0.85-2.23)	0.193

All mortality adjusted for demographic and clinical comorbidities.

