Troponin T as a Predictor of Survival in Patients with Hip Fracture: a Seven Years Follow-up Study

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The impact of elevated serum troponin in patients inflicted with low –trauma hip fracture (HF) on late survival has not been assessed yet.

Population &Methods : Troponin T (TnT) (STAT, Roche ™) was measured in patients admitted to hospital with HF (63% per-trochanteric) between October 2000 and May 2001. TnT values were obtained on admission , 24 hours later and prior to discharge. Hospital data and late vital status (updated to September 14th 2008) were analyzed. The study group consisted of 147 patients (32 males, aged 81.3 ±8.1 years) who were followed for 1540± 1056 days (range : 4-2896). Chi-Square tests and Cox regression analysis were used to determine predictors of death.

Results: Time from admission to surgery was 2.9±2.7 days and overall length of stay was 12.5±6.7 days. .107 (73%) of patients were dead at end of follow up. Elevated TnT (range:0.1-32 ng /ml) was observed on admission in 32 (22 %) patients and altogether during hospitalization in 53 (36%) patients. An ischemic ECG pattern on admission was observed in 10% of patients and was associated with 92% mortality (compared to 67% of those without ischemic changes, p=0.06).

Table of Death Predictors *(cox regression*)

variable	Hazard Ratio	95% Confidence Interval	P value
TnT	1.057*	1.007-1.1103	0.02
age	1.084	1.05-1.12	<0.0001
Diabetes Mellitus	2.12	1.2-3.46	0.003
Prior MI, CVA	1.65	0.99-2.77	0.055
Prior coronary bypass	0.13	0.018-1.119	0.049

*Increase of 1 ng/ml in TnT was associated with increased risk of death by 5.75%.

Conclusions: Elevated TnT – a manifestation of peri - trauma myocardial injury - is a significant independent predictor of long term survival in unselected group of patients admitted with HF.