

## **Fulminant versus Non Fulminant Myocarditis; Clinical Characteristics and Early Outcome**

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Background: Patients who present with fulminant myocarditis may have severe congestive heart failure with hemodynamic compromise and they often die early from arrhythmia or severe heart failure. Full recovery may occur with early initiation of aggressive supportive therapy.

Aim: To identify clinical and laboratory parameters of fulminant myocarditis.

Methods and results: Forty seven patients (Mean age  $35.2 \pm 11$  years; 39/8 M/F) who were admitted to our hospital with clinical diagnosis of acute myocarditis were retrospectively reviewed. Clinical features, laboratory data, and echocardiographic studies during hospitalization were analyzed. These patients were divided into fulminant (n= 9) and acute non fulminant myocarditis group (n=38). Overall mortality was 8.5% (4/47). Mortality was higher in the fulminant group 44.4% (3/9) vs. 2.6% (1/38); P=0.003. Patients with fulminant myocarditis were characterized by pericardial friction rub (33.3% vs. 2.7%; P= 0.0001) and reduced left ventricular ejection fraction ( $29.2\% \pm 9.5$  vs.  $51.3 \pm 8.7$ ; P = 0.001), they were more often treated by vasopressor drugs (55.5% vs. 2.7%; P= 0.0001), Mechanical ventilation (33.3% vs. 2.6%; P= 0.003), Intra aortic balloon pump (IABP) (22.2% vs. 2.6% P= 0.013) and left ventricular assist device (LVAD) ( 22.2% vs. 2.6% P=0.013). Despite early aggressive therapy non of the patient in whom mechanical support was employed survived.

Conclusions:

1. Fulminant myocarditis patients were characterized by pericardial friction rub, reduced systolic left ventricular function and higher mortality rate.
2. In our group early mechanical supportive therapy did not improve in hospital outcome.