Abstract

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Introduction: Despite improvements in supportive therapies and reperfusion strategies, the mortality rate remains unacceptably high in the setting of cardiogenic shock.

Aim of work: comparison between medical treatment ,intra aortic balloon pump (IABP) and veno-arteria extra corporeal membrane oxygenation (VA ECMO)in management of cardiogenic shock.

Methods: seventeen patients with acute cardiogenic shock was managed by different modalities medical treatment (42) patients, IABP (21) patients and VA ECMO (7) patents. APACHEII, SOFA was calculated to all patients and SAVE score for those on VA ECMO before initiation of the support and 24 hours after support. full laboratory profile ,chest X ray, echocardiography ,venous and arterial duplex was also done before and 24 hour after support. Percutaneous cannulation was done in all patients using single lumen cannu-lae, additional cannula was added when needed. Cardiohelp (Maquet, Germany) and Rotaflow(Maquet, Germany) ECMO consoles were used with centrifugal pump. ECMO circuits PLS for

Rotaflow and HLS for Cardiohelp were changed when indicated.

Results: VA ECMO was used in 4 patients with STEMI and cardiogenic shock one patient was stress induced cardiomyopathy and 2 patients with massive pulmonary embolism using of VA ECMO was associated with significant improvement in APACHEII and SOFA scores with subsequent improvement of the shock and significant improvement of tissue perfusion compared to medical treatment and IABP .However there was no significant difference in mortality among the three groups.

Conclusion: VA ECMO may be helpful in the setting of profound acute cardiogenic shock in maintain organ perfusion and bridge to recovery or bridge to another modality of management such LVAD or heart transplantation.