

DIFFERENTIAL IMMUNOMETABOLIC PROFILES OF PBMCs IN SEPSIS AND CIRRHOSIS-ASSOCIATED SEPSIS

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Poster

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A study of 75 sepsis patients found distinct immunometabolic profiles in PBMCs, with cirrhotic-septic patients showing a hypermetabolic state and higher mortality compared to non-cirrhotic septic patients who exhibited immunometabolic paralysis.

KEY POINTS

- PBMCs from 63 septic patients showed deep immunometabolic paralysis with significantly decreased mitochondrial respiration and reduced glycolytic activity, while 12 cirrhotic-septic patients exhibited a distinct hypermetabolic state with elevated glycolytic and mitochondrial activities.
- Cirrhotic-septic patients had significantly higher IL-1 β and TNF- α expression, lower serum hepatokine levels, and higher mortality (58% versus 40%) compared to non-cirrhotic septic patients.
- Patients who clinically recovered from sepsis showed gradual normalization of PBMC bioenergetic profiles with progressive restoration of glycolytic activity and mitochondrial respiration.
- The authors suggest that immunometabolic paralysis might represent a rescue mechanism absent in cirrhotic patients, potentially explaining lower therapeutic response in cirrhosis, and conclude that the liver governs immunometabolic changes during sepsis.

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