Liver disease during and after hematopoietic stem cell transplantation in adults: a single center Egyptian experience
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Background: Hepatic complications are a well-known cause of both early and late mortality and morbidity in hematopoietic stem cell transplant (HSCT) recipients. Early diagnosis and management of hepatic complications is important in order to commence appropriate therapy. Conditioning regimens, acute and chronic graft-versus-host disease, sinusoidal obstruction syndrome and infections among others represent major hepatic complications for the transplant recipient.

Materials and Methods: 190 patients were enrolled in this retrospective study, 88 patients underwent autologus and 102 patients underwent allogeneic transplant. We assessed liver function tests, viral markers, polymerase chain reaction, abdominal ultrasound, portal and hepatic venous duplex as well as liver biopsy in selected patients and evaluated early and late hepatic complications and their impact on transplant outcome.

Results: The prevalence of pre-transplant liver function abnormalities in both allogeneic and autologous patients before conditioning is 11.1% that increased to 48.8% after conditioning regimens. The major cause of hepatic injury in allogeneic patients is conditioning regimen (38.8%) followed by acute GVHD (14.7%), after day +100 chronic hepatic GVHD is the primary cause of liver injury which occurred in about 40% of allogeneic patients. In autologus patients, the first cause of hepatotoxicity is also conditioning regimen involving 27.9% of patients followed by flare of viral hepatitis in 7.9% and sepsis in 6.3% of cases, busulfan-based conditioning regimens were the most common regimen associated with hepatotoxicity. The prevalence of HCV, HBV and CMV is 19%, 16% and 8% respectively. Flare of viral hepatitis in both autologous and allogeneic patients represented 3% from all patients.

Conclusion: In our study, Conditioning regimens, acute and chronic hepatic GVHD are frequent causes of hepatic injury following allogeneic HSCT while conditioning regimens, flare of viral hepatitis and sepsis represent the most common causes of hepatic injury following autologus HSCT.

Role of intestinal microbiota in cardiovascular disease risk in end stage renal disease patients
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Background: Chronic inflammation is considered as a non-traditional risk factor for cardiovascular mortality in the chronic kidney disease (CKD) population. Recent studies have revealed that alterations in gut microbiota composition and intestinal barrier have been associated with inflammation and oxidative stress in CKD patients which in turn promotes adverse cardiovascular outcomes and CKD progression. The purpose of our study was to assess the alteration of beneficial gut microbiota mainly Lactobacillus acidophilus in fecal samples of patients with end stage renal disease (ESRD) and the extent of its effect by the co-existence of cardiovascular complications. Forty patients with ESRD, another forty ESRD with CVD and 20 healthy adults participated in the study. The fecal composition of Lactobacillus acidophilus was identified using de Man Rogosa Sharp agar followed by further confirmation using polymerase chain reaction technique. A significant abundance of Lactobacillus acidophilus in ESRD patients compared to controls was noticed, and this increase was detected mainly in ESRD patients with CVD. Furthermore, Lactobacillus acidophilus was not correlated significantly with either serum cholesterol, triglycerides or urinary protein creatinine ratio.

Conclusion: Lactobacillus acidophilus as a beneficial microbiome, has no protective role against progression of CKD and CVD risks. Thus, the exact role of gut microbiota in CKD progression has not been yet fully elucidated and further investigation will be needed.