SUMMARY

The present study imparted the following noteworthy points:

1. The prospective, case-control study was conducted on 100 patients of liver disease and 100 healthy controls. The study was undertaken at Delhi Heart Institute and Research Centre, Bathinda, (Punjab).
2. The simple, non invasive, laboratory methods were used to estimate liver functions and renal functions. This approach, provided the data that match with the data of previous research workers.

3. The study provided ample significant data, pertaining to patients suffering from liver diseases. Further, it furnished that a high prevalence of renal dysfunction is present in decompensated cirrhosis patients. This data would be very useful in clinical practice.

4. Hepatitis A, emerged to be the most prevalent mode of infection of viral hepatitis in the population, whereas, the hepatitis C, emerged as the second most prevalent mode of viral hepatitis.

5. The chronic consumption of alcohol was the major risk factor for the occurrence of cirrhosis in population. The 67.7% of the population in decompensated cirrhosis, consumed alcohol for a period more than 8 years. The hepatitis C, was the second cause of cirrhosis in population.

6. Jaundice was the hallmark symptom, present in high prevalence in patients of acute viral hepatitis and decompensated cirrhosis.

7. Child-Pugh, class C, score had the highest prevalence in decompensated cirrhosis patients, while, Child-Pugh, class B, was the most prevalent score in compensated cirrhosis patients.

8. Renal dysfunction was observed in 56% of the patients with ascites cirrhosis, out of total 67 patients of cirrhosis.

9. The estimated glomerular filtration rate declined significantly, in 56% of the patients who suffered from ascites cirrhosis. The decline in eGFR value covaried with the serum albumin and serum sodium values in ascites cirrhosis patients.
10. The eGFR function was observed to be normal in patients, who suffered from acute viral hepatitis and non ascites cirrhosis.

11. Anemia was observed in patients suffering from both non ascites cirrhosis and ascites cirrhosis. But the decline in haemoglobin value was significantly, higher in ascites patients than non ascites patients.

12. The pre-renal failure, accounted for 56% of the renal dysfunction, while intrinsic failure (acute tubular necrosis), resulted in 44% of the renal dysfunction in decompensated cirrhosis patients.

13. Hepatorenal syndrome and spontaneous bacterial peritonitis were the predominant causes of pre-renal failure, while Acute tubular necrosis emerged as the sole cause of intrinsic renal failure in ascites cirrhosis.

14. Renal function, as depicted by renal function parameters, was not affected in viral hepatitis and compensated cirrhosis (non ascites) patients.

15. Serum Albumin level in viral hepatitis and non ascites cirrhosis patients were within normal reference range, while in ascites cirrhosis patients, hypoalbuminemia was observed. The hypoalbuminemia in these patients covariated with the hyponatremia, hyperkalemia, decline in eGFR, rise in serum creatinine and BUN/C values.

16. SGPT and SGOT levels were highly elevated (>500IU) and SGPT levels were more than the SGOT, in viral hepatitis, whereas, SGPT and SGOT levels were elevated to less than 300 IU and SGOT level was > than SGPT in cirrhosis.

17. Serum Sodium covariated significantly with serum albumin in ascites cirrhosis patients.
18. The Hyperkalemia was associated with ascites cirrhosis patients.

19. The hyperkalemia and hypoalbuminemia in ascites cirrhosis patients, covaried inversely.

20. The hypoalbuminemia correlated significantly in an inverse relation with azotemia in ascites cirrhosis patients.

CONCLUSIONS

The present study shows that renal function is impaired (renal dysfunction) in patients suffering from decompensated cirrhosis (ascites cirrhosis), while, the renal function, remains normal in patients with viral hepatitis and non ascites cirrhosis.
The biochemical parameters as eGFR, serum creatinine, serum sodium, serum potassium, bun/creatinine were significantly deviated from reference range, thus, would help detect the renal dysfunction in liver disease patients, in day to day, clinical practice.

Further, the renal function parameters show covariation with the serum albumin in ascites cirrhosis patients. This correlation is valuable in assessing the staging and grading of liver disease in relation to renal dysfunction in daily practice in hospitals.

Serum aminotransferases, confirmed, as an aid in diagnosis of acute and chronic liver diseases.

The hypoalbuminemia correlated to hyponatremia in ascites cirrhosis patients. This correlation of serum sodium with serum albumin in advanced cirrhosis, would help assess prognosis of end stage liver disease in patients.

It would emanate as an important fact for future study.