Haematological Changes Before And After Haemodialysis At Tertiary Care Hospital

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Abstract

Background: Over the years, the global burden of patients with renal failure continues to rise, raising the morbidity and mortality. Available treatment modalities for this include renal transplant and haemodialysis. Among these, haemodialysis remains the mainstay of treatment because of less availability of suitable donors. Hence, it is necessary to study the changes in haematological parameters during haemodialysis, to prevent complications. **Methods**: 150 patients undergoing haemodialysis were included. After obtaining their written and informed consent, their blood samples were collected in the dialysis ward, before the start of, and at the end of the procedure. Samples were labeled and processed further in the hematology laboratory. Results were noted. Pre-dialysis results were compared with post-dialysis results. Statistical analysis was performed to check if the difference was statistically significant. **Results**: In this study, a significant increase in haemoglobin concentration, RBC count, and haematocrit was observed. WBC count also increased significantly post-haemodialysis. However, there was a significant decline in platelet count after dialysis. Among red cell indices, a non-significant rise in MCV, but significant decline in MCH and MCHC values was observed after haemodialysis. A significant decline in prothrombin time was also observed. However, there was a significant rise in activated partial thromboplastin time and fibrinogen after haemodialysis. ESR value decreased significantly post-dialysis. **Conclusion**: It can be concluded that haemodialysis causes a significant change in many haematological parameters. These parameters should be regularly monitored to prevent complications like bleeding and coagulopathy, and consequently to decrease morbidity and mortality.

Keywords: Coagulopathy, Haemodialysis, Renal failure