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# ABSTRACT

## Management of Anemia Among Hemodialysis Patients in Hebron Governorate

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**Background**: Renal Anemia is a prevalent condition among end-stage of chronic kidney disease (CKD), especially among patients undergoing hemodialysis (HD) due to erythropoietin deficiency. Uncontrolled anemia treatment is a major contributing factor for increased mortality and significant decrease in the Quality of Life (QoL). Medical protocols of renal anemia for end stage CKD patients vary between blood transfusion, erythropoiesis stimulating agents (ESAs) therapy or iron supplements. Palestinian hemodialysis patients receive medical care and treatment in the governmental hospitals. However, the clinical outcomes for HD patients are not clearly assessed.

**Objectives**: This study aims to evaluate the effectiveness of the renal anemia management protocols followed in Palestinian dialysis units and identify the existing barriers and gaps for provision of ultimate management to end stage CKD patients.

**Methods:** A Cross-Sectional study design for 3 years was followed. Target population included all HD patients in Palestinian hemodialysis units. Patients' records of hemoglobin concentration and/or hematocrit, serum ferritin, transferrin saturation(TSAT), Total iron binding


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capacity(TIBC), the type and dose of treatment therapy and other relevant data were collected. Collected data was organized and analyzed using SPSS version 25.

**Results:** Data collection was completed in Hebron governmental hospital. Patients with hemodialysis therapy received 2-3 sessions per week. For the 310 patients, 89.9% had abnormal Hb level and probably renal anemia as Hb levels< 11 g/dl. A total iron profile is adopted to manage anemia among HD patients by the use of parameters such as TSAT and TIBC. The lack of periodic blood tests especially iron profile is due to a shortage of kits and supplies. The main cause of anemia Complications is inadequate supply of ESAs therapy which leads to the use of blood transfusion or the use of IV iron injection to overcome anemia. This implies fatal consequences on the quality of life of HD patients, as well as their health status and organ functionality, as it is well-known that HD patients are more susceptible to cardiovascular diseases and osteoporosis.

**Conclusions**: This study provided evidence of the barriers and gaps in Palestinian anemia management among HD patients. The lack of periodic monitoring of iron status and the associated risks due to the use of ESAs therapy, in addition to the lack of evidence about optimal hemoglobin concentration among HD patients leads to increase co-morbidities and mortality. These results should be utilized by researchers, medical practitioners, and policymakers to address the mentioned gaps to improve the quality of care, minimize co-morbidities and complications and improve the quality of life for HD patients.

**Keywords:** Renal Anemia, Hemodialysis, Hemoglobin level, Iron status/profile, Erythropoesis stimulating Agents, Health related Quality of Life.


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