

## **Abstract**

### **Introduction**

Malnutrition is common in dialysis patients. It has many outcomes such as increased mortality, delayed wound healing, and increased susceptibility to infection, fatigue and malaise. As regard to various studies that have been shown different results on relationship between malnutrition and other laboratory findings with mortality of hemodialysis patients; therefore we intended to evaluate the relationship between BMI with laboratory indexes and mortality in hemodialysis patients.

### **Material and Methods**

This study carried out on patients who were under hemodialysis from 2002 to 2011 in Ardebil. Factors such as weight, height and BMI of patients who were admitted to hemodialysis from 2003 were calculated, as well as some preliminary tests including urea, creatinine, cholesterol, triglycerides and albumin were taken three times at one month intervals in admission. Studied patients were following up during the study in terms of changes in the preliminary laboratory variables with mortality rate. All information of patients associated with demographic information was entered in check lists then resulted data were analyzed by SPSS v19 software.

### **Results**

The current study evaluated the records of 260 patients that among them 61.34% were alive and 39.65% died because of underlying disease (not incidence). 57% of patients were male and 42.7% were female. Results showed that there was no significant relationship between gender and mortality rate ( $p=0.911$ ). The average age was  $59.39\pm 14.48$  years and the most prevalence age was 61-70. 56.9% of patients had normal BMI and the average of BMI was 24.49. The serum albumin level in dead and alive patients was 3.83 and 4.16 g/dl respectively ( $p<0.001$ ); triglyceride level in dead patients was 181.76 mg/dl and in alive patients was 188.68 mg/dl ( $p=0.575$ ). The BUN level in dead and alive patients was 152.23 and 147.94 mg/dl ( $p=0.426$ ) respectively. Results indicated creatinine level in alive patients was 9.44 mg/dl and in dead patients was 8.61 mg/dl ( $p=0.034$ ). In this study after evaluation the relationship between gender and laboratory findings were also observed that there was a significant relationship between the average of albumin level ( $p=0.044$ ), triglyceride ( $p=0.003$ ) and cholesterol ( $p=0.001$ ) with gender.

### **Conclusion**

Results indicated that the hemodialysis and serum albumin level in alive and dead patients was different significantly, but there was no significant difference between two groups. It is therefore likely that these factors could be a predictable cause for mortality in patients.

**Key words:** Hemodialysis , Mortality , Body Mass Index , Malnutrition