

SERUM URIC ACID LEVEL AND LONG TERM SURVIVAL IN DIALYSIS PATIENTS

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Objectives:

Recent studies suggest that high levels of uric acid (UA) may play an important role in developing hypertension, renal disease and cardiovascular events [1-4]; also elevated serum UA level may lead to chronic and end stage renal disease [5-6]. Concerning the effect of UA on glomerular filtration rate (GFR), it has been found that serum UA levels are independently connected with reduction of GFR and also contribute to an increased risk of cardiovascular disease and morbidity [7-8]. Further, it has been shown that there is a J-shaped relationship between UA levels and mortality in chronic kidney disease patients [9].

Aim of the study was to examine whether dialysis patients baseline serum UA level predicts long term survival.

Methods:

The study was performed after approval of the protocol by the Regional Ethical Review Board, Linköping, Sweden. 33 dialysis patients (29 male and 4 female, mean age 71±12 years) were followed during mean follow-up period of 24 months (1 - 45 months), 5 of them were treated with allopurinol. To estimate the effect of baseline serum UA level on survival, Kaplan–Meier analysis was performed. Grouping was made according to patients' group mean UA level 5.75 mg/dl (342 µmol/L), the range was 3.36-8.64 mg/dL (200-514 µmol/L).

Results:

During the follow-up 22 patients died, 3 were transplanted and 8 survived. Analysis showed significant difference (log-rank test = 5.14; p=0.03) between survival in the two groups during follow up. Survival was significantly higher in the group where patients mean baseline serum UA level was below 5.75 mg/dL (342 µmol/L).

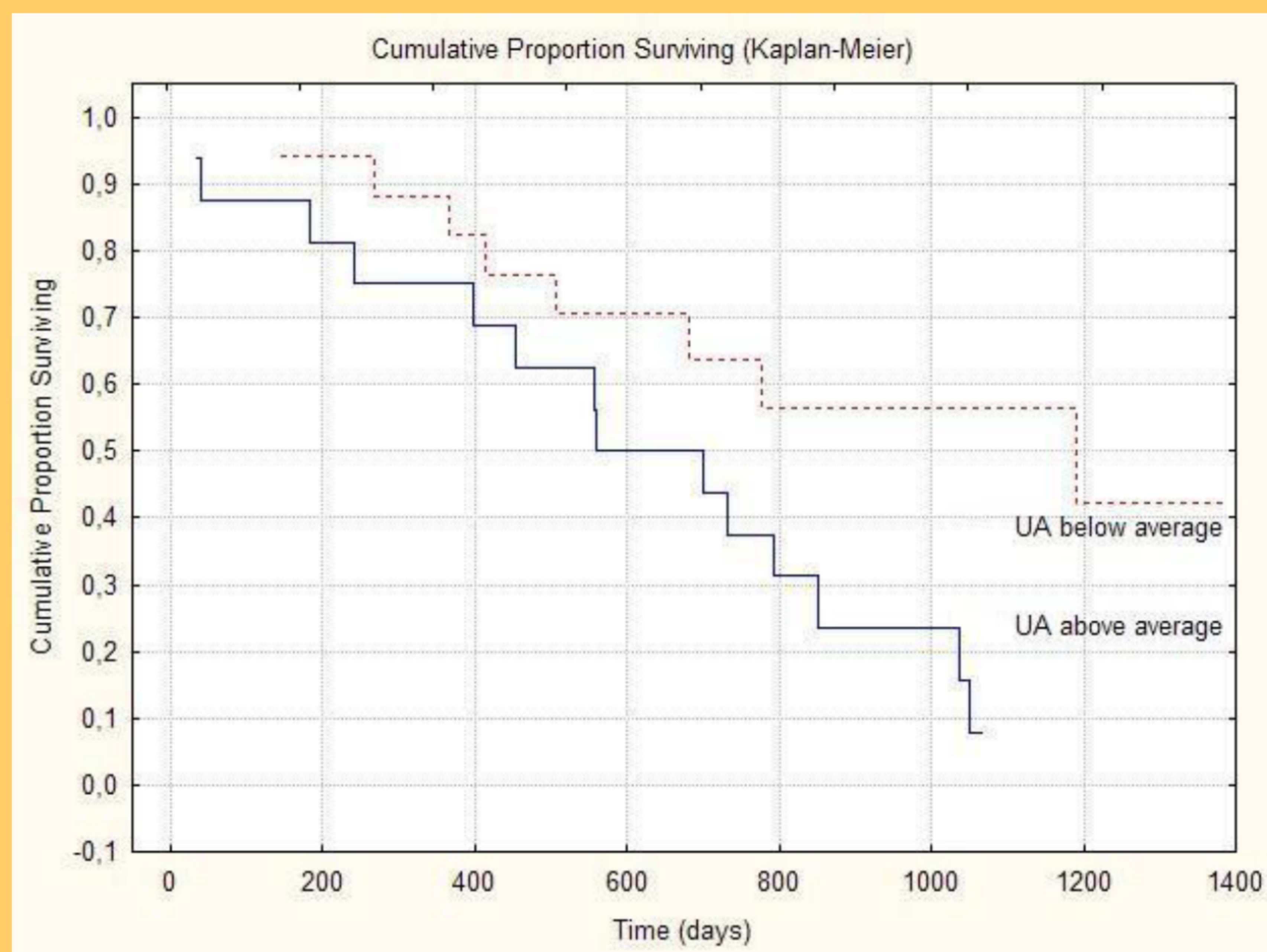


Figure 1 Survival analysis of dialysis patients that participated in the study (log-rank test = 5.14; p=0.03).

Conclusions:

Higher UA levels in dialysis patients seem to convey a poorer prognosis in terms of long term survival. In the current study only 5 patients were treated with allopurinol, 3 of them died during follow up. Possible benefits of UA lowering therapy should be discussed and studied in larger groups of patients.

References:

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