



Is There a Survival Difference Among Diabetic Patients According to Primary Renal Disease? National-Wide Study in Chronic Dialysis Patients in the Czech Republic.

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on behalf of the Czech Society of Nephrology



Introduction

Diabetes mellitus has become one of the leading causes of end-stage renal disease (ESRD) worldwide. Recently, almost 24% of patients (pts) entering renal replacement therapy (RRT) in Europe has been referred as having diabetic kidney disease as the primary cause of ESRD. Further studies proved lower survival of diabetic pts among RRT pts and, moreover, pts with diabetic nephropathy (DN) as primary renal disease (PRD) were referred as having lower survival compared to diabetic pts with non-diabetes renal disease (NDRD).

The aim of our study was to compare data of diabetic pts on haemodialysis in the Czech Republic.

Methods

We chose pts on chronic haemodialysis treatment (HD), i.e. >3 months, from the Czech Registry of Dialysis Patients (RDP) because 93.5% of pts received HD. Currently, approx. 2/3 of HD pts are covered by RDP. All pts entering HD between January 2006 and July 2014 were enrolled. Pts with missing information about PRD, co-morbidities or start date of HD were excluded. The data were compared according to age (under and over 70-y), gender and diabetic status. According to PRD, pts were divided to diabetic nephropathy group (DN), pts with diabetes and NDRD, and the Others (no diabetes).

All statistical analyses were performed on SPSS Statistics 20.0 software and the Kaplan-Meier method was used for the survival analysis.

Results

Study population included 6913 pts from which 59% were men and 48% were over 70-y. The overall mean survival reached 4.9 years, 75% of pts survived 2 years. There was no overall survival difference between men and women (p-value 0.603) and also between age groups under and over 70-y (p-value 0.079).

Altogether 2039 pts (30%) suffered from DN, 768 (11%) from NDRD while the majority (4106, i.e. 59%) belonged to Others PRD. The most frequent PRDs in group Others were tubulointerstitial nephritis 12.3%, CKD without precise specification 11.5%, renal vascular disease 10.7% and glomerulonephritis 10.7%.

M/F ratio was proportional in all groups representing 58% in DN, 55% in NDRD and 60% in the Others, respectively. NDRD pts were the oldest (mean age 72-y) compared to DN (70-y) and the Others (67-y). DN pts showed better survival than NDRD pts (4.7-y vs. 4.2-y). The Others had better survival than DN and NDRD, too (5.1-y vs. 4.7 and 4.2-y) while NDRD were proved to have the worst survival from all groups (Picture 1).

According to age we found better survival in group of pts over 70-y in the Others group compared to the same age categories in DN and NDRD (5.4-y vs. 4.9-y and 4.3-y). There was no survival difference between groups of pts under age of 70 (p-value 0.079). In both women and men survival was higher in the Others compared with DN and NDRD (p-value 0.000). On the other hand, men had better survival in group of pts DN compared with NDRD (Picture 2). This pattern was not found in women.

Conclusions

We can conclude that among chronic HD pts in the Czech Republic:

- As expected, we proved a strong impact of diabetes mellitus presence on patients survival** despite the group of PRD causing ESRD.
- Surprisingly, survival of DN patients was found higher compared to NDRD** (p-value 0.001). The reason for that could be due to higher age and the presence of more cardiovascular co-morbidities in NDRD patients. Moreover, NDRD group was represented by only 768 patients.
- Gender did not affect the survival** (p-value 0.603).

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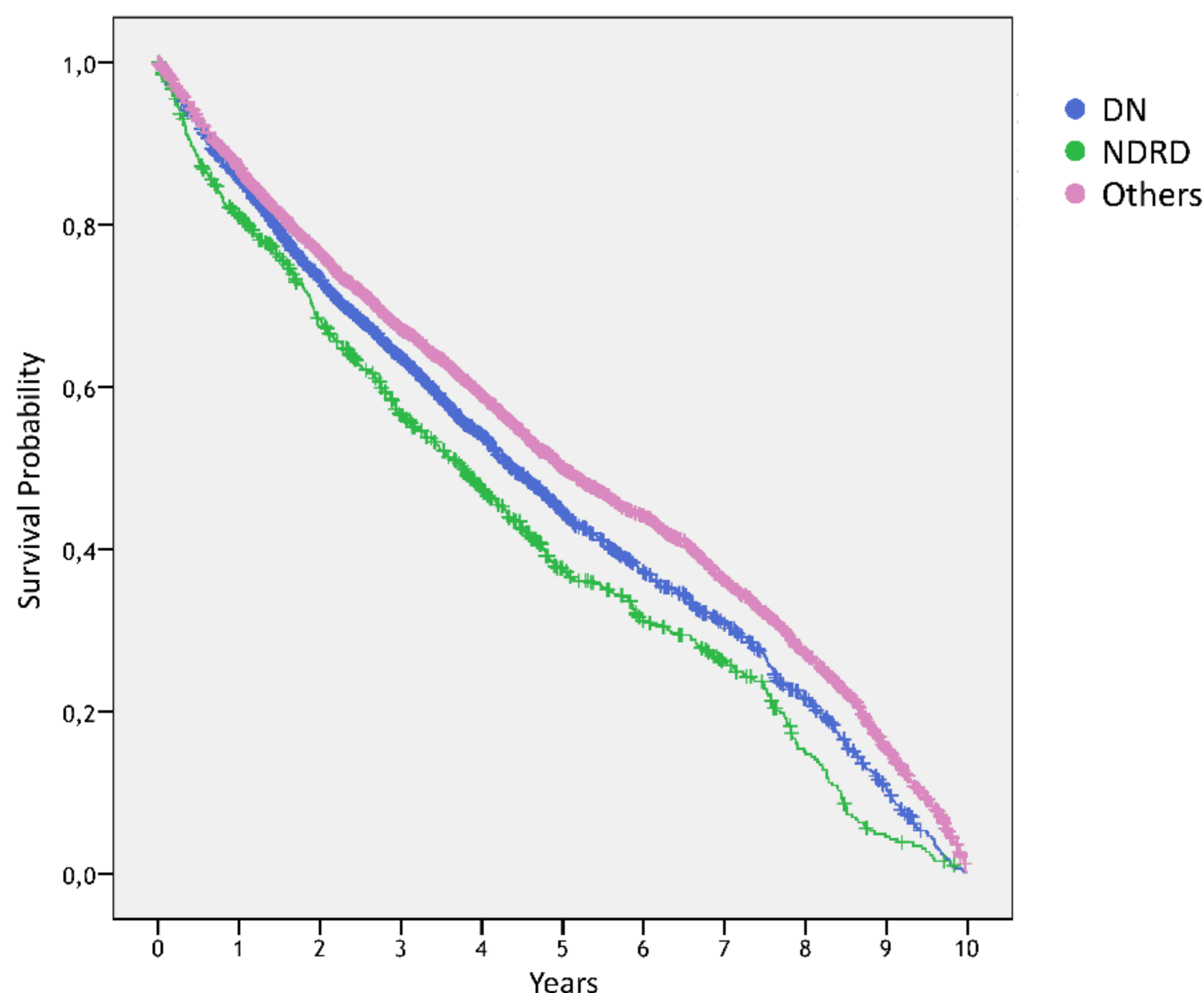
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Picture 1: Kaplan-Meier Survival



Picture 2: Kaplan-Meier Survival by Gender - Men

