INTRODUCTION AND AIMS: Recently it was found that prevalence of Balkan endemic nephropathy (EN) in endemic villages of Croatian area is decreasing due to diminished exposure to aristolochic acid (AA). Our aim was to analyze whether this trend has any impact on incidence and prevalence of patients undergoing renal replacement therapy (RRT) in Croatian EN focus.

METHODS: We retrospectively collected data on patients from Croatian endemic focus who started RRT in period from 1995 till 2015. Statistical analysis was done using tests of difference and proportions when appropriate, and ‘joint point’ regression analysis for analysis of trend changes was performed.

RESULTS: From 1995 till 2015 year, 84 patients with EN started RRT (men 61.9%; median age 67 year (range 49-83)). There was no gender difference in age when starting RRT (F vs. M 46.8-9.83 vs. 67; 51-80; p=0.883). Using ‘joint point’ regression analysis, significant increase of number of incident patients with EN on RRT of 5.4% per year (CI 1.7-9.3) was detected with significant rise in age at starting RRT of 2.2% per year (CI 1.7-2.8), though slope was less steep after 1998. Subjects who started RRT in the second period (2003-2015) were significantly older than subjects who started RRT in the first period (1995-2003): 61 year vs. 72 years of age. In this period (1995-2015) 62 EN patients on RRT died (median age 69 (range 57-83)), mostly due to infections (N=20, 32%), cardiovascular (CV) causes (N=16, 25%) and solid tumors (N=7, 11.3%). Interestingly, patients with EN undergoing RRT lived longer than previously published results on patients undergoing dialysis (median years 5.5 (interquartile range (IQR) 3.3-10)). Number of prevalent EN patient on RRT is stable (31 in 2003; 41 in 2015), and accounts for 1/3 of the whole dialytic unit in Croatian EN focus.

CONCLUSIONS: Although the prevalence of diseased EN patients is decreasing in endemic villages, the number of prevalent or incident EN patients on RRT is unchanged. In the past, those patients were exposed to AA and have lived long enough to start RRT. The prevalence of EN patients on RRT through the last two decades is preserved, possibly due to a better survival and lower CV mortality of this subgroup of patients on RRT. EN remains a substantial healthcare problem in this region which should be taken into account when planning hospital and medical care.