

ROMA ETHNICITY AND HIGH RISK OF MORTALITY AT YOUNG AGES IN HEMODIALYSIS PATIENTS

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The racial survival paradox of dialysis patients have been recognized for African Americans and Hispanics. Among North American patients with CKD undergoing hemodialysis, African Americans seem to have an advantage of survival compared to their Caucasians counterparts. In contrast, in Europe, evidences are lacking regarding Roma peoples (also known as gypsies) undergoing maintenance hemodialysis, although Roma constitute a major ethnic minority in several Eastern and Central European Countries. The paper addresses this issues.

Method

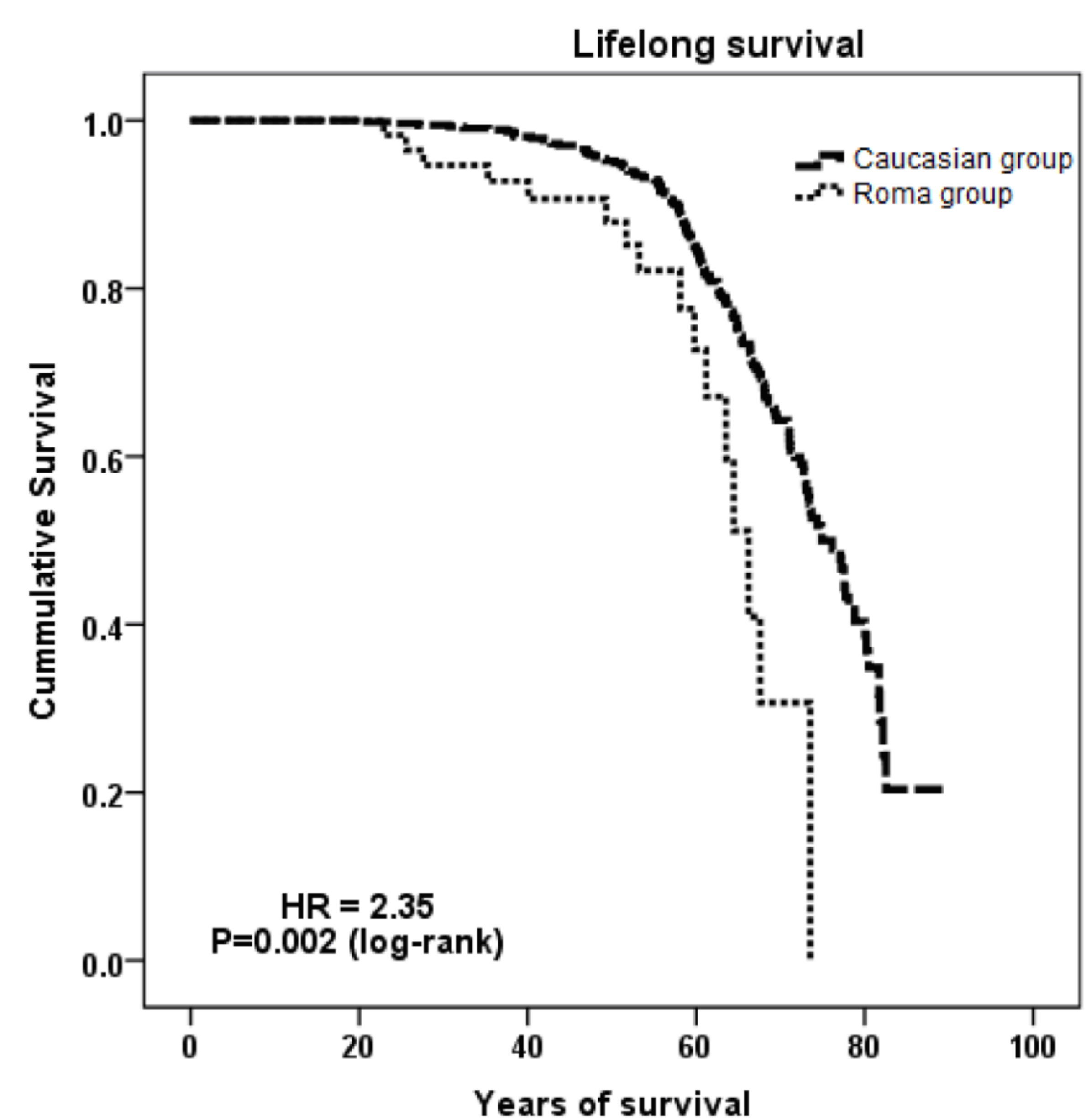
- 600 patients (median age (IQR): 56 (19) years, 332 men, 268 women) from 7 HD centers in Romania were followed for 3 years.
- Patients were on hemodialysis therapy (3 times/ week – 12 hours/ week) for an average of 2.8 (5) years.
- Assessment of ethnicity – patients were categorized as Roma or non-Roma Caucasian by two physicians independently who provided direct clinical care for the patients and 57 patients (9.5%) were designated as Roma group.
- Data concerning dialysis adequacy, renal anemia, mineral and bone disorders, serum albumin, CRP, BMI, bicarbonate have been analyzed
- Comorbidities (cardiovascular disease, diabetes mellitus-DM), B and C hepatitis infection, therapy and 3 years mortality rate have been included in the present analysis.
- Data have been processed using SPSS 16 data analysis system.

Results

Parameter	Caucasians patients (n=543)	Roma patients (n=57)	p
Men (%)	299 (55.1%)	33 (57.9%)	0.683
Age (years) ^a	56 [18]	51 [20]	<0.001
Age HD initiation (years)	52.3 [19]	46[18.5]	0.001
Dialysis duration (years) ^a	2.7 [5]	2.8 [4.7]	0.619
eKtV ^b	1.34 ± 0.46	1.46 ± 0.47	0.048
BMI (kg/m ²) ^b	25.4 ± 4.7	25.9 ± 6.3	0.532
Hemoglobin (g/dL) ^b	11.2 ± 1.6	11.5 ± 1.2	0.081
hsCRP (mg/dL) ^a	2.0 [4.0]	2.1 [5.5]	0.367
Albumin (g/dL) ^b	3.9 ± 0.7	4.1 ± 0.7	0.033
Ca (mg/dL) ^b	8.6 ± 1.1	8.4 ± 0.9	0.327
PO ₄ (mg/dL) ^b	5.6 ± 1.7	6.4 ± 2.0	0.006
CaXPO ₄ ^b	48.1 ± 15.0	53.7 ± 17.3	0.010
HCO ₃ ^b	19.4 ± 4.3	19.9 ± 5.5	0.502
iPTH ^a	382.5 [666.8]	550.0 [454.3]	0.200
Cholecalciferol ^a	20.1 [21.2]	23.5 [18]	0.276
ALP ^a	96 [63]	102 [70]	0.192
Overall mortality (3-years)	137 (25.2%)	16 (28.1%)	0.640
Age at death (years)	61.6 [13.9]	55.7 [27.8]	0.029

Parameter	Caucasians patients (n=543)	Roma patients (n=57)	p
Coronary heart disease (%)	343 (63.2%)	32 (56.1%)	0.297
Peripheral vascular disease (%)	136 (25.0%)	14 (24.6%)	0.936
History of stroke (%)	91 (16.8%)	7 (12.3%)	0.384
Positive HBsAg (%)	51 (9.4%)	6 (10.5%)	0.781
Positive anti-HCV (%)	151 (27.8%)	13 (22.8%)	0.420
Vitamin D deficiency (%)	146 (26.9%)	10 (17.5%)	0.126
Type 2 Diabetes mellitus(%)	85 (15.7%)	7 (12.3%)	0.501
Erythropoiesis-stimulating agents (%)	479 (88.2%)	50 (87.7%)	0.912
Ca-based phosphate binders (%)	329 (60.6%)	36 (63.2%)	0.705
Sevelamer (%)	275 (50.6%)	38 (66.7%)	0.021
Calcitriol supplementation (%)	133 (24.5%)	11 (19.3%)	0.382
Paricalcitol (%)	80 (14.7%)	11 (19.3%)	0.361

- When comparing Roma group with the Caucasian group we observed that Roma patients initiate hemodialysis at a significantly younger age.
- Roma patients received a better dose of dialysis (as judged by eKt/V) compared to the Caucasians.
- In Roma group we observed a more favourable nutritional status as assessed by serum albumin level.
- The mean PO₄ and CaXPO₄ product were significantly higher in Roma patients despite more likely to receive calcium-free phosphate binders.
- The three years mortality rate of Roma group did not significantly differ from Caucasian Group but the age of death was significantly younger in Roma patients.
- The lifelong survival analysis revealed a worsening outcome in the Roma hemodialysis patients – Figure



Conclusions

Our results show that Roma individuals initiate dialysis at a younger age. Furthermore, Roma minority undergoing hemodialysis has a higher risk of death at a younger age. The dietary non-compliance or specific genetic background of the Roma could be related to the abnormalities in mineral metabolism. The health care systems should be more aware of the higher risk of Roma for earlier reaching ESRD. In dialysis, ethnicity-based interventions should be considered in order to improve the outcomes in Roma dialysed population.

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