

A PARADIGM SHIFT ON NUTRITIONAL DISORDERS AS CLASSIFIED BY THE BMI IN THE DIALYSIS POPULATION IN TWO SOUTHERN EUROPEAN RENAL REGISTRIES: ASCEDANCY OF OVERWEIGHT AND OBESITY AND DECLINE OF UNDERWEIGHT CATEGORIES

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OBJECTIVES

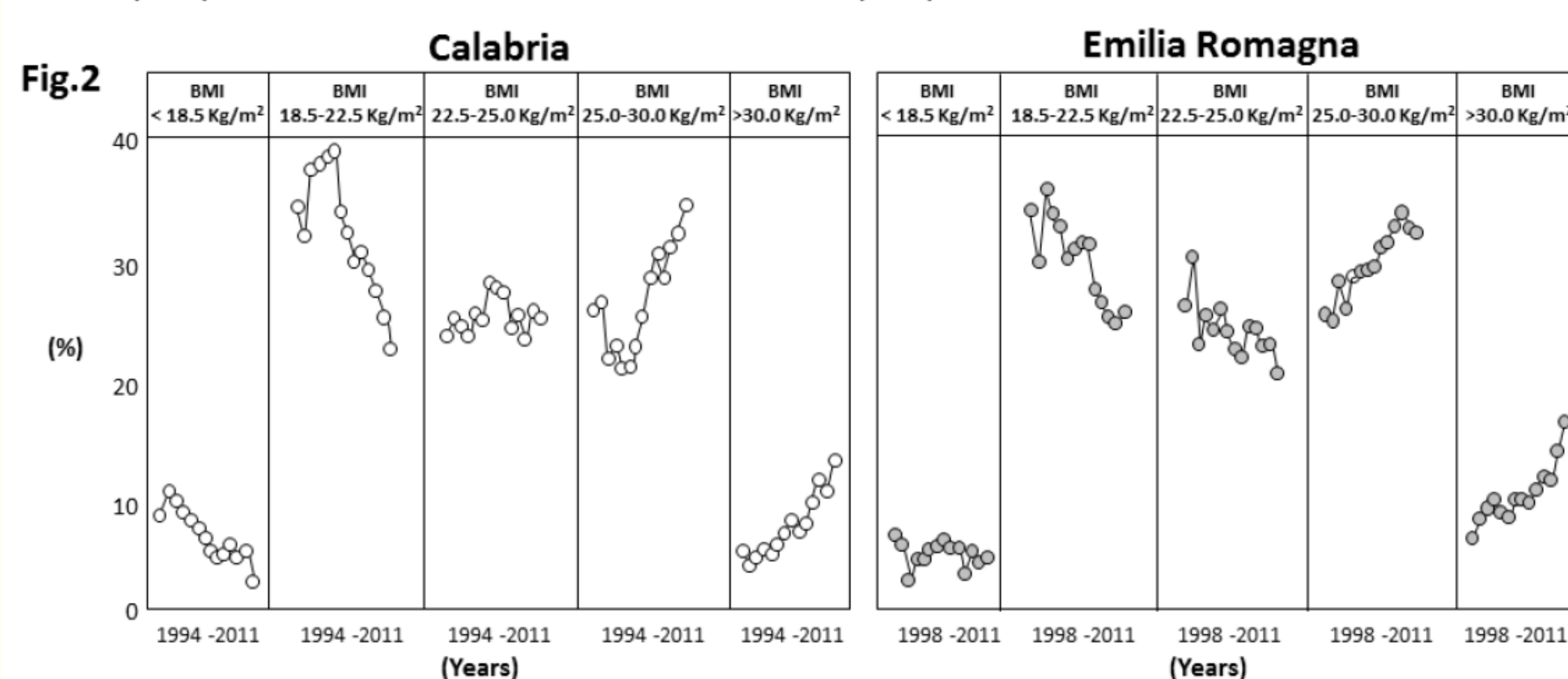
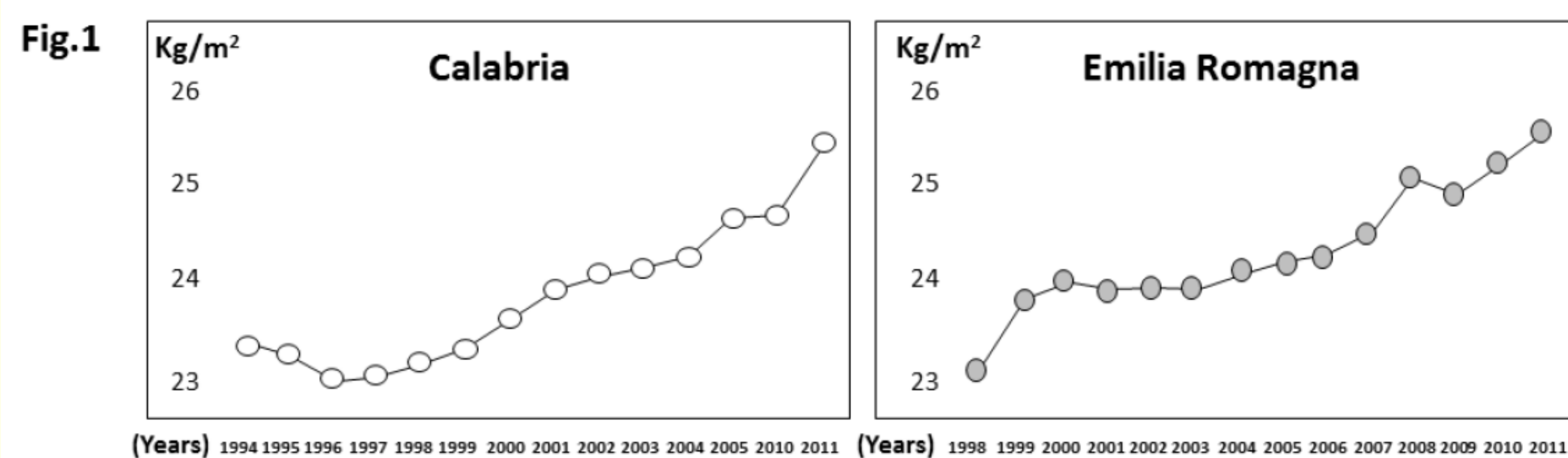
Obesity is an epidemic phenomenon worldwide. In the past decades, the prevalence of obesity in the general population more than doubled in the USA and in most European countries. In the USA this trend is parallel to the growth of the population with end stage kidney disease (ESKD) on dialysis, a population considered to be at high risk for malnutrition. However secular trends on the epidemiology of overweight and obesity have not been investigated outside the USA and no such data have been reported in European renal registries.

METHODS

We investigated the secular trend of BMI and nutrition disorders (from underweight to obesity) across 18 years (1994-2011) among patients included in two dialysis Registries, one in a Southern Italian region (Calabria) and one in a region of northern Italy (Emilia). Both are affiliated with the ERA-EDTA Registry with average demographic characteristics, death risk and comorbidities very close to the corresponding average values of the same Registry.

RESULTS

The average BMI rose from 23.5 kg/m² in 1994 to 25.5 (+8.5%) in 2011 in the Calabrian Registry and from 23.7 in 1998 to 25.4 (+7.1%) in 2011 (Fig.1) (P<0.001). In both regions this time-trend of BMI was accompanied by a decline in the proportion of patients with severe (BMI <18.5 kg/m²) and mild to moderate (BMI 18.6-22.5 kg/m²) underweight. Remarkably, both the prevalence of overweight (BMI 25.1-30 kg/m²: Calabria 26%→35% and Emilia Romagna 26%→35%), and frankly obese patients (BMI>30kg/m²: Calabria 6%→14% and Emilia Romagna 6%→16%) increased considerably (P<0.001) (Fig.2) over the same time-frame. These secular trends were evident across various population strata including age and gender and the rising tide of overweight and obesity in this population was accompanied by a parallel increase in the prevalence of diabetic nephropathy as a diagnosis of ESKD (Calabria, 1994: 7%; 2011: 15%. Emilia Romagna, 1998: 8% 2011: 14%). Similar analyses focusing exclusively in incident patients showed a substantial decline in the risk of underweight (from 12% to just <3% in Calabria, from 5% to 2.5% in Emilia Romagna) and an increase of the risk of overweight (from 30% to 39% in Calabria and from 25% to 27% in Emilia Romagna) and obesity (from 7% to 18% in Calabria, from 7% to 25% in Emilia Romagna).



CONCLUSIONS

Analysis of the secular trends of BMI in two regional Registries in Italy show a parallel rise of overweight and obese patients and a decline of patients in the underweight categories. These secular trends have obvious clinical relevance. If confirmed in other European ESKD cohorts these trends may have relevant public health implications.

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