ORAL HEALTH STATUS IN PREDIALYSIS PATIENTS WITH CHRONIC KIDNEY DISEASE

Liliana Gârneață[1,3], Georgiana Moldoveanu[2], Paula Luca[3], Şerban Ţovaru[2], Gabriel Mircescu[1,3]

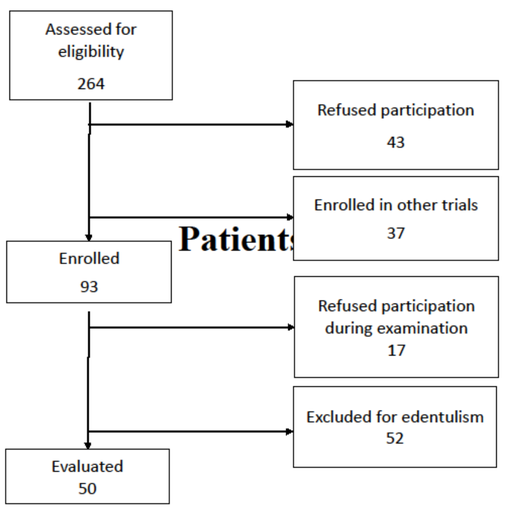
1 - "Carol Davila" University of Medicine and Pharmacy, Department of Nephrology, Bucharest, Romania; 2 - "Carol Davila" University of Medicine and Pharmacy, Faculty of Dental Medicine;
3 - "Dr Carol Davila" Teaching Hospital of Nephrology, Bucharest, Romania

INTRODUCTION AND AIM

- **Background**: Oral health status was reported as poor in haemodialyzed patients, with high prevalence of periodontal disease (PDD), associated with inflammation, malnutrition and increased mortality [1-4]. Predialyzed patients with Chronic Kidney Disease (CKD) seem to have also impared oral health status, with possible impact on renal function and general health, but it was much less studied [5,6].
- **Objective**: to assess the prevalence of PDD in predialysis CKD patients and its relationship with renal function, inflammation and nutritional status.

METHODS

- **Study type**: cross-sectional single-center observational study
- **Subjects:** All the 264 consecutive adults, with stage 3+ CKD (estimated GFR< 60 mL/min per year, MDRD4 formula) admitted in a large Nephrology Department were assessed.



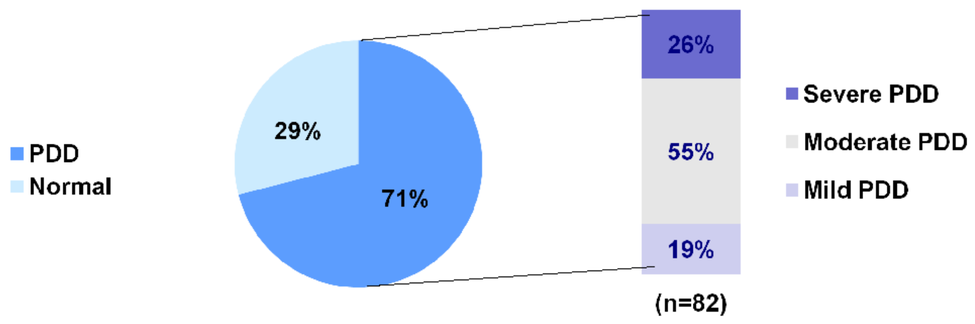
- **Oral Health Assessment**:
  - WHO recommendations, by a single examiner:
    - Silness and Loe plaque index (PI)
    - Loss of clinical attachment level (CAL)
    - Pocket depth (PD)
    - Decayed-Missing-Filled Teeth (DMFT) score
  - Patients were stratified by CAL:
    - normal oral status/ mild PDD (CAL<3mm)
    - moderate PDD (CAL 3-4 mm)
    - severe PDD (CAL ≥5mm).
- **Parameters**:
  - Demografics
  - Smoking habit
  - Renal function
  - Proteinuria
  - CKD-related disorders
  - Nutritional status (SGA, anthropemetrical, biochemical)
  - Inflammatory status

- **Patients characteristics:**

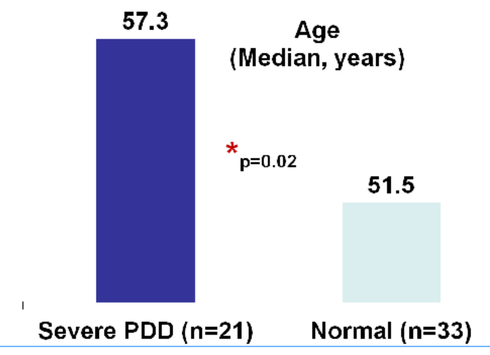
Age* (years)	58.0 (50.4-59.3)
Gender (% males)	37
Underlying kidney disease:	
Glomerular nephropathies (%)	33
Vascular kidney diseases (%)	31
Interstitial nephropathies (%)	22
Diabetes mellitus (%)	10
Other/unknown (%)	4
Smokers (%)	59
eGFR* (mL/min)	29.8 (28.2-38.4)
Proteinuria* (g/g creatininuria)	1.8 (0.5-3.5)
Nutritional status: SGA A (%)	89
Inflammatory status:	
CRP* (mg/L)	9 (5, 14)
CRP > 12 mg/L (%)	24

* Data presented as median (interquartile range)

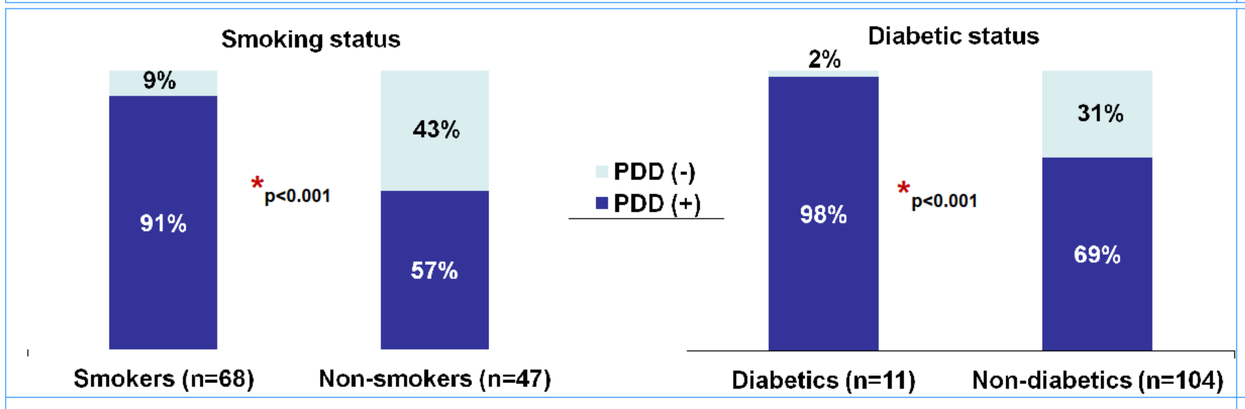
RESULTS



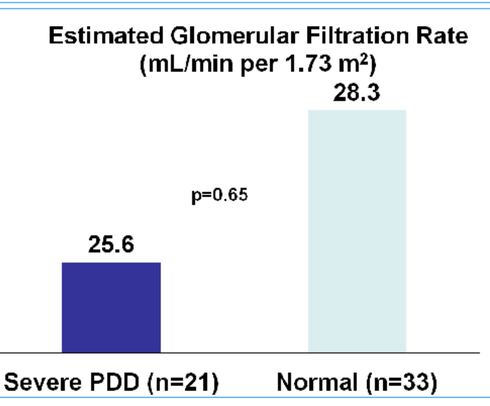
- Poor periodontal health status was identified in 71% of patients, 26% of them with severe PDD.



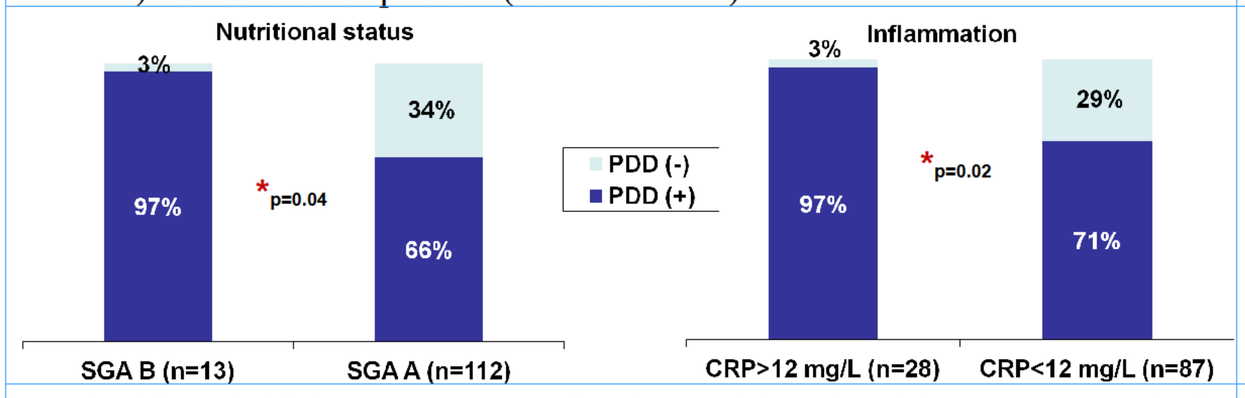
- Patients with severe PDD were significantly older [57.3 (55.1-60.2) versus 51.5 (49.8-53.2) years] as compared to those with healthy oral status.



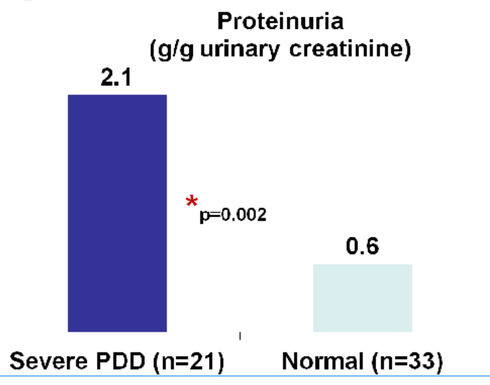
- Periodontal disease was significantly more frequent in smokers (91 versus 57%) and in diabetic patients (98 versus 69%).



- The level of kidney function was similar in patients with severe PDD and in those with normal periodontium: 25.6 (19.4-28.4) vs. 28.3 (25.9-31.2) mL/min.



- Significantly higher percentages of patients with malnutrition (SGA B) and of those with inflammation (CRP>12 mg/L) had PDD: 97 versus 66% and 97 versus 71%, respectivelly.



- Proteinuria was significantly higher in subjects with severe PDD: 2.1 (1.7-3.2) versus 0.6 (0.1-1.2) g/g creatininuria in normals.

CONCLUSIONS

- Impaired periodontal health was highly prevalent in predialysis CKD patients.
- Periodontal disease was more prevalent in elderly, in smokers, in diabetics, as well as in malnourished and in inflammed patients and was associated with heavier proteinuria.
- Interventional trials to evaluate the influence of periodontal disease on hard outcome end-points are required.

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