



# MUD BATH ASSOCIATED WITH LOW DIET PROTEINS IN SLOWING CKD PROGRESSION

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## Introduction and Aims

On skin contact with mud, by its thermal, chemical and mechanical characteristics, the peripheral neuroreceptors are stimulated determining a series of local and remote reflexes, with favorable effect on various functions. It has been noticed that mud increases plasma cortisol, determining a slight increase of blood pressure and high renal blood flow. The aim of the study is to determine if mud therapy (for degenerative arthrosis disease) associated with hypoproteic diet, reduce the level of serum creatinine in patients with early stages of CKD.

## Material and method

We conducted a prospective study on 60 CKD patients with different etiologies (hypertensive nephropathy -18, diabetic nephropathy-22, chronic glomerulonephritis-6, tubule-interstitial nephropathy -14). We developed the study on patients aged 50 and 60. Half of them (group A) underwent mud bath at 38 degrees Celsius for 20 minutes, 1 session/day/10 days/month, 3 months, associated with hypoproteic (0.8g/kg/day) diet. The other half (group B) received just hypoproteic diet. We measured serum creatinine, albuminemia, microalbuminuria at the beginning of the study and after 3 months. All groups were homogeneous for age and male/female ratio.

## Results

In group A, serum creatinine, after 3 months, is lower than in group B just for tubulointerstitial nephropathy (group A: 1.35 ± 0.48 mg/dL, group B: 1.58 ± 0.21 mg/dL,  $p=0.001$ ) and hypertensive nephropathy (group A: 1.4 ± 0.36 mg/dL, group B: 1.49 ± 0.13 mg/dL,  $p=0.004$ ). There were no statistically significant differences between the 2 groups in creatinine serum values for patients with diabetic nephropathy and chronic glomerulonephritis. There were also no major variations in albuminemia values during the study, statistically speaking. We noticed that microalbuminuria is higher in patients with diabetic nephropathy in group A after 3 months than at the beginning of the study ( $p=0.006$ ).

## Conclusions

For tubule-interstitial and hypertensive nephropathy patients, mud bath associated with hypoproteic diet decrease serum creatinine thus delaying the progression of chronic kidney disease. It was noticed that mud baths does not influence CKD evolution in patients with diabetic nephropathy and chronic glomerulonephritis, in those with diabetic nephropathy slowly increasing microalbuminuria. This alternative treatment should be considered in slowing the evolution of CKD in patients with tubule-interstitial nephropathy and hypertensive nephropathy, until further extensive clinical studies will be made.

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