

# Epidemiological Profile of Pediatric Dialysis Patients In A Southern Area of Algeria

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## • INTRODUCTION:

End stage renal disease (ESRD) in pediatric population is a major challenge for medical and paramedical staff

In Algeria, the number of children reaching ESRD increases annually. Epidemiological studies of the pediatric ESRD in Algeria are few. the statistical data are collected but there is no operable national register.

The objectives of this study are to :

- Estimate the prevalence and the incidence of ESRD in the pediatric population of Ghardaïa.
- Determine the epidemiological characteristics of dialyzed children
- Analyze the results of pediatric dialysis during the period of the study

## • METHODS:

In this retrospective study, we included all patients under the age of 19 years at the time of the ESRD, living in Ghardaïa, treated at least 03 months by hemodialysis (HD) or peritoneal dialysis (DP) during the period between 01/01/2005 to 12/31/2014.

Information was collected from the medical files, interrogation of patients and their parents.

## • RESULTS:

Twenty-five (25) children under the age of 19 years have reached the ESRD. The average age was 12 years (1-19), sex ratio (M / F) was 0.9.

The calculated annual incidence of ESRD in our serie was: 15.28 pmarp / yr (Per million age related population). The prevalence is : 73.36 pmarp.

The frequency was high for patients between 10 and 14 years of age (44%), There is no difference in numbers between the two sexes.

Glomerular nephropathie is the first cause of pediatric ESRD in our study (36%) which is comparable to most of the series published in Europe, Maghreb or Middle East. The cortico-resistant nephrotic syndrome was the chief of wire .

Congenital abnormalities of kidneys and urinary tract (CAKUT) are frequent and dominated by neurological bladder. the majority of patients were in peritoneal dialysis

In 20% of the cases, the etiology was not found; this is mainly due to delayed diagnosis

Dialysis was in most cases urgent (68%), anemia was predominantly present at the time of dialysis ( 88%). Hemodialysis is the first treatment method for incident (76%) and prevalent (70%) patients .

A very high mortality rate (20%) was founded mainly due to dialysis insufficiency, a very low school enrollment (40%) and a significant retardation of growth (60%). none of our patients was regularly followed in pediatrics during years of dialysis

The transplant rate (4%) is well below the national average (20%), Only 1 patient has been transplanted, obstacles to kidney transplantation are numerous, mainly the absence of donor (58%)

## • CONCLUSIONS:

Our study is the first work on pediatric ESRD in southern Algeria; we have highlighted the following problems:- Late diagnosis of kidney disease- Absence of targeted screening programs-lack urological surgery for complex CAKUT- Absence of genetic diagnosis.

A comprehensive management of the dialyzed child should enable them to achieve acceptable growth, good schooling and quality of life, require a good training of health care workers and close collaboration between the different treatment practitioners.