

DIALYSIS PARTICULARITIES BETWEEN TWO EAST (LA RÉUNION) AND WEST (SENEGAL) AFRICAN DIALYSIS CENTERS IN A SIX MONTHS PERIOD: A RETROSPECTIVE STUDY

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INTRODUCTION

- African nephrology and dialysis care is developing quickly, despite the late-start comparing to other continents. As former colonies, some territories in Africa are taking advantage because of European support.
- La Réunion is a 2.512 km² East African island (500 miles east of Madagascar); it is an overseas region of France, with a very mixed population (African, Indian and European). Senegal is an independent West-Coast African country, with many French influences during its historical past.
- We analyzed two very different, yet African both, dialysis populations from two dialysis centers, with demographic, clinical and paraclinical parameters over **6 months**.

METHODS

- ✓ **41** hemodialyzed patients from St Louis (La Réunion) Dialysis Centre and **26** hemodialyzed patients from Touba (Senegal) Dialysis Centre were included in the study.
- ✓ Demographic (age, sex, aetiology of renal disease), clinical (dialysis access, weight, body mass index, presence of diabetes, hypertension, coronaropathy, cardiac failure) and paraclinical (nutritional, anaemia) parameters were analysed, at the beginning (April 2016) and at follow-up (October 2016).
- ✓ Dialysis vascular access and filters were also compared, together with the efficacy of the dialysis in the two populations.

RESULTS

Table 1: Characteristics of the studied population

	St Louis (La Reunion) study lot	Touba (Senegal) study lot	p
Number of patients	41	26	
Mean age (years)	62,02 ± 15,30	45,62 ± 11,63	0,0001
Sex (% male)	53,7	42,3	
Smoker (%)	16	0	
BMI (kg/m ²)	26,51 ± 5,99	16,76 ± 3,27	0,0001
Duration in dialysis (months)	79,71 ± 101,42	30,42 ± 16,03	0,004
Vascular access	9,8% KT	15,4%	NS

Fig. 2: Blood pressure control in St Louis dialysis center

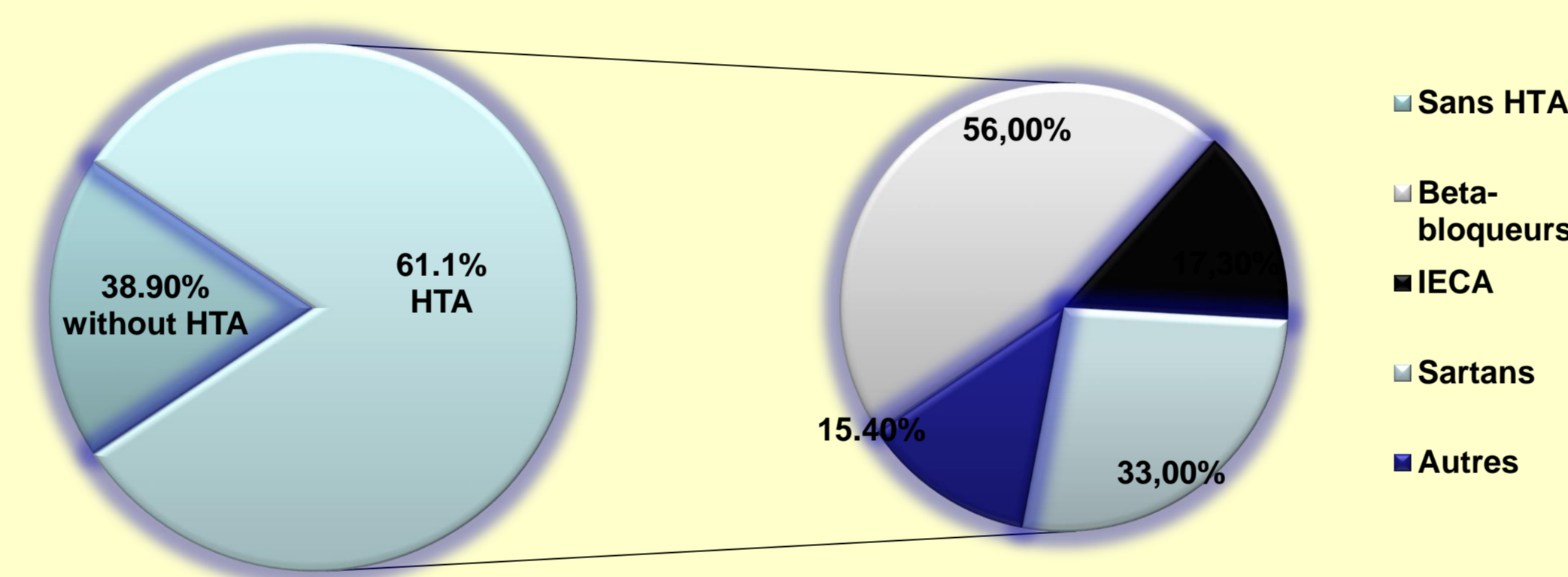


Fig. 4: Albumin levels in the 2 hemodialysis groups

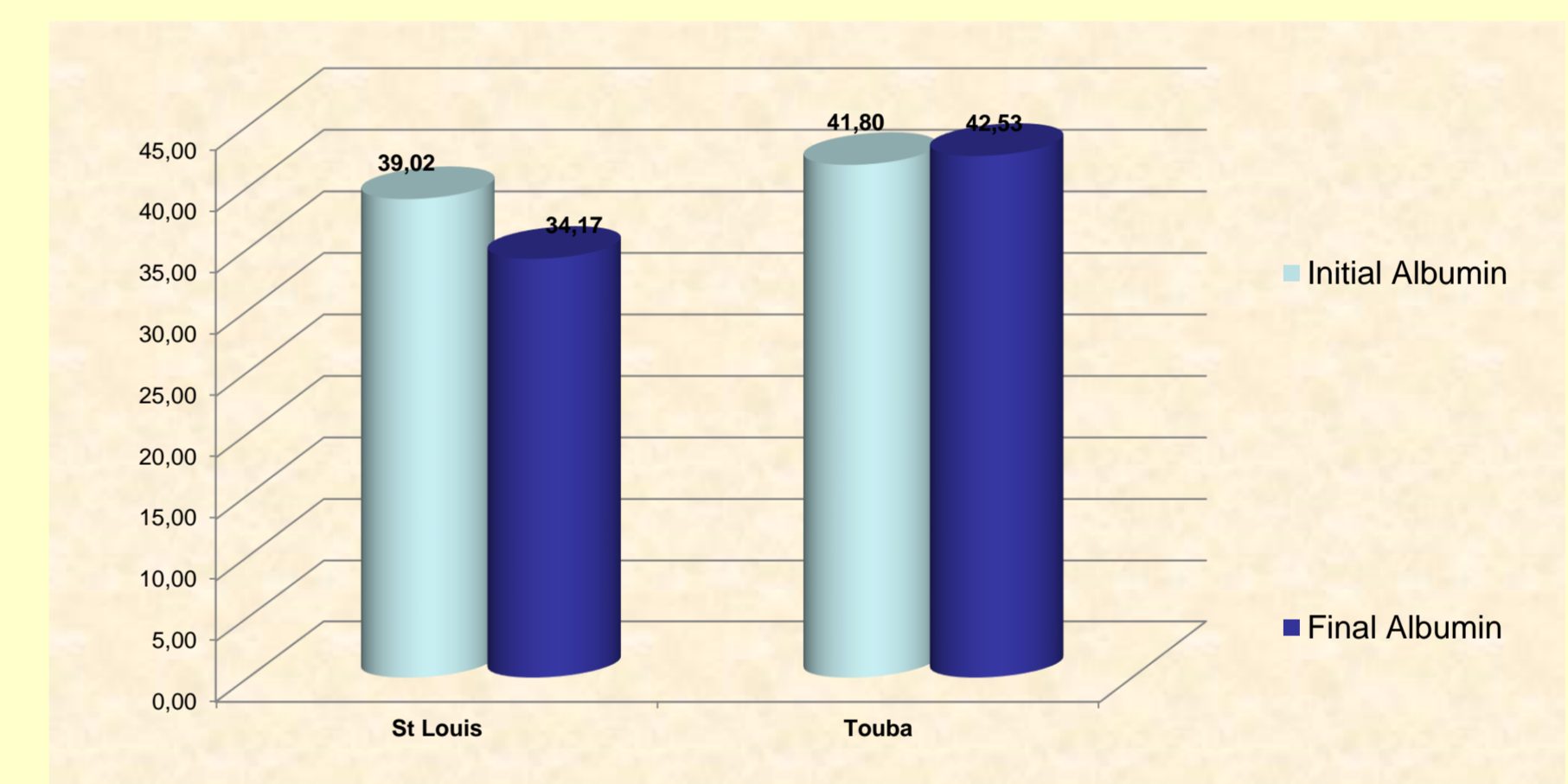


Table 2: Comorbidities in studied population

	St Louis (La Reunion) study lot	Touba (Senegal) study lot	p
Diabetes (%)	56,09	7,69	0,002
HTA (%)	90,2	61,5	<0,05
AVC (%)	0	0	NS
Cardiac failure	34,1	26,9	NS
Coronaropathy	19,5	30,8	0,004

Fig. 3: Hemoglobin levels in the 2 groups

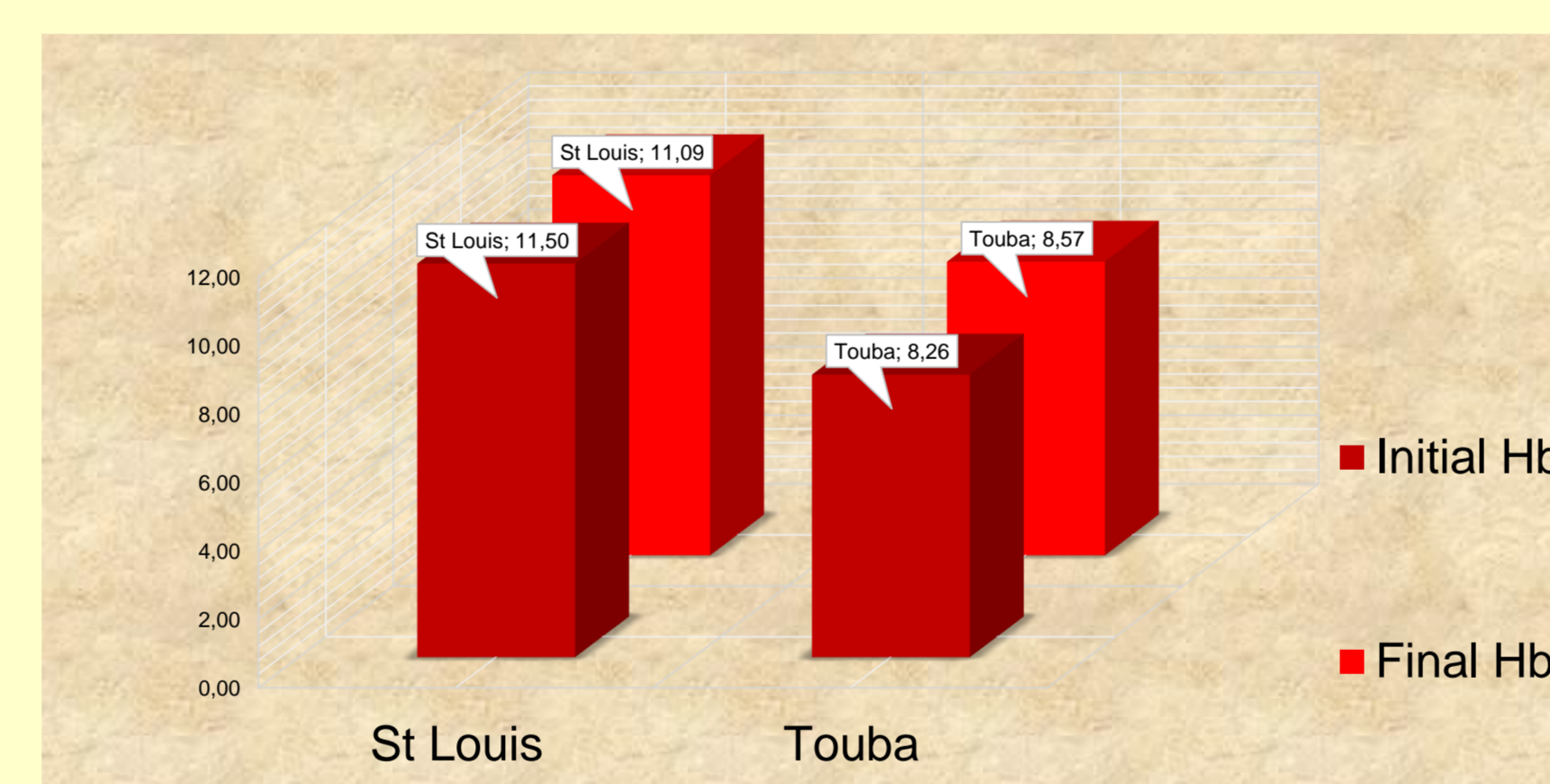


Fig. 5: Prevalence of malnutrition in the 2 groups

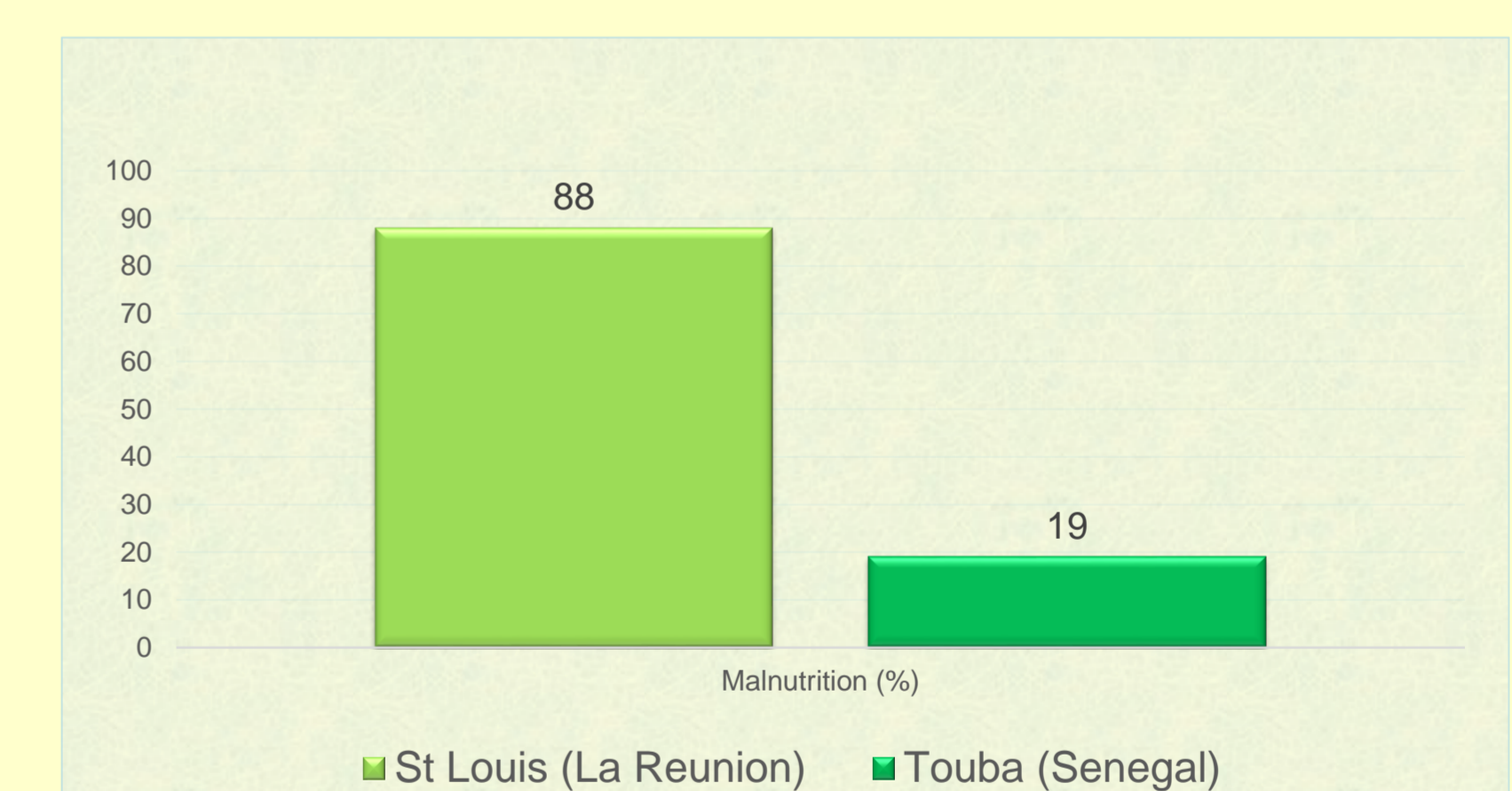


Fig. 1a: Etiology of renal failure in St Louis

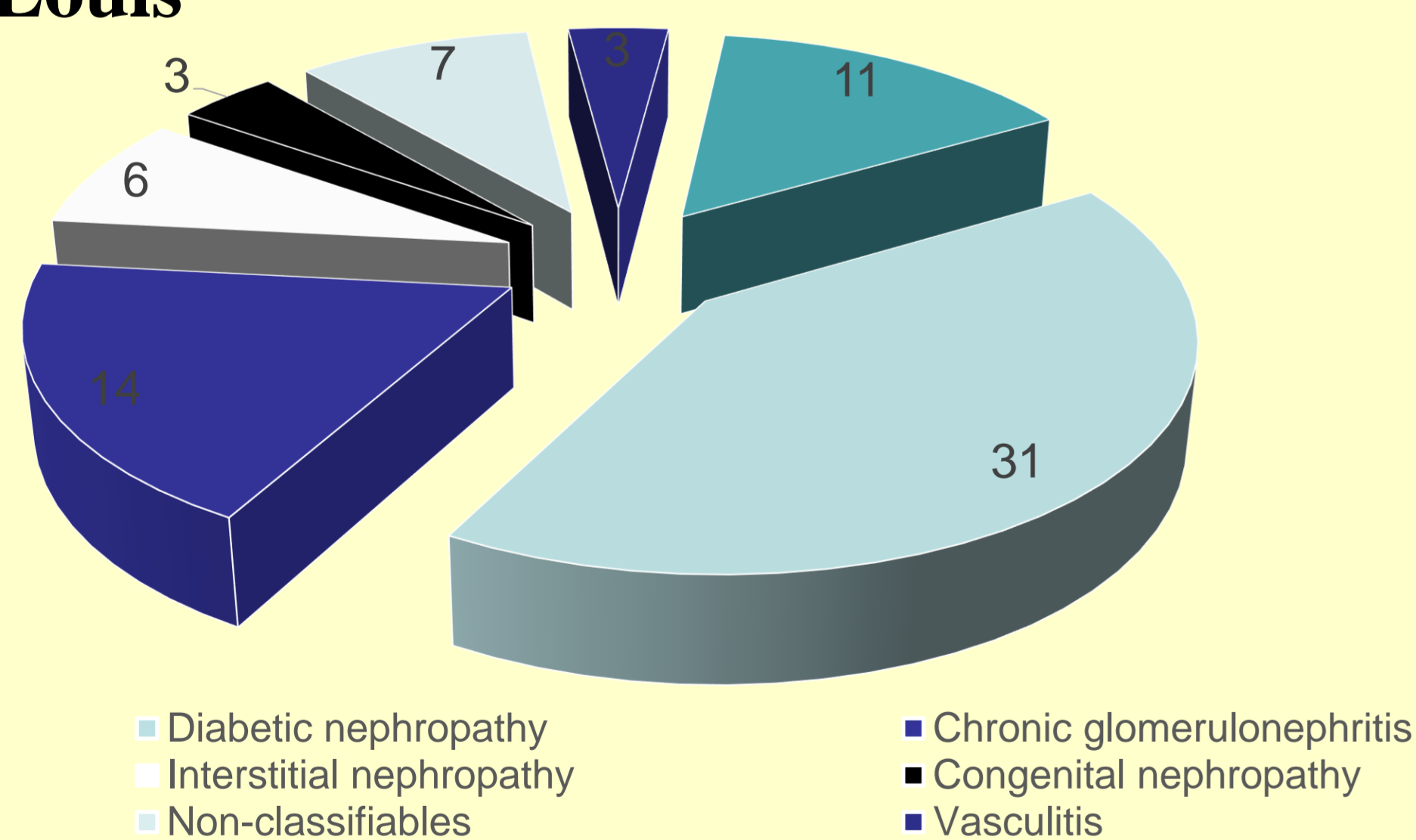
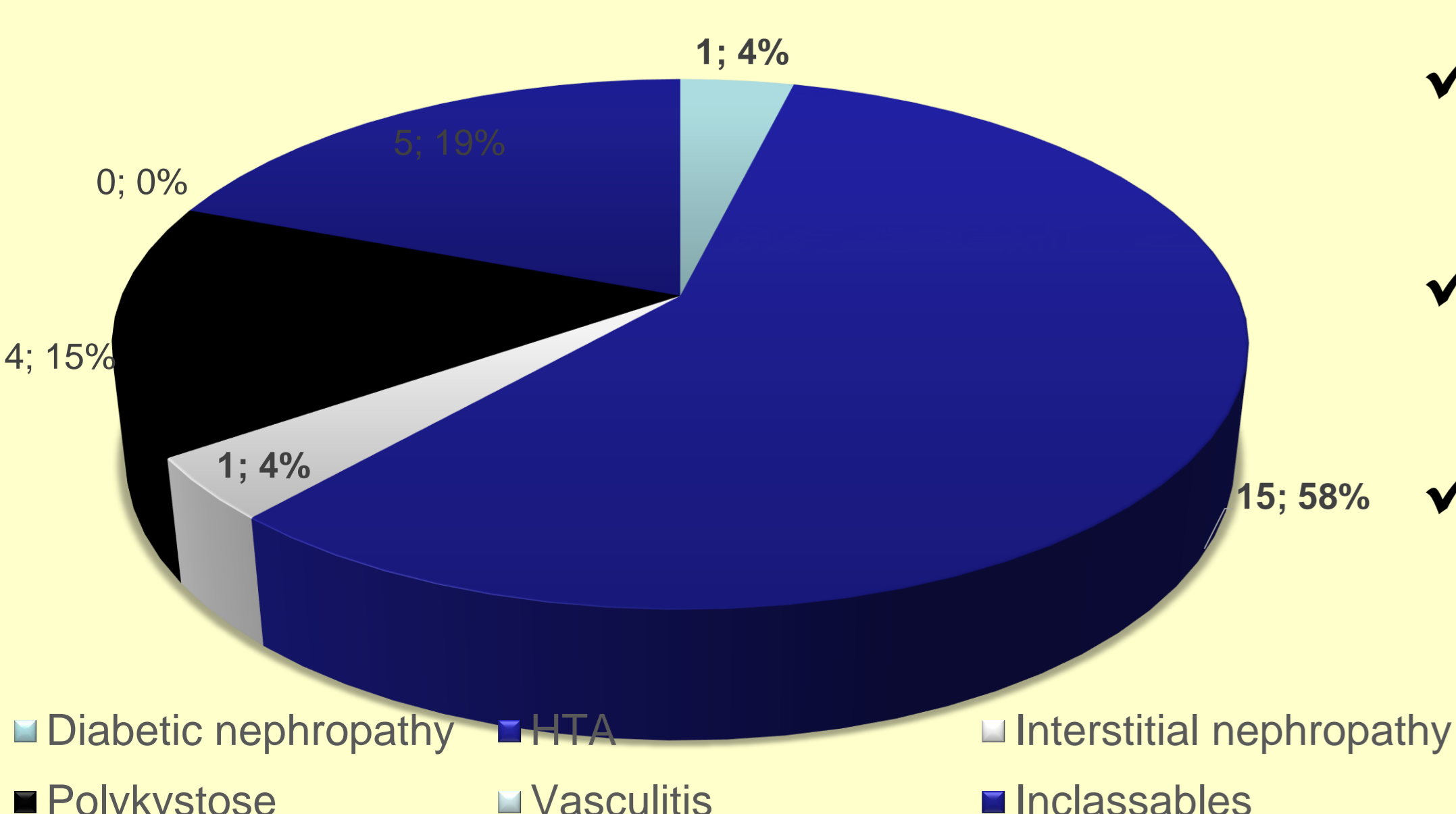


Fig. 1b: Etiology of renal failure in Touba



Conclusion

- ✓ Creole dialyzed (from La Réunion) patients are **more diabetic, hypertensive and over weight** in comparison with their African cousins from Senegal. **Mean age** is also much higher in La Réunion dialysis group. Different genetic phenotypes and cultural habits may explain this difference.
- ✓ **Dialysis duration** is also very different between the two groups: Senegalese patients are much younger and they dialyze for a significantly shorter period than creole patients from La Réunion island.
- ✓ **Anemia** is more severe in Senegalese dialyzed patients because of poor incomes and the fact that erythropoietin treatment costs are supported by the patients.
- ✓ Dialysis duration (and survival) much longer in La Réunion is another argument for the better follow up of creole patients.
- ✓ However, the presence of **malnutrition** in more patients in La Réunion than in Senegal may be linked to nutritional disorders described in literature in creole La Réunion population and should be more profoundly analyzed.

