# 4.1 CHARACTERISTICS OF STUDY POPULATION.

**4.1.1. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION.**

Of the 44 participants enrolled, 65.9% were females (n=29). The age of the participants ranged from 20 years to 65 years with a mean±SD age of 40.6±11.9 years. In all, 84.1% (n=37) were employed and 77.3% (n=34) were of semi-bantus origin (see Table I).

**Table I : Socio-demographic characteristics of the study population (n=45)**

|  |  |  |
| --- | --- | --- |
| **VARIABLE** | **FREQUENCY** | **PERCENTAGE (%)** |
| **Age ranges** |  |  |
| [20-30[ | 11 | 25.0 |
| [30-40[ | 9 | 20.5 |
| [40-50[ | 12 | 27.3 |
| [50-60[ | 10 | 22.7 |
| [60-70[ | 2 | 4.5 |
| **Sex** |  |  |
| Females | 29 | 65.9 |
| Males | 15 | 34.1 |
| **Employment status** |  |  |
| Employed | 37 | 84.1 |
| Unemployed | 6 | 13.7 |
| Retired | 1 | 2.3 |
| **Ethnicity** |  |  |
| Semi-Bantus | 34 | 77.3 |
| Bantus | 9 | 20.5 |
| Sudanese | 1 | 2.3 |

**4.1.2 CLINICAL CHARACTERISTICS OF PARTICIPANTS WITH ADPKD.**

The median ADPKD vintage was 3.0[1.0-8.0] years

Table II: Clinical parameters of participants with ADPKD (n=29)

|  |  |  |
| --- | --- | --- |
| Variable | Frequency | Percentage (%) |
| Presentation |  |  |
| Hypertension | 14 | 48.3 |
| Flank pain | 18 | 62.1 |
| Gross hematuria | 7 | 54.1 |
| Urinary tract infection | 5 | 17.2 |
| Kidney stone | 5 | 17.2 |
| Family History |  |  |
| Yes | 17 | 58.8 |
| Unknown | 11 | 37.9 |
| No | 1 | 3.4 |
| Extra-renal cysts |  |  |
| Yes | 11 | 37.9 |
| Liver | 10 | 90.9 |
| Pancreas | 1 | 9.1 |

Figure 1: Symptom distribution in the study population. Symptoms are: Hypertension, flank pain, macroscopic hematuria, urinary tract infection and kidney stones.

Figure 2: Family members with ADPKD

Figure 3: Number of family members with ADPKD

**4.1.3 DRUG HISTORY OF STUDY PARTICIPANTS**

Figure 4: Drug history of participants

Figure 5: Drug history of ADPKD Participants

**4.1.4 DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF STUDY PARTICIPANT SUB-GROUPS**

Tableau 1: Clinical parameters in our study population (n=44)

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristic | ADPKD (n=29) | Control (n=15) | p value |
| Age Ɨ | 40.2±11.2 | 41.3±13.4 | 0.795 |
| Sex: female (n) | 20 | 9 |  |
| BMI (kg/m2) Ɨ | 21.6±3.4 | 23.3±3.5 | 0.136 |
| Serum creatinine(mg/L)\* | 11.6[8.7-16.3] | 8.9[8.0-10.6] | **0.022\*** |
| eGFR(ml/min/1.73m2)\* | 74.4[51.2-94.6] | 94.5[77.3-111.7] | **0.022\*** |
| Blood pressure (mm/Hg) |  |  |  |
| SBP Ɨ | 128.9±22.7 | 127.7±16.2 | 0.709 |
| DBP Ɨ | 83.8±13.7 | 78.9±13.3 | 0.241 |
| Urine dipstick |  |  |  |
| Leukocytes | 11 | 0 | 0.314 |
| Proteins | 3 | 0 | 0.540 |
| Blood | 3 | 0 | 0.540 |
| Nitrites | 2 | 0 | 0.169 |
| BSS |  |  | 0.615 |
| Type 2 | 1 | 1 |  |
| Type 3 | 5 | 1 |  |
| Type 4 | 20 | 10 |  |
| Type 5 | 2 | 2 |  |
| Type 6 | 0 | 1 |  |
| Type 7 | 1 | 0 |  |

SBP = systolic blood pressure, DBP = diastolic blood pressure, BMI = body mass index, BSS = Bristol stool scale

**4.2 KIDNEY FUNCTION IN OUR STUDY POPULATION**

Table IV: Kidney function in the study population

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **ADPKD (n=29)** | **Control (n=15)** | **p Value** |
| **Serum creatinine(mg/dL)** | 11.6[8.7-16.3] | 8.9[8.0-10.6] | **0.022\*** |
| **eGFR(ml/mm/1.73m2)** | 74.4[51.2-94.6] | 94.5[77.3-111.7] | **0.022\*** |

**p value=0.011\***

Figure 18: KDIGO CKD classification

**4.3 DIET ASSESSMENT**

**4.3.1 24HOUR RECALL ASSESSMENT**

Table V: Dietary intakes

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | ADPKD (n=29) | Control (n=15) | **p Value** |
| **Energy (Kcal)** | 1544.1  [1014.5-1517.9] | 1520.0  [1015.9-1822.8] | 0.757 |
| **Proteins (g)** | 40.3  [24.9-56.5] | 38.9  [32.8-50.6] | 0.853 |
| **Carbohydrates(g)** | 114.6  [68.1-163.4] | 114.1  [100.2-159.4] | 0.421 |
| **Fibre(g)** | 19.4  [4.8-20.4] | 16.9  [14.9-27.7] | 0.052 |
| **Fats (g)** | 69.1  [36.2-127.1] | 64.2  [44.8-131.9] | 0.738 |

**4.3.2 FOOD FREQUENCY QUESTIONNAIRE ANALYSIS**

Table VI: FFQ assessment by scores method

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | ADPKD (n=29) | Control (n=15) | **p Value** |
| **Score I** | 5.2[4.4-6.0] | 4.1[3.2-5.1] | **0.041\*** |
| **Score II** | 2.8[2.0-3.4] | 3.7[2.7-3.9] | 0.134 |

**Score 1:** « Protective » of gut microbiota **Score II:** « Non - protective » of gut microbiota

**4.4 FACTORS ASSOCIATED ( RENAL FUNCTION, DIET AND GUT BACTERIA)**

**4.4.1 BETWEEN DIET AND RENAL FUNCTION**

Figure 19: Correlation between renal function and gut non-beneficial feeding in the study population

**r=0.44, p=0.003\***

Figure 20 Correlation between renal function and gut beneficial feeding in the study population