Tables

Table (1): Normal reference ranges of thyroid hormones

Thyroid-stimulating hormone (TSH	6 mo-18 yr	0.5-4.5 μ IU/L
Thyroxine (T4), total	1-5 yr 6-18 yr	4.5-11.0 μ g/dL 4.5-10.0 μ g/dL
Thyroxine (T4), free	31 days-18 yr	0.7-2.00 ng/dL
Triiodothyronine (T3), free	6 wk Adult (20-50 yr)	240-560 pg/dL- 3.7-8.6 pmol/L 230-660 pg/dL- 3.5-10.0 pmol/L
Triiodothyronine (T3), total	1-6 yr 7-11 yr 12-18 yr	90-240 ng/dL-1.4-3.7 nmol/L 90-230 ng/dL- 1.4-3.6 nmol/L 100-210 /dL- 1.5-3.3 nmol/L

Table 2: Baseline characteristics of the studied patients

Variables	**Total patients (n=41)**
Age (years)	
Mean ± SD	15.17 ± 4.69
Range	6 – 23
Gender	
Male	19 (46.3%)
Female	22 (53.7%)
Male/female ratio	0.9
Height (cm)	
Mean ± SD	134.68 ± 16.12
Range	100 – 165
< 3rd percentile (short stature)	27 (65.9%)
Weight (kg)	
Mean ± SD	30.46 ± 10.28
Range	12 – 50
< 3rd percentile (under weight)	14 (34.1%)
Duration of dialysis (months)	
Median (IQR)	47.67 (17.27 – 106.59)
Range	4.07 - 189.77
Number of sessions/week	3 ± 0

Table 3: Thyroid function tests of the studied patients

Variables	**Total patients (n=41)**
TSH (μIU/L)	
Median (IQR)	2.31 (1.8 - 3.2)
Range	0.5 – 4.5
Sub-clinical hypothyroidism (TSH>4.5 μIU/L)	6 (14.6%)
Normal TSH (0.5 – 4.5)	35 (85.4%)
T3 (ng/dL)	
Median (IQR)	130 (112.55 - 153.5)
Range	90 -240
FT3 (pg/ml)	
Median (IQR)	2.5 (2.25 - 2.75)
Range	2.4 - 7
T4 (μg/dL)	
Median (IQR)	8.6 (5.6 - 9.55)
Range	4.5 - 11
FT4 (ng/dL)	
Median (IQR)	1 (0.9 - 1.2)
Range	0.7 - 2

Table 4: Association between thyroid function of the studied patients and different laboratory investigations

Variables	Normal (n=35)	Subclinical hypothyroidism (n=6)	P value
CBC			
Hb (g/dL)	11.3 (8.75 - 12.4)	11.4 (9.55 - 11.7)	0.9
Anemia	12 (34.3%)	2 (33.3%)	>0.999
WBCs ($x10^3$cells/µl)	5.8 (5.18 - 7.9)	7.7 (5.58 - 10.02)	0.148
PLT ($x10^3$cells/µl)	188 (163 - 228)	226.5 (186 - 288.75)	0.148
HCT (%)	34.3 (28.7 - 37.3)	34.4 (30.58 - 35.7)	0.815
MCV (fL)	88.5 (85 - 95.2)	88.6 (86.28 - 93.85)	0.706
Kidney function			
BUN (mg/dL)	114 (105 - 127)	114 (97.25 - 171.25)	0.9
Serum creatinine (mg/dL)	7.4 (6.09 - 9.44)	6.55 (5.08 - 8.7)	0.376
Sodium (mmol/L)	133.2 (133 - 135.1)	133.5 (132.75 - 135)	0.815
Potassium (mmol/L)	4.6 (3.84 - 4.9)	3.6 (3.55 - 3.76)	**0.002***
Total calcium (mg/dl)	8.9 (8 - 9.8)	8.95 (8.53 - 10.35)	0.505
Ionized calcium (mg/dl)	1.02 (0.9 - 1.2)	1.16 (1.03 - 1.47)	0.102
Liver function			
ALT (IU/L)	12 (10 - 16)	16.5 (9 - 89)	0.552
AST(IU/L)	18 (16 - 24)	30.5 (15 - 75.25)	0.252
Total protein (g/dL)	7.2 (6.6 - 7.4)	6.75 (5.9 - 7.65)	0.577
Albumin (g/dL)	3.7 (3.5 - 4.2)	3.7 (3.35 - 4.13)	0.872
Total bilirubin (mg/dL)	0.5 (0.4 - 0.7)	0.3 (0.28 - 0.38)	**0.02***
ABG			
pH	7.3 (7.2 - 7.3)	7.32 (7.3 - 7.37)	**0.02***
PCO_2 (mmHg)	33.1 (30.6 - 40.5)	29.6 (28.5 - 30.13)	**0.006***
PO_2 (mmHg)	127 (112 - 148)	120.5 (109.48 - 125)	0.459
Base Deficit (mmol/L)	-8.8 (-10.9 to -7.1)	-7.7 (-8.7 to-7.23)	0.237
HCO_3 (mmol/L)	17.7 (15.6 - 20.6)	19.2 (17.6 - 66.78)	0.209
PTH (pg/mL)	392 (166.3 - 526)	450.7 (12.33 - 1369)	0.76
25-OH (vitamin D) (nmol/L)	22.7 (11.57 - 40.17)	30.82 (14.4 - 50.86)	0.416
Alkaline phosphatase (IU/L)	350 (172 - 624)	358 (114.5 - 880.5)	0.986
Phosphorus (mg/dL)	4.9 (3.2 - 6.1)	4.65 (3.38 - 5.8)	0.787

Table 5 Association between T3 Syndrome of the studied patients and different laboratory investigations

Variables	Normal (n=35)	Low T3 Syndrome (n=6)	P value
CBC			
Hb (g/dL)	11.4 (9.3 - 12.4)	8.58 (7.2 - 10.9)	0.058
Anemia	4 (66.7%)	10 (28.6%)	0.069
WBCs ($x10^3$cells/µl)	5.8 (5.19 – 6.95)	8.44 (5.2 - 10.33)	0.155
PLT ($x10^3$cells/µl)	188 (172 - 238)	178.5 (98 - 346)	0.618
HCT (%)	34.4 (29.2 - 37.3)	26.85 (21.1 - 34.6)	0.050
MCV (fL)	88.5 (85 - 92.1)	92.35 (87.9 - 97.6)	0.210
Kidney function			
BUN (mg/dL)	114 (98 - 133)	114 (113 - 118)	0.726
Serum creatinine (mg/dL)	7.26 (5.2 - 9.44)	6.23 (5.9 - 7.4)	0.438
Sodium (mmol/L)	133 (133 - 135)	134.5 (133 - 136)	0.489
Potassium (mmol/L)	4.6 (3.7 - 4.9)	4.15 (3.38 - 4.66)	0.209
Total calcium (mg/dl)	8.9 (8 - 9.6)	9.75 (8.6 - 11.6)	0.337
Ionized calcium (mg/dl)	1.04 (0.9 - 1.2)	1.14 (0.98 - 1.6)	0.300
Liver function			
ALT (IU/L)	12 (10 - 27)	12.5 (9 - 13)	0.460
AST(IU/L)	19 (15 - 30)	17.5 (16 - 18)	0.395
Total protein (g/dL)	7.2 (6.4 - 7.5)	6.95 (6.6 - 7.1)	0.222
Albumin (g/dL)	3.6 (3.5 - 4.2)	3.9 (3.5 - 4)	0.956
Total bilirubin (mg/dL)	0.45 (0.3 - 0.6)	0.55 (0.3 - 0.8)	0.492
ABG			
pH	7.3 (7.2 - 7.3)	7.3 (7.3 - 7.3)	0.656
PCO_2 (mmHg)	32 (29.6 - 40.2)	34.9 (30.5 - 42.9)	0.618
PO_2 (mmHg)	127 (112 - 141)	114 (113 - 146)	0.726
Base Deficit (mmol/L)	-8.4 (-10.3 - -7.1)	-9.2 (-10.1 - -7.7)	0.726
HCO_3 (mmol/L)	18.25 (15.8 - 20.6)	18.1 (17 - 19.7)	0.850
PTH (pg/mL)	410.8 (169.1 - 553.4)	246.65 (37.9 - 881)	0.740
25-OH (vitamin D) (nmol/L)	24.9 (14.13 - 40.17)	9.72 (8.47 - 61.16)	0.197
Alkaline phosphatase (IU/L)	350 (123 - 624)	398 (172 - 775)	0.543
Phosphorus (mg/dL)	5.2 (3.5 - 6.4)	4.45 (3.2 - 5.7)	0.460