

LIST OF TABLES

Table	page
(1) A Table showing the age of the three studied groups	37
(2) A Table showing the percentage of males versus females among the three studied groups	38
(3) A Table showing RA duration among the studied groups	39
(4) A Table showing the DAS 28 among the studied groups	40
(5) A Table showing the clinical picture of thyroid disorders among the studied groups	41
(6) A Table showing ESR and CRP among the studied groups	42
(7) A Table showing mean serum RF and Anti-CCP among the studied groups	44
(8) Comparison between the three studied groups according to RF and anti CCP	46
(9) A Table showing mean serum TSH, T3 and T4 among the studied groups	47
(10) A Table showing the percentage of TSH, T3 and T4 among the studied groups	49
(11) A Table showing the mean serum anti-TPO, anti-TG and TRAbs among the studied groups	51
(12) A Table showing the percentage of anti-TPO, anti-TG and TRAbs among the studied groups	53
(13) A Table showing thyroiditis on ultrasound among the studied groups	55
(14) A table showing relation between DAS- 28 score with clinical picture of thyroid disorder among the studied groups	57
(15) A Table showing the relation between DAS 28 and serum TSH level among the studied groups	59
(16) Correlation between DAS score with mean serum TSH	61
(17) Correlation between DAS score with Anti-TPO, Anti-TG and TRAbs	61
(18) A Table showing the relation between thyroid auto antibodies and overt thyroid dysfunction	62
(19) Relation between thyroid autoantibodies and RF and anti-CCP	63
(20) Correlation between mean RF with Anti-TPO, Anti-TG and TRAbs	64
(21) Correlation between Anti-CCP with Anti-TPO, Anti-TG and TRAbs	66
(22) Correlation between duration of RA with Anti-TPO, Anti-TG	68
(23) Correlation between TSH with Anti-TPO, Anti-TG	68

LIST OF FIGURES

Figure		page
(1)	Pathogenesis of AITDs	3
(2)	Ultrasound picture of Graves' disease showing marked hyper vascularity (thyroid inferno sign)	8
(3)	Diffuse Hashimoto's thyroiditis in a 35-year-old female patient, who presented with features of hypothyroidism and had anti-thyroid antibodies positive for the disease.	8
(4)	Pathophysiology of Rheumatoid arthritis	14
(5)	Joints to be assessed in DAS calculation:	16
(6)	Interpretation of DAS results	16
(7)	A figure comparing the age of the different studied groups.	37
(8)	A figure comparing the sex of the different studied groups.	38
(9)	A figure comparing RA duration between the studied patients.	39
(10)	Comparison between the studied groups according to DAS 28 score.	40
(11)	A figure comparing the clinical picture of thyroid disorders between the studied groups.	41
(12)	A figure comparing the ESR between the studied groups.	43
(13)	A figure comparing CRP between the studied groups.	43
(14)	A figure comparing between mean RF among the studied groups.	45
(15)	A figure comparing mean serum Anti CCP between the studied groups.	45
(16)	A figure showing comparison between the three studied groups according to RF and anti CCP.	46
(17)	A figure showing mean serum TSH, T3 and T4 among the studied groups.	48
(18)	A figure showing the percentage of TSH among the studied groups.	50
(19)	A figure showing the percentage of T3 among the studied groups.	50
(20)	A figure showing the percentage of T4 among the studied groups.	50
(21)	A figure showing the mean serum anti-TPO, anti-TG among the studied groups.	52
(22)	A figure showing the mean TRAbs among the studied groups.	52
(23)	A figure showing the percentage of anti-TPO among the studied groups.	54
(24)	A figure showing the percentage of anti-TG among the studied groups.	54
(25)	A figure showing the percentage of TRAbs among the studied groups.	54

Figure	page
(26)	A figure comparing ultrasound finding of evidence of thyroiditis among the studied groups. 55
(27)	A:ultrasound picture of a 35 year old female patient showing diffuse heterogenicity of the thyroid gland ,Rt lobe volume 6.1,lt lobe volume 6.5,no definite nodules...picture of thyroiditis (patient no. 18 of group I). B: ultrasound picture of thyroid gland of a 42 year old female patient showing diffuse heterogenicity of the gland...picture of thyroiditis (patient no.39 of group II). C: Ultrasound picture of normal thyroid gland regarding size and echogenicity of 24 year old female patient (patient no.84 of group III) 56
(28)	Relation between DAS- 28 score with clinical picture of thyroid disorder among the studied groups. 58
(29)	A figure showing the relation between DAS 28 and serum TSH level among the studied groups. 60
(30)	A figure showing the relation between thyroid autoantibodies and overt thyroid dysfunction. 62
(31)	A figure showing the relation between thyroid autoantibodies and RF and anti-CCP. 63
(32)	A figure showing the correlation between RF and Anti-TPO. 65
(33)	A figure showing the correlation between RF and TRAbs. 65
(34)	A figure showing correlation between Anti-CCP and Anti-TPO. 67
(35)	A figure showing correlation between Anti-CCP and TRAbs. 67

LIST OF ABBREVIATIONS

(Abs)	: Antibodies
(ACPA)	: Anti-cyclic citrullinated peptide
(ACR)	: American college of rheumatology
(AH)	: Autoimmune hypothyroidism
(AIDs)	: Autoimmune diseases
(AIT)	: Amiodarone induced thyrotoxicosis
(AITDs)	: Autoimmune thyroid diseases
(ALT)	: Alanine transaminase
(ANA)	: Antinuclear antibody
(ANS)	: 8-anilino-1-naphthalene sulfonic acid
(Anti-CCP)	: Anti cyclic citrullinated peptide
(APC)	: Antigen presenting cell
(AST)	: Aspartate transaminase
(CD)	: Cluster of differentiation
(COX)	: Cyclooxygenase
(CRP)	: C- reactive protein
(CT)	: Computed tomography
(DAS 28)	: Disease activity score 28
(DMARDs)	: Disease modifying anti rheumatoid drugs
(ELISA)	: Enzyme linked immune sorbent assay
(ESR)	: Erythrocyte sedimentation rate
(EULAR)	: European league against rheumatism
(GD)	: Graves' disease
(GWAS)	: Genome wide association studies
(HCV)	: Hepatitis C virus
(HLA)	: Human leucocyte antigen
(HRP)	: Horseradish peroxidase
(HT)	: Hashimoto's thyroiditis
(IBD)	: Inflammatory bowel disease
(IFN g)	: Interferon g
(IgG)	: Immunoglobulin G
(IL)	: Interleukin
(IU)	: International unit
(K-Da)	: Kilo Dalton
(MAS)	: Multiple autoimmune syndromes
(MCP)	: Metacarpo phalangeal
(MHC)	: Major histocompatibility complex
(MHz)	: Megahertz
(MMP)	: Matrix metalloproteinase
(MRI)	: Magnetic resonance imaging

(mRNA)	: Messenger RNA
(MS)	: Multiple sclerosis
(MTP)	: Metatarso phalangeal
(MTX)	: Methotrexate
(NICE)	: National institute for health and care excellence
(NIS)	: Sodium iodide symporter
(NSAIDs)	: Non-Steroidal anti-inflammatory drugs
(PGs)	: Prostaglandins
(PIP)	: Proximal inter phalangeal
(PPT)	: Postpartum thyroiditis
(RA)	: Rheumatoid arthritis
(RAIU)	: Radioactive iodine uptake
(RANK)	: Receptor activator of nuclear factor kappa
(RANKL)	: Receptor activator of nuclear factor kappa ligand
(RF)	: Rheumatoid factor
(SD)	: Standard deviation
(SF)	: Synovial fluid
(SLE)	: Systemic lupus erythematosus
(SNPs)	: Single nucleotide polymorphisms
(SS)	: Sjogren's syndrome
(SSZ)	: Sulphasalazine
(T3)	: Triiodothyronine
(T4)	: Tetraiodothyronine
(TAO)	: Thyroid associated orbitopathy
(TCR)	: T-cell receptor
(TG)	: Thyroglobulin
(Th1)	: T-helper cell
(TMB)	: Tetramethylbenzidine
(TNF-a)	: Tumor necrosis factor alpha
(TPO)	: Thyroid peroxidase
(TRABs)	: TSH receptor antibodies
(TSH)	: Thyroid stimulating hormone
(US)	: Ultrasound
(USA)	: United States of America
(USG)	: Ultrasonography