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Risk Factors of Hypothyroidism among Palestinian in Gaza Strip: Case Control Study

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Risk Factors of Hypothyroidism among Palestinian in Gaza Strip: Case Control Study

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Risk Factors of Hypothyroidism Among Palestinian In Gaza Strip: Case Control Study

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Dedication

To the loving memory of my father, God bless his soul

To my precious mother

To my brother; Mr. Mohammad, Dr. Abdellrahman, and Mr. Ahmad

To my sister

To my wife

To my son Ibrahim

To my daughters Shtha, Basma, and Raghad

To my relative and friends

Declaration

I certify that this thesis submitted for the degree of master, is the result of my own research, except where otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed

Khalil Ibrahim Hamad

Date: / /

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I hope this study could be helpful for the practice and for knowledge seekers.

Abstract

Hypothyroidism is a clinical syndrome resulting from a deficiency of thyroid hormones and it is considered as one of the most common endocrinological disorders in the world. The aim of this study is to assess the risk factors for hypothyroidism among people attending the Governmental hospitals in Gaza Strip. Case control study was carried out in four governmental hospitals namely European Gaza hospital, Naser hospital, Shohda Al-aqsa hospital and Al-shifa hospital in Gaza strip. The sample was selected by convenient sampling method with total sample size of 300 (150 cases and 150 controls). The cases were adult clients already diagnosed with hypothyroidism who attended the selected governmental hospitals and the controls were adults without hypothyroidism from people who attended the Governmental hospitals. The matching was done in term of the same Governorate. Pilot study was carried out and resulted with no any modification in the instrument. P-value ≤ 0.05 and/or confidence interval of 95% are considered statistically significant. Bivariate analysis showed that there were statistically significant association ($p < 0.05$) between hypothyroidism and the under mentioned risk factors; the Socio-demographic factors including age (t: 3.625, p: 0.000), being female OR: 3.18 (1.63 – 6.17), educational level ($p< 0.05$ for all categories less than diploma), unemployment OR:2 (1.25 – 3.18), family history of thyroid diseases OR: 6.658 (3.38 – 13.10), present medical history of hypertension OR: 1.98 (1.16 – 3.39), present medical history of diabetes mellitus OR: 2.74 (1.39 – 5.36), presence of goiter OR: 29 (11.24 – 74.77), among reproductive factors postpartum thyroiditis (F: 25.34, p: 0.000), for drugs antiacid intake (t: 2.153, p: 0.043), iron intake (t: 2.19, p: 0.033),and for Dietary factors eating red meat 3 times and more weekly OR: 0.184 (.065 – 0.517) and eating red meat 1-2 times weekly OR: 0.247 (0.099 – 0.616), taking milk 3 times and more weekly OR: 0.395 (0.231 – 0.677) and taking milk less than once weekly OR: 0.38 (0.194 – 0.764), eating peanuts 1-2 times weekly OR: 0.472, (0.232 – 0.862) and eating peanuts Less than once weekly OR: 0.472 (0.272 – 0.819), eating pineapple (F:11.30, P:0.008), eating raisin 1-2 times weekly OR: 0.23 (0.085 – 0.645) and eating raisin less than once weekly OR: 0.447 (0.273 – 0.734), eating sesame less than once weekly OR: 0.468 (0.275 – 0.799) and eating walnuts 3 or more weekly, 1-2 times weekly and less than once weekly (OR: 0.294, 0.199 and 0.498 respectively, C.I: 0.097 – 0.892, 0.062 – 0.642 and 0.305 – 0.811 respectively). The study recommended that well adopted surveillance system for hypothyroidism and screening program for population at risk for hypothyroidism should be taken in place specially among female diabetic and/or hypertensive patients aged 40 years and above. In addition health education program should be adopted to increase awareness on hypothyroidism as one of the common endocrine disorders and to work on modifiable risk factors for hypothyroidism like drugs intake.

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List of Abbreviations

AITD	Auto immune thyroid disease
Anti-Tg	Thyroglobulin antibodies
Anti-TPO	Thyroid Peroxidase antibodies
EMRO	Eastern Mediterranean Region Office WHO
FT3	Free T3
FT4	Free T4
GD	Grave's Disease
LT4	Levothyroxine
MOH	Ministry of Health
NGO	Non-Governmental Organization
OCHA	United Nation Office for the Coordination of Humanitarian Affairs
PASSIA	Palestinian Academic Society for the Study of International Affairs
PCBS	Palestinian Central Bureau of Statistics
RAI	Radioactive iodine
SCH	Subclinical hypothyroidism
TBG	Thyroxin-binding globulin
Tg	Thyroglobulin
TPO	Thyroid peroxidase
TRH	Thyrotropin-releasing hormone
TSH	Thyroid stimulating hormone, thyrotropin
UI	Urinary iodine
UNFPA	United Nations Population Fund
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
WHO	World Health Organization