

**Oral Calcium and Vitamin D
Supplementation after Total
Thyroidectomy, Does it worth?
A Prospective study**

THESIS

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Contents:

	Page
I Acknowledgement.....	1
II List of figures.....	3
III List of tables.....	7
1- Introduction & aim of the work.....	9
2- Anatomy of thyroid and parathyroid glands....	17
3- Physiology of calcium.....	61
4- Etiology and Clinical presentation of post- thyroidectomy hypocalcaemia.....	75
5- Predictors of hypocalcaemia after total Thyroidectomy.....	93
6- Patients and methods.....	111
7- Surgical strategy.....	125
8- Results.....	139
9- Discussion.....	157
10-Conclusion.	173

11-	Summary.....	177
12-	References.....	183
13-	Arabic summary.....	201

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LIST OF FIGURES

Figure	Page
(Fig.1): Normal vestiges of thyroid Gland development.....	19
(Fig.2): Fascial layers of the neck (Cross section).....	21
(Fig.3): The anchor of the thyroid gland: the ligament of Berry.....	22
(Fig.4): The arterial supply to the thyroid gland.....	24
(Fig. 5): Relations at the crossing of the recurrent laryngeal nerve and the inferior thyroid artery.....	27
(Fig.6): The venous drainage of the thyroid gland. The inferior thyroid veins are quite variable.....	29
(Fig.7): The lymph nodes receiving drainage from the thyroid gland.....	31

(Fig.8): The embryonic aortic arches and the "recurrence" of the laryngeal nerve.....	36
(Fig.9): The course of the recurrent laryngeal nerve at the thyroid gland.....	38
(Fig.10): Zuckerkandl's tuberculum.....	42
(Fig.11): The region of the tubercle of Zuckerkandl and the distal course of the recurrent laryngeal nerve (RLN)....	43
(Fig.12): Branching of the superior laryngeal nerve and the carotid arteries.....	45
(Fig.13): The migratory pathways of the parathyroid glands.....	50
(Fig.14): Anatomic locations of ectopic parathyroid glands, with number found in each location.....	51
(Fig.15): parathyroid glands and their relation to RLN.....	52
(Fig.16): Calcium balance and fluxes in a normal human.....	64
(Fig.17): Regulation of calcium homeostasis.....	69
(Fig.18): Chvostek's Sign.....	85
(Fig.19): Trousseau's Sign.....	86
(Fig.20): Distribution of calcium levels.....	98

(Fig.21): Strategy of using calcium and PTH levels after thyroidectomy.....	104
(Fig.22): Positioning of the patient.....	127
(Fig.23): Elevating upper flap.....	129
(Fig.24): Dissection of the recurrent laryngeal nerve after ligation and excision of the superior pole.....	132
(Fig.25): Dissection and preservation of the superior parathyroid gland.....	134
(Fig.26): Dissection and preservation of the inferior parathyroid gland.....	135
(Fig.27): Thyroid gland after excision.....	136
(Fig.28): Chart comparing sex of the two groups.....	143
(Fig.29): Chart comparing age of the two groups.....	143
(Fig.30): Chart comparing indications for total thyroidectomy between the two groups.....	145
(Fig.31): Chart showing comparison of the surgical procedure between the two groups.....	146
(Fig.32): Pie chart showing the histopathological results and their incidence in the control group.....	150
(Fig.33): Pie chart showing the histopathological results and their incidence in the treatment group.....	150
(Fig.34): Chart showing comparison of the serum calcium levels between the two groups.....	155

LIST OF TABLES

Table	Page
Table 1: Actions of Major Calcium Regulating Hormones.....	70
Table 2: Recommended calcium and vit.D intakes per day based on age.....	73
Table 3: Characteristics and hospital stay of patients with/without routine oral calcium and vitamin D supplements.....	142
Table 4: Indications for total thyroidectomy in patients with thyroid diseases.....	144
Table 5: Surgical procedures.....	146
Table 6: Number of parathyroid glands preserved and number of patients with parathyroid glands autotransplantation.....	148
Table 7: Postoperative histopathological results.....	149
Table 8: The incidence of temporary and permanent hypocalcaemia.....	151
Table 9: Comparison of the severity of hypocalcaemic symptoms between the two groups.....	153
Table 10: Serum calcium levels.....	154

INTRODUCTION & AIM OF THE WORK

Introduction

Hypocalcaemia is an important and common complication following thyroid surgery with reports varying from 0.5% to 75%. This wide variation is partly due to differences in defining hypocalcaemia and variance in laboratory ranges for normocalcaemia. (Gac et al., 2007).

In most cases, post-thyroidectomy hypocalcaemia is temporary, but may take several months to resolve. A small percentage (0–12%) persists beyond this stage and is considered permanent, although the cut-off time between a temporary and permanent hypocalcaemia varies between 6 months and 1 year. (Tartaglia et al., 2009).

Despite being self-limiting in most patients, symptomatic hypocalcaemia is of particular concern because of a delay in its manifestation and the consequent need for prolonged patient hospitalization or readmission. (Lindblom et al, 2002).

Several authors have attempted to identify risk factors in the development of hypocalcaemia. Declines in serum calcium or parathyroid hormone levels after surgery have been suggested as being reliable predictors of postoperative hypocalcaemia. **(Lindblom et al, 2002).**

Various causes for postoperative hypocalcaemia have been suggested including hemodilution or increased urinary calcium excretion secondary to surgical stress, calcitonin release secondary to thyroid gland manipulation, hungry bone syndrome (reversal of toxic thyroid osteodystrophy) and interference with the function of the parathyroid glands either through direct injury, removal or devascularization. **(Payne et al., 2005).**

Although the development of postoperative hypocalcaemia is likely to be multifactorial in nature, thyroid lobectomy alone is hardly ever associated with this complication, which is most common following total thyroidectomy where there is a greater risk of parathyroid injury compared to other forms of thyroid surgery. **(Fahmy et al., 2009).**