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

THESIS

Submitted For Partial Fulfillment of the M.D. degree in General Surgery

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Acknowledgement

First and for ever, I would like to thank Allah The most merciful and who is behind all success.
I would like to express my deepest gratitude and extreme appreciation to ***Prof. Dr. Rafeeq Ramsis,*** Professor of General Surgery, Faculty of Medicine, Ain Shams University, for his guidance, advices, and unlimited time offered to me during this work. That without his help wouldn't have come true; it was a great honor to work under his supervision.
And my acknowledgement will not be completed without, thanking ***Prof. Dr. Ashraf Abd El-Moghny Mustafa,*** Professor of General Surgery, Faculty of Medicine, Ain Shams University, for his encouragement, great help and valuable suggestions to me during this work.
I' am also very grateful to ***Dr. Mohamed El Sayed El Shinawi,*** Assistant professor of General Surgery, Faculty of Medicine, Ain Shams University, for his continuous help and his skillful technical assistance, advices, and unlimited time offered to me during this work. I would like to thank my family for there great help during this work.

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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).**