

PRE-BED DOSING OF L-THYROXINE IN RAMADAN AND THE EFFECT ON LIPID PARAMETERS

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ABSTRACT

Pre-bed dosing of L-thyroxine is an alternative method to improve patient's compliance, especially in the month of Ramadan. Some studies reported increment of Thyroid Stimulating Hormone (TSH) on Pre-bed dosing consistent with Subclinical Hypothyroidism (SH). Hyperlipidemia is one of the markers of tissue hypothyroidism which occurs as early as four weeks of suboptimal thyroxine replacement. We aimed to investigate the effect of Pre-bed thyroxine ingestion during the month of Ramadan on thyroid hormones and lipid parameters. A total of 9 hypothyroid patients who are on daily L-thyroxine replacement (taken before breakfast) were involved in this study. During Ramadan, they were asked to take their daily dose of L-thyroxine pre-bed instead of taking it pre-sahur. At the end of Ramadan, their thyroid hormones and lipid parameters were analysed. Most of the patients were already on thyroxine for more than a year with a stable dose of L-thyroxine. Their thyroid hormones (TSH, fT3, fT4) and lipid parameters (TC, LDL, HDL, triglyceride) were comparable at baseline. At the end of Ramadan, there was a significant increment of TSH observed [TSH w0 1.8 (0.23, 5.57) vs w4 3.65 (0.45, 16.10); p=0.011] without significant change of fT3 and fT4. Despite having Subclinical Hypothyroidism (SH), there was no significant change in the lipid parameters observed at the end of Ramadan. Pre-bed dosing in Ramadan biochemically showed to cause Subclinical Hypothyroidism (SH) without significant change in the lipid parameters.

Keywords: Pre-bed, Thyroxine, Ramadan, Subclinical Hypothyroidism, Lipid

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