

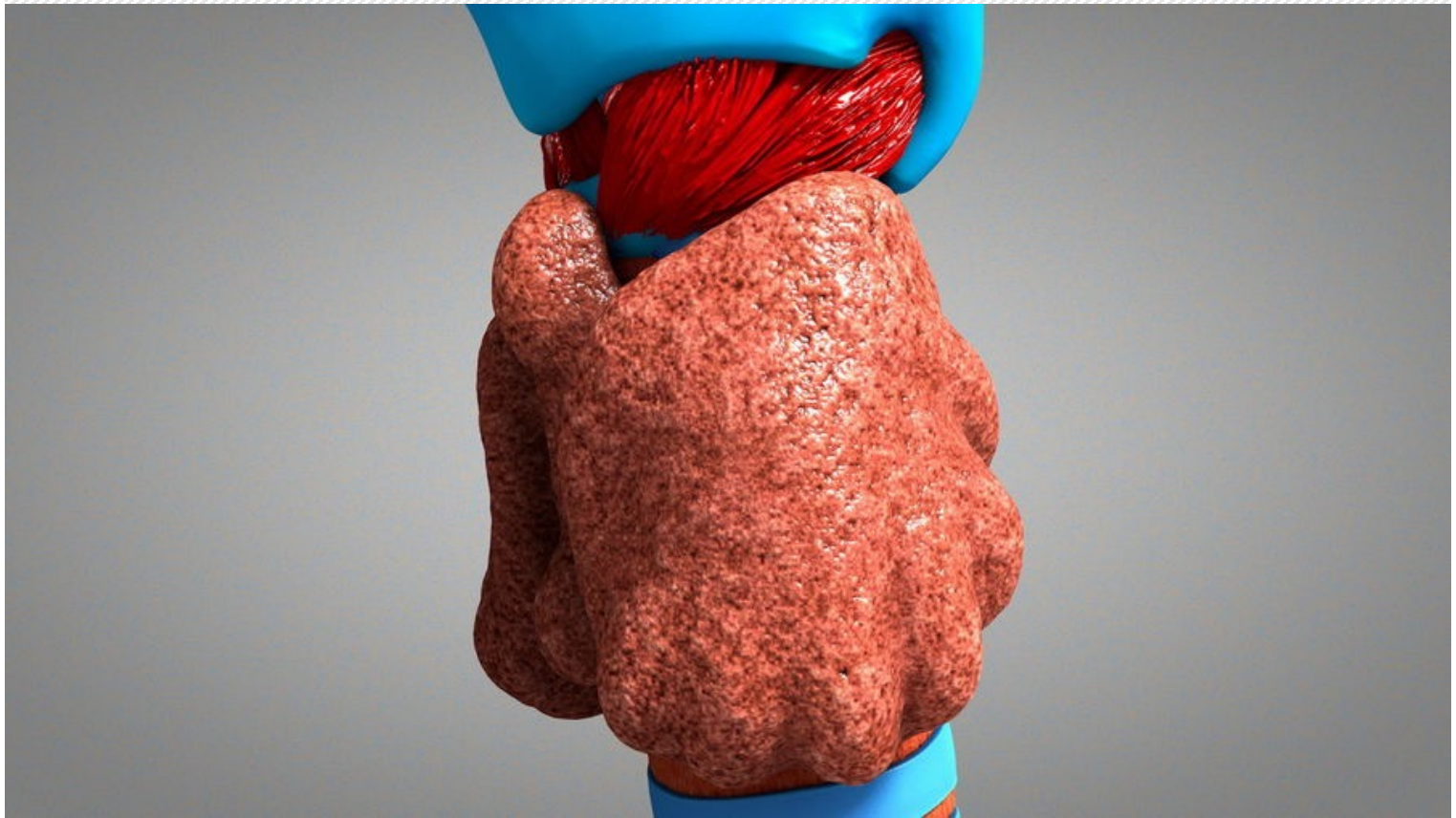
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Ebb or Flow of Tide: Which Thyroid Report is Right

CASE VIGNETTE: A 48 years old female had presented with chief complaints of gradual loss of weight over last 2 years. She was normotensive with a high pulse rate (average:106 beats/min). She had a family history of type II Diabetes Mellitus.

Chest X-rays and haematological parameters were unremarkable. Relevant investigations revealed high HbA1c % (8.6) and a deranged thyroid function test profile with high normal FT4 and very low TSH. Further evaluation of this subclinical hyperthyroid state by ^{99m}Tc-pertechnetate scan were suggestive of normal trapping function of the thyroid gland with no hyperfunctioning or cold nodule. Repeat thyroid immunoassays reports on follow up after 3 months were almost similar. However, subsequent thyroid function tests conducted after another 3 months unveiled a different picture. FT4 levels were still in the high normal zone but this time around the serum TSH values were also in the high normal territory. In view of the findings USG thyroid was conducted. Echo pattern suggested in favour of further investigations to exclude Hashimoto's thyroiditis. 4 months down the line FT4 levels have declined to low normal state with an extreme paradoxically high TSH value. The patient in due course of time had attained an acceptable level of control over her glycaemic status with no overt signs and symptoms of hyper or hypothyroidism.

DISCUSSION: The spectrum of laboratory findings from a state of subclinical hyperthyroidism to euthyroid and subsequent overt hypothyroidism in the backdrop of normal radionuclide scan and ultrasound findings suggestive of presence of Hashimoto's thyroiditis in an almost asymptomatic individual hint at presence of subacute lymphocytic thyroiditis (LT) or silent painless thyroiditis (PT).

ETIOLOGY: LT or PT is autoimmune in character and is thought to be a variant of Hashimoto's thyroiditis. There is a significant prevalence of HLA-DRw3 and HLA-DRw5 histocompatibility antigens among these cases. A biosimilar post-partum thyroiditis also occurs frequently.

CLINICAL FEATURES: With a women predilection PT follows 4 phases:

- Hyperthyroid Phase (6 weeks – 3 months): Serum total and free T4 are elevated and TSH is suppressed. T4 / T3 ratio < 20:1 with normal scintigraphy differentiates this condition from Graves Disease.
- Euthyroid Interval (3 weeks – 6 weeks): Thyroid gland becomes depleted of hormones and test results are normal.
- Hypothyroid Period (2 – 3 months): Both biochemical and clinical features are seen in 25-40% of individuals.
- Restoration of Euthyroid State: Following this phase hypothyroid patients become normal. However frank hypothyroidism still persists in one third of patients.

Report Date	Free Thyroxine (FT4)	Thyroid Stimulating Hormone (TSH)
04.10.2021	19.42 (12 – 22 pmol/Lt)	0.01 (0.27 - 5.5 µIU/Lt)
03.01.2022	22.83 (12 – 22 pmol/Lt)	0.01 (0.27 - 5.5 µIU/Lt)
20.04.2022	1.93 (0.8 – 2.0 ng/dl)	6.0 (0.28 - 6.8 µIU/Lt)
18.08.2022	0.76 (0.8 – 2.0 ng/dl)	58.53 (0.28 - 6.8 µIU/Lt)

* Values displayed are those retrieved from various private laboratory reports

CONCLUSION: Painless thyroiditis frequently poses a diagnostic dilemma to the laboratory physician. These patients may present with subtle hyper or hypothyroid features and laboratory findings that mimics a group of diseases that can present with strikingly similar symptoms. While Beta blockers are the only therapy required in hyperthyroid state, hypothyroid phase requires levothyroxine supplementation. Multidisciplinary approach including patient history sometimes become essential to uncover the exact etiology in these cases.

Pre conference CME, AMBICON 2022: A Report

INTRODUCTION: The Pre conference CME, AMBICON 2022, West Bengal chapter was successfully organized by the Department of Biochemistry, IPGME&R and SSKM Hospital Kolkata on 2nd September, Friday, 2022. The theme of the CME was “Immunoassay Conclave”. Over 100 delegates all over the state, including many stalwarts belonging to the fraternity of Medical Biochemistry and members of Association of Medical Biochemistry of India had attended the program. The scientific sessions comprised of incisive and insightful discussions on various facets of the issue of “Immunoassay” as reflected and refracted through the prism of day-to-day laboratory investigations. The views expressed and explored on this platform by the resource persons made the audience enrich their knowledge and ideas pertaining to machine and methods of immunoassay.

PROCEEDINGS: The Hon’ble Chief Guest Prof (Dr) Monimoy Bandopadhyay, Director, IPGME&R inaugurated the program. In his inaugural speech the Hon’ble Director emphasized upon the essentiality of expansion of medical biochemistry beyond the purview of laboratory medicine into clinical domain.

SESSION: The introductory presentation titled “Endocrine Kaleidoscope” was narrated by Prof. (Dr) Subhankar Chowdhury through a varied set of illustrative slides. A never-ending contention on relevance of PEG precipitation of Macroprolactin in hyperprolactinemia was well debated upon by Dr. Priyanka Datta and Dr. Kasturi Mukherjee through a series of recent research works and guidelines. Eminent Professor (Dr) Indranil Chakraborty took a succinct dip down into the history of evolution of Immunoassay techniques. The subsequent speech was on laboratory evaluation in growth failure of endocrine origin where the speaker Dr. Jayati Roy Choudhury emphasized upon the need of the hour of diagnosis of growth failure via proper immunoassay investigations to initiate treatment at the earliest. Organizing secretary for the CME, Dr. Debojyoti Bhattacharjee highlighted the various pitfalls in immunoassay investigations and interpretation of results. Prof. (Dr) Pinaki Sarkar in the subsequent speech called attention to the harmonization of ever important TSH immunoassay methods for achieving a uniform reference interval through robust statistical models. The convenor of the CME, Prof. (Dr) Mousumi Mukhopadhyay in her deliberation showcased the various fascinating innovations in upcoming immunoassay technology worldwide that shall change the entire perspective of modern hormonal assessment.

CONCLUSION: The valedictory address was marked by a vote of thanks to the hard work put in by the entire departmental team led by Dr. Soumyajit Maiti, Dr. Arghya Roy Chaudhuri, all the Senior Residents and Post Graduate Trainees, Laboratory technologists, DMLT students and volunteers, Dept. of Biochemistry and authorities of West Bengal College of Nursing for providing the venue. The CME owes its success to the able guidance of Prof. (Dr) Soma Gupta, Secretary AMBI, West Bengal Chapter.



Photographs from Pre - Conference CME

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