

Subclinical Hypothyroidism and Surgery

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Received: July 31, 2018; **Published:** August 24, 2018

Thyroid disorders, commonly encountered by surgeons in their clinical practice includes three entities: reduced thyroid hormones-hypothyroidism, increased thyroid hormones-hyperthyroidism and normal hormonal levels-euthyroid. Surgeon will defer elective surgeries in both hyper or hypothyroidism, to avoid the expectant complications of the same.

Subclinical hypothyroidism (SCH) is a condition with normal thyroid hormone level in blood except an increase in thyroid stimulating hormone (TSH) mildly which is encountered in 3 to 8% of the general population. As with other thyroid disorders, SCH is also having female preponderance. Four fifth (80%) of them have TSH levels within 10 mIU/L. When encountering cases of subclinical hypothyroidism in patients with non-thyroidal diseases, surgeon will face the dilemma whether to operate or not. Literature suggests treating clinically evident hypothyroidism routinely when TSH is more than 10 mIU/L. Is it same for the patients in queue for surgery is debatable.

SCH patients, who are all in the age group of 40 to 70 years may be benefited with levothyroxine therapy owing to reduction in cardiovascular morbidity. But no benefit was observed over the age of 70 years. Is it applicable for surgical patients?

Hypothyroidism can adversely affect the cardiorespiratory, renal, hematological, central nervous system and gastrointestinal functions. So the postoperative recovery can be affected by poor cardiac function, reduced respiratory effort, reduced urinary output, reduced clearance of anesthetic drugs, hemostatic problems, cognition and metabolic complications associated with the hypothyroidism. Treating hypothyroidism is necessary before doing any elective surgery to avoid such adverse postoperative outcomes.

SCH patients requiring surgery can undergo their procedure with regional anesthesia to avoid general anesthesia related complications. When SCH requires correction in elective surgeries, it can be corrected with oral thyroxin substitution. Whether the emergency surgeries need intravenous correction? Is there any benefit with that treatment in emergency?

Various studies comparing the outcome of surgery on SCH patients shows no increase in morbidity or difference in postoperative outcome, but none of these were prospective or randomized trials. Even American Thyroid Association (ATA) and American Association of Clinical Endocrinologists (AACE) guidelines do not elaborate about SCH patients undergoing surgery for nonthyroidal conditions. But the current recommendation is to make the patient euthyroid for elective surgeries, whereas in emergency situations "Go ahead with the surgery and manage hypothyroid related complications if occurs".

Volume 3 Issue 4 September 2018

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