

**PROSPECTIVE STUDY ON INTRAOPERATIVE METHYLENE  
BLUE SPRAYING OVER OPERATIVE FIELD OF THYROID  
SURGERY IN PRESERVING PARATHYROID GLAND**

*Dr.N.GOWRISHANMUGAN M.S GENERAL SURGERY*

*FINAL YEAR POST GRADUATE,*

*MADURAI MEDICAL COLLEGE & HOSPITAL.*

***ABSTRACT***

***OBJECTIVES***

*Aimed to evaluate the effectiveness of intra operative methylene blue stain spraying in identifying the parathyroid gland & minimize the postoperative complication in thyroid surgery.*

## **MATERIAL AND METHODS**

This prospective study was conducted who were planned for total thyroidectomy in Madurai Rajaji College and hospital around 50 patients. In which 25 patient were stained with methylene blue dye intra operatively and other 25 patients were not stained with methylene dye. Before the inferior pole ligation , 0.5 ml(1:10 dilution) methylene sprayed over the thyroid lobe and perilobar area. The parathyroid glands, recurrent laryngeal nerve, inferior thyroid artery were looked for identification and preservation

## **Results**

Recurrent laryngeal nerve won't get stain while thyroid and parathyroid tissue got stained in blue colour. Parathyroid glands had wash out the blue stain and regain their original yellow colour within three minutes due to their rich lympho

vascular structure. Wash out time for thyroid tissue took more than 15 minutes. Recurrent laryngeal nerve won't stained and remains in white at all times due to Schwann sheath . With the methylene blue staining, parathyroid were identified in all the 25 patients. Without methylene blue staining, parathyroid not identified in 6 out of 25 patients in that group.

So parathyroid identification were better with methylene blue staining & significant p value  $<0.05$  .

## **Conclusion**

Spraying of methylene blue dye during thyroid surgery to identify the parathyroid is a safe and effective technique and avoiding injury to parathyroid and RLN.