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# newsletter



Rajiv Gandhi Cancer Institute  
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## EDITORIAL

### GIANTS, HEROES, COMRADES AND FRIENDS!!

We come across three types of persons in life; first, who make things happen, next, those who see that things happen and finally, those who ask, “what happened. I consider myself to be in the last category and I am thankful for what has happened. It has been a special honor to have been the MD of such prestigious institute, RGCIRC for last 6 yrs.

In this editorial I take an opportunity to express my gratitude to the giants, who in 1990's made things happen and to the heroes in next two decades, who labored to see that the goals are attained and to comrades and friends who supported me in my tenure as MD. In my view, the heroes saw the opportunity, the giants made it happen. Change was always difficult and indeed frequently painful. We are small and our giants were tall. The giants changed hats in serving the society and over time with great insight and perseverance, they adopted to new realities and the larger view. The man most influential and responsible for bringing the fruition of change, in my opinion has been Mr. K K Mehta – A Titan among the giants, and a father figure to many.

Mr. Rakesh Chopra and Mr. Maheshwari – powerful, dynamic forces working as Chairman and Hony. Secretary of Governing Council of RGCIRC, have been especially effective and will remain an inspiration to me and I had the privilege to know and work closely with them. Another council member, Late Mr. Madan Aggarwal was truly an exemplar humanist and his values and principles served as the ideal paradigm for all of us. In fact all the Governing Council members are sincere, intensely loyal, resourceful, optimistic, constructive critics and have an unusual sense of fairness.

Mr. D S Negi, CEO of RGCIRC; kind, generous, tolerant, trustworthy, intellectually honest and a champion of high principles has been the guiding force for me in last 6 yrs. Well read, logical in thought, armed with the facts, he knows what is happening in each department and each ward.

We have completed 20 years with great hopes and expectations of change. It is not just change of calendar but real change must happen within us. However, diverse we are, if we are ready to keep aside our personal interests and think that we are bound together in a human chain and work together as RGCIRC family, we can do wonders.

I have 3 admonitions. The first is that we must honor and continue to support our mother discipline Oncology, working ethically based on evidence. Our responsibility to our specialty increases as our specialty matures.

Secondly we must strongly stand for the continued advancement, excellence and independence of our own great specialty, promoting and enlarging our knowledge and special skills for the benefit of society and for the welfare of our patient. We must move with technology.

Finally, we must not forget the “Oncologic passionate touch”. By this I mean the patient centered ethic that has been from the beginning, the hallmark of RGCIRC; the concern for patient satisfaction and comfort, the caring smile and the held hand. The humane touch to cancer patient!

I bow to my giants, salute my heroes, embrace my comrades and sincerely thank my friends. !!

**Dr. A. K. Dewan , MCh.**  
Sr. Consultant, Surgical Oncology



## TEN COMMANDMENTS OF THYROID SURGERY

The recorded history of thyroid surgery is as old as Billroth, Kocher and Halsted. They were responsible for development of the technique for thyroidectomy between 1873 and 1910. To be more precise, the modern thyroid surgery as we know it today began sometime in the 1860s at Vienna with the school of Billroth. In the last 20 years, major improvements and new technologies have been proposed and applied in thyroid surgery; among these are mini-invasive thyroidectomy, new devices for achieving hemostasis and dissection, regional anesthesia and intra-operative neuro-monitoring. The essential objectives for thyroidectomy have however always been the conservation of the parathyroid glands, avoidance of injury to the recurrent and external laryngeal nerves, an accurate hemostasis and an excellent cosmesis.

The “ten” commandments in thyroid surgery are by no means the only “golden pearls” that a surgeon is expected to adhere to but are perhaps some of the most essential aspects of this otherwise gratifying surgery.

### **Commandment-1: Not Operating by Clock!!**

The most essential aspect of thyroid surgery is demonstration of clear surgical anatomy and the dissection proceeds in a step wise manner through the natural or the “holy planes” of the neck ensuring minimal or no bleeding. Meticulous dissection techniques are tested in this surgery and a surgeon operating by clock has actually no business to be operating on thyroid. It is known that the anatomy of neck is by and large fixed and the anomaly would essentially be in the mind of the surgeon. It amounts to cutting on the dotted line.

### **Commandment-2: Positioning Correctly & Making the Right Incision**

Positioning correctly is the most essential aspect of any head and neck surgery. The aim is to ensure adequate exposure and reduced bleeding. The classical “Rose” or “Barking dog” or Kocher's position requires keeping the patient in reverse Trendelenberg's position (head end of the table is up by about 15°) with the neck extended by keeping a sand bag or a “Dunhill” pillow under the shoulder (Fig. 1). Keeping the head end of the table up reduces the venous congestion and ensures adequate exposure of the neck making the thyroid swelling more prominent. The flip side of the entire scenario is that it also increases the risk of air embolism by reducing the negative pressure in the neck veins. The right technique is to ensure that the veins are ligated before they are cut and if there are any air bubbles visible in the internal jugular vein the air can be aspirated using a syringe. The classical incision is in the skin crease and most surgeons prefer to make it about 2–3 cm from the clavicle attachment of the sternocleidomastoid muscle (SCM) (Fig. 2). However, it is essential to take in to consideration various other aspects and especially in ladies with heavier breasts, it is advisable to make this incision a little higher so that the subsequent scar is not dragged down on to the anterior aspect of sternum, where it may form an ugly keloid



Fig.1



Fig.2

Marking the incision with a silk thread or marking pen is desirable. (Fig.2)

### **Commandment-3: Raise the Flaps Adequately & Find the Midline**

The flaps are raised in the sub-platysmal plane. This ensures that there is no or minimal bleeding and adequate blood supply to the flaps. The superior flaps must be raised up to the hyoid bone and the lower flap should expose the tendons of sternomastoid muscles (Fig. 3). Raising the flaps in this manner allows central neck dissection to be performed if planned. One must remember that the platysma is absent in the midline and posteriorly. It is desirable, although not mandatory to find the midline after incising the investing layer of deep fascia. This helps in the adequate dissection of the strap muscles. The strap muscles may need transection if the gland is large. The muscles should be cut as high as possible as the nerve supply to these muscles (ansacervicalis) is in the lower third. Strap muscles are anterior to thyroid lobes. The strap muscles are being split in the midline and retracted. It is necessary to stay in the midline and this can be done without any bleeding using electro-cautery.



Fig.3

### **Commandment-4: Search for Middle Thyroid Vein Before Mobilizing the Lobe**

This short and wide vein may be absent in a minority of patients (10–15%). The vein is identified as it crosses the common carotid artery to enter in to the internal jugular vein (IJV). If an attempt is made to deliver the gland using finger dissection (blunt and blind), the vein may get avulsed and bleed. The resulting stump may retract and appear like a hole in the IJV. The vein therefore must be identified and doubly ligated in continuity (Fig. 4).



Fig.4

### **Commandment-5: Perform Medial Dissection at Superior Pole for Crico-thyroid Space & Dissect the Superior Pedicle**

This is a critical step in order to avoid damage to the external laryngeal nerve (ELN). During this manouvere traction is given to the lobe in the downward and outward(lateral) direction leading to



opening up of the cricothyroid space of Reeves (Fig. 5). This allows the medial dissection to be completed, thus separating the vascular pedicle i.e. superior thyroid artery, vein to be separated from the external laryngeal nerve. The superior thyroid artery and vein are dissected and ligated individually and separately.

#### **Commandment-6-“Surely” Look for ELN**

An effort must be made to demonstrate this nerve in every case. It can be seen more often than is documented in the literature if an effort is made. Very often this nerve is ignored or neglected

#### **Commandment-7 -Perform Capsular Dissection and not Ligate the Main Trunk of Inferior Thyroid Artery**

Contrary to what was usually taught and believed in the past, inferior thyroid artery (main trunk) is never ligated unless injured. Only capsular branches (after the parathyroids have received their blood supply), should be ligated and transected. This “orange peel or capsular dissection” ensures that the recurrent laryngeal nerve (RLN) and the blood supply to parathyroids are not affected. Bipolar diathermy is very useful for capsular dissection as most of the dissection proceeds very close to the recurrent laryngeal nerve (Fig.6)

Inferior parathyroid gland is usually located within 1 cm of the lower pole of thyroid below the inferior thyroid artery.

#### **Commandment-8: Identify all the Parathyroids and the RLN Till its Entry in to Crico-pharyngeus Muscle and Demonstrate to the Assistants**

Regarding the identification of RLN and its preservation, it is now believed that the “nerve not seen is damaged” rather than “seen is damaged” as was earlier believed. It is mandatory to dissect and demonstrate this nerve to the assistants. The nerve can be identified best as it enters the neck. On the right side it enters at an angle while on the left side it lies in the tracheo-esophageal groove. All four parathyroids must be identified and demonstrated to all assistants each time. These are hardy glands but should be handled and preserved carefully. They are identified by their location (the superior glands are by and large fixed in their position, while the inferior glands can sometimes descend down along with thymus during embryonic development. The missing inferior parathyroid glands are sometimes found in the thyro-thalamic ligament at the lower pole. The parathyroids are golden yellow in colour and author finds the attached “sentinel pad” of fat a very reliable pointer to the gland (fig.7). Handling the gland makes it get congested (the gland getting angry!!) unlike the fatty tissue and warns against proceeding with the dissection very close to the gland. This can be a very useful warning signal to avoid damage to the gland which is mostly ischemic in nature. The RLN could be traversing in between the branches of the main trunk of inferior thyroid artery (ITA-hooked here) (Fig 8).

#### **Commandment-9: Isolate the Inferior Pedicle and Ligature the Veins Individually**

The inferior pole vessels are individually dissected and also doubly ligated. Mass ligatures should be avoided as there can be accidental inclusion of RLN or damage to the inferior parathyroids (Fig. 9)

#### **Commandment-10: Ensure the Viability of Parathyroids, Hemostasis and Shall not Routinely Drain the Bed**

The wound is thoroughly irrigated using normal saline and hemostasis is ensured. The colour of the parathyroids is re-assessed. It is vital to know that all black parathyroids are not dead and all normal yellow looking glands are not viable. Author likes to perform a knife test on such glands i.e. making an incision using number 15 blade. This test exposes the viable gland and if the viability is doubtful re-implantation in to the SCM is recommended. The suspicious gland is removed and sliced in to the thinnest possible pieces that are kept in the ice cold saline before implanting them in to a pocket created in the sterno-cleidomastoid muscle on the same side. Routine drainage of the thyroid bed following routine thyroid surgery is not recommended. It is mandatory to achieve perfect hemostasis and drainage is not a substitute for poor dissection. There is, however an indication for drainage if some type of neck dissection is performed along with thyroidectomy.

These are in no way the only way to perform this surgery and there can be many more commandments for performing an optimum and safe thyroid surgery, the bottom line however is to learn one correct way of doing it and performing the procedure with no haste paying special attention to the surgical anatomy.



Fig.5



Fig.6



Fig.7

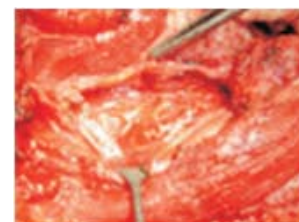


Fig.8



Fig.9

**Prof. Chintamani**

Department of Surgery, Vardhman Mahavir Medical College & Safdarjang Hospital, New Delhi

*In  
fond  
remembrance....*



### SHRI O. P. NAYAR

Rajiv Gandhi Cancer Institute & Research Centre mourns the sad demise of Shri OP Nayar, one of the founder members of the Institute.

Born and brought up in Lahore, Shri Nayar after his post-graduation entered Indian Railways Traffic Services and served with distinction in various capacities including assignments in UN.

After the superannuation from the services, Shri Nayar dedicated himself to the cause of the cancer patients. Joining Indian Cancer Society soon after the retirement, he initiated the cancer prevention program in Delhi. Since there were no treatment facilities to treat cancer patients in north India, he joined hands with other founder members of Indraprastha Cancer and played an important role in setting up this Institute.

It is due to the immense contribution of people like Shri Nayar, this Institute has developed as one of the leading cancer care centers in the country.

The management of the RGCIRC condoles the death of Shri Nayar.

**We would like to keep you abreast of the latest developments at RGCIRC. Please send us your updated address, contact number and email id at [marketing@rgcirc.org](mailto:marketing@rgcirc.org)**

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Architect's Impression of RGCIRC (post expansion)



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