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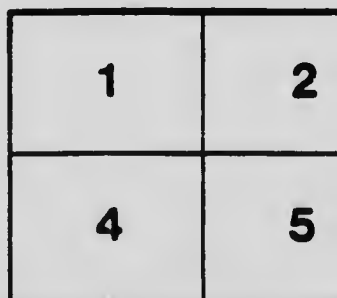
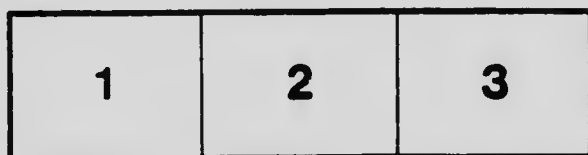
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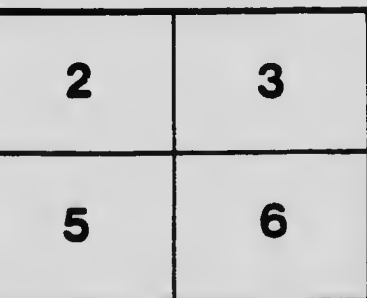
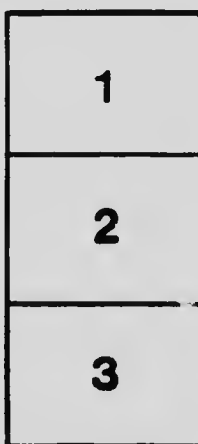
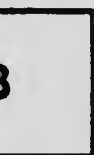
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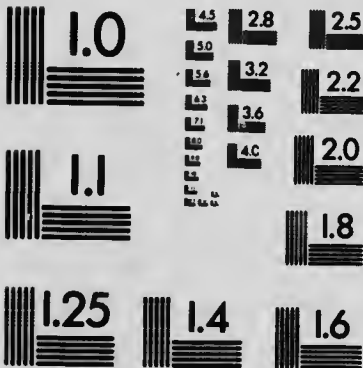
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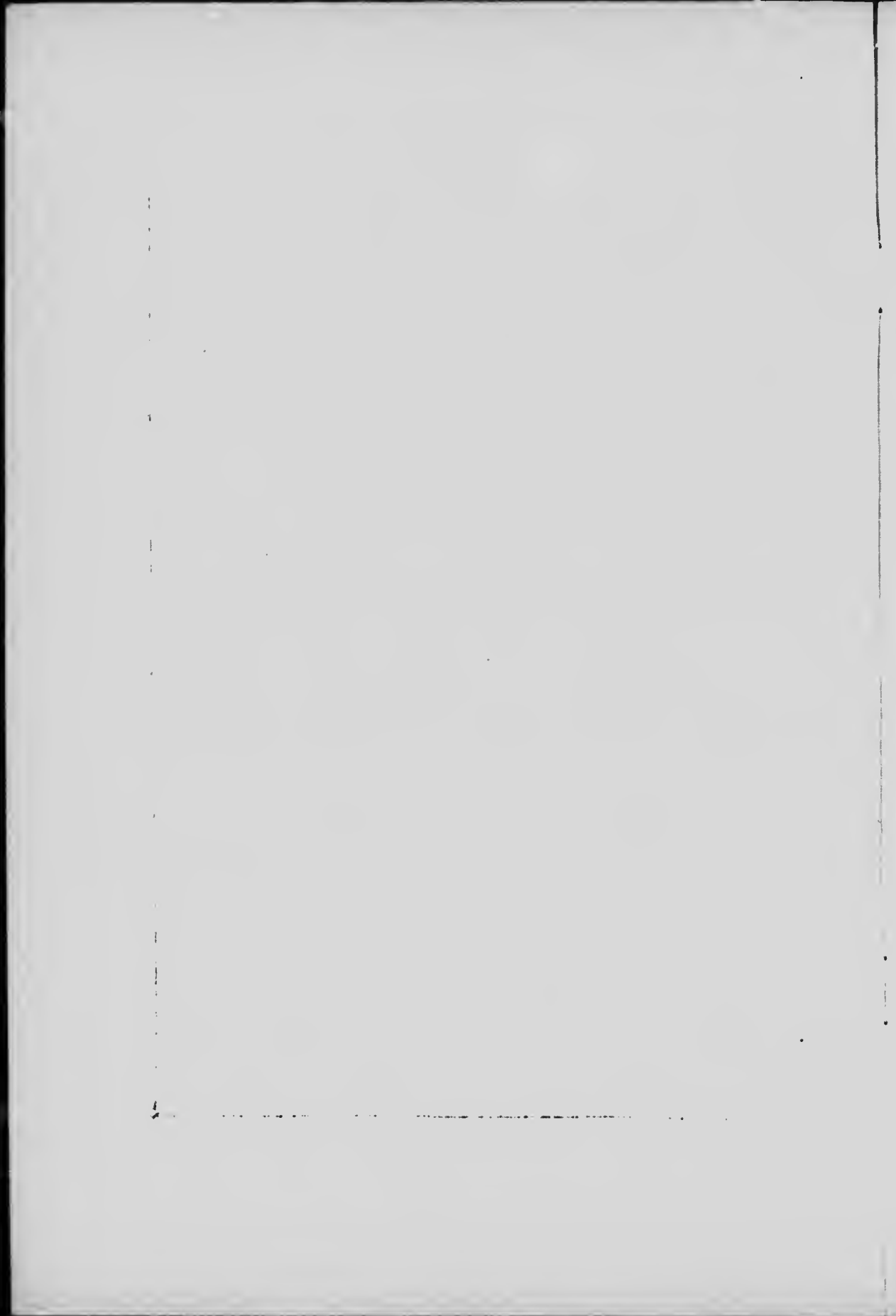
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VISIT TO  
**DR. ANDRE CROTTI'S CLINIC**

By  
**JOHN M. MACDONALD, M.D.C.M.**  
Toronto



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## VISIT TO DR. ANDRE CROTTI'S CLINIC.

BY JOHN M. MACDONALD, M.D.C.M., TORONTO.

THE OPERATING ROOM is on the sixth floor of Grant Hospital, Columbus, Ohio.

1. *Light.*—There is a circle of eight electric lights over the operating table, so arranged as to focus on the operation. Each light is enclosed in a box like an automobile light.

### 2. *Sterilization of Hands, etc.*

- (a) Scrub hands as usual. Dry on sterile towel.
- (b) Wash hands well with swabs, using iodine solution. Iodine solution for hands: Iodine, U.S.P. 70 per cent; alcohol, 30 per cent.
- (c) Iodine now washed off with alcohol on swabs; hands are now white.
- (d) Sterile gown now donned. (Clean underwear and a sterile gown had previously been put on in the wash-up room.)

The sterile gown is simply put on over the other gown. If in the course of an operation he wished a clean sterile gown, it was simply put on over the old one.

- (e) Hands sterile and gown on, sterile powder is put on hands and dry sterile gloves put on.
- (f) Previously, patient had been given a hypodermic. Neck is now prepared by iodine, etc., and where incision is to be, it is outlined with alcohol. (No scratch marks used as guide on neck.)

Kocher screen is used to protect the wound from Anesthetist and patient's breath. The patient is carefully draped with sterile sheets and gauze. (Dr. Crotti drapes patient himself.)



*Crotti's Method of Draping a Patient for his Transfrontal Resection of the Thyroid Gland:*

- (a) A sterile sheet with tapes at one end is draped over the patient's body. The tapes are tied round the neck below the goitre, by the anesthetist. The free end of sheet is thrown over a bar near foot of the operating table.
- (b) Another sterile sheet with tapes at end is thrown over the Kocher screen, and the tapes are tied around the patient's neck, above the goitre, by the anesthetist.
- (c) Another sheet with a perforation in the centre is now spread over all in such a manner that the goitre is in view in the opening.
- (d) Sterile gauze is now disposed at the sides so as to further render the operative field safe.

The operator's gloved hands are now rinsed in the bichloride solution and then in sterile water.

Dr. Crotti has as first assistant a Dr. Ramsey. His second assistant is a Russian, Dr. Greenbloom. (No house surgeons are permitted near the operation.)

*A description of Dr. Crotti's Transfrontal Resection of Thyroid Gland.*

1. Crotti uses the low collar incision; also, it is extra short as his new method admits of this. Crotti stands on right hand of patient and cuts away from himself—from the right of the patient to the patient's left side. The incision at this stage includes the skin and platysma. These tissues are dissected up and down, and a special retractor is applied. This special retractor is curved to the shape of the neck and is not in the way during the operation. It keeps the lips of the wound well separated.

2. Dr. Crotti now makes the median incision down to Surgical Capsule; he loosens up the muscles from the gland, taking care not to press unduly on it; and opens the Surgical Capsule with due care.

3. The gland is loosened up where needed (gently, of course). He places a finger on the common carotid to protect

it from injury and passes what he calls a "Cooper" through the Thyreoid Gland (any place in the substance of goitre, not too posteriorly, of course.) This "Cooper" is simply a silk traction thread passed on a blunt ligature carrier; being blunt it does not injure blood vessels, so no appreciable hemorrhage results from its use.

4. Traction is made on the "Cooper" and this tends to bring down the Superior Pole to view. Another "Cooper" is similarly passed and traction again made. This "Cooper" is passed above the first one so when traction is made it pulls the superior pole down farther. By the time another one is applied to gland above last one the superior pole is in full view.

(While traction is going on, gentle loosening up may be carefully done, if needed, before "Coopers" are applied. The Kocher Goitre Forceps is applied to act as convenient handle in the manipulations of gland.)

The superior pole is ligated with silk on the blunt ligature carrier. This silk ligature is left long for the present.

The Kocher Haemostat is now applied to the Superior Pole below the ligature. As much gland as was included in the bite of the forceps is cut below forceps, on opposite side of ligature, but forceps are still left on superior pole. The cut is made with scissors. Another forceps takes a bite of Superior Pole. The tissue thus held by the second forceps is snipped through *below* the forceps as before, etc.

By the time the Superior Pole is cut through, perhaps four forceps may be thus applied below the silk ligature. These forceps thus applied to the Superior Pole are left in place for the present, and the silk ligature is for the time being left long.

(The forceps is always applied to inferior Thyreoid Artery to compress it only; when the operation is over this is released and no ligature applied in ordinary cases.)

Traction on the "Cooper" brings the lower pole into view, when needed.

Kocher uses light wire tractors to aid in gland manipulation. Retracting the muscles, etc., from over part of gland he is working with aids greatly.

5. Crotti now proceeds to the transfrontal resection of

Thyroid. The gland is held up gently out of the way by means of Koehler's goitre forceps. Each cut made in doing the trans-frontal resection was preceded by a haemostat placed on gland just below where cut was to be. That is, the haemostat was applied dorsally to position of future cut. The cut was made by "Mayo" scissors. The forceps were applied only on the dorsal border of cut. No bleeding coming from above, no forceps were applied there. That is, as no bleeding came from portion being removed, no forceps were applied to portion being removed.

Each scissors cut is horizontal in plane after superior pole is cut. That is, plane of scissors cut is parallel to long axis of body, and forceps is applied to part of gland to be left in.

For each forceps applied, Crotti uses one slip of scissors. That is, the scissors only cut the amount of tissue caught in the forceps, and no more.

Upward traction is used during the transfrontal resection part of the operation. This causes the cut to gape and shows where next to apply forceps, etc. All gland to be removed is completely resected before ligatures are applied. Of course, the silk ligature is applied to superior pole before any resection of gland occurs.

The portion to be resected being removed he now applies iodine catgut ligatures to all parts included in forceps bite. He was careful to resect the pyramidal process with the part removed.

6. He now again ligated the Superior Pole. This time he used catgut. He applied the ligature in this case over the four forceps; also, before removing the forceps from superior pole he threw a catgut ligature around it.

7. In cases of oozing and difficulty of hemostasis, he used a running suture, taking off forceps only as the ligature included the part held by them, and when suture was finally tied, the oozing stopped.

(If during the operation the patient's breathing is bad it may be due to weight of all the forceps. This, however, is easily corrected and breathing will again become normal.)

8. The ligatures being tied, he finished by closing median incision, putting in a glass drain. The raw surface of the gland

was left unaltered by anything but the above closure of median incision. In the final closing he sewed the platysma by itself; the skin was then drawn together by the intradermic suture.

(The gland left in after a transfrontal resection reverts to the normal type.)

9. In dissecting gland off a trachea he makes upward traction on gland; that is, traction in such a way as to tend to lift the gland off the trachea. While doing this he inserts closed "Mayo" scissors from feetward to headward, parallel to trachea, between the ligaments of the thyroid and trachea; he then opens the blades. This strips the gland off the trachea; thus injury to trachea is avoided.

10. Dr. Crotti then hunted for thymus gland as he always does. When he finds thymus he removes it.

(a) In dealing with intrathoracic goitre he first completely frees the superior pole on the side on which is the intrathoracic portion. The extrathoracic part is first resected. The intrathoracic part is then lifted out quite easily by means of "Coopers" pulling up and outward towards the head. The remainder of operation is the same as before described.

(b) "It is impossible," says Crotti, "to remove an intrathoracic goitre without first completely freeing the superior pole and resecting the cervical part of gland on the side of which is the intrathoracic portion of gland."

(c) The goitre is always removed in one piece. This is the more elegant way.

(Right side goitre apt to be large, and left side thymus apt to be large.)

(d) Dr. Crotti's record time for removing a goitre is from six to ten minutes. The operation all told takes about three-quarters of an hour.

(The "Cooper" is a silk tractor applied to gland with a blunt ligature carrier. Being blunt it avoids injury to vessels.)

The "Cooper" is put through the gland any place in the part to be removed; the common carotid artery being protected by the finger.

#### *Uses of the "Cooper."*

1. To pull gland upward from wound:
2. To drag *down* on superior pole.

3. To drag up inferior pole.
4. To aid in dislocating intrathoracic portion.

*Advantages of the "Cooper."*

1. Allows of a small incision.
2. Allows easy dislocation of gland; also, while the "Cooper" is used there is less necessity for cutting across the muscles.

*Advantages of the Crotti method of transfrontal resection of Thyroid Gland.*

1. It allows of a general view of the whole gland and no part of the diseased portion escapes notice.
2. Relapses are less apt to occur.
3. It is ideal from an aesthetic point of view.
4. In his method we keep away from the *danger zone* and protect it by leaving enough gland tissue over it to prevent hypothyroidism.
5. Fine invisible scar. By use of "Coopers" the scar is even shorter and in most cases it avoids need of cutting across muscles.
6. The method is simple.
7. After the transfrontal resection the remaining gland reverts to the normal type.

For anesthesia Crotti uses oxygen and ether. He tried nitrous oxide, but had bad results from it.



