

with a tenaculum, and gently insinuate a director behind the posterior edge of the hyoglossus muscle and push it forward between this and the middle constrictor of the pharynx, which lies underneath it, in a line parallel to, and just above, the greater horn of the hyoid bone. The hyoglossus muscle is then to be divided on the director, and the lingual artery is exposed. In placing the ligature, the needle should be passed from above downward, so as not to injure the hypoglossal nerve. The important guides in this ligation are the hyoid bone, the pulley of the digastric muscle, and the hypoglossal nerve.

**5 and 6. Ligation of the Common Carotid Artery.**—For ligation, the common carotid artery is divided into two portions by the narrow, omohyoid muscle, which crosses it near its middle. (Shown in the cut.) The upper portion is comparatively superficial, and occupies what on this account is called the triangle of election. The lower portion lies deeper, and occupies what for this reason is called the triangle of necessity. (The cut represents the incisions for both these ligations united.)

**5. Ligation of the Common Carotid Artery in the Triangle of Election.**—The patient should be recumbent, with the head extended and turned toward the opposite side. An incision should be made along the anterior edge of the sterno-cleido-mastoid muscle, from about an inch below the angle of the lower jaw to a little below the cricoid cartilage. The superficial fascia, the platysma-myoides muscle, and the deep fascia are then to be divided on a director. The sterno-mastoid muscle must then be held back, and the deep layer of the deep fascia picked up and carefully divided on a director. This will expose the sheath of the blood-vessels, and perhaps the *descendens noni* nerve. Avoiding the latter, the sheath of the vessels is to be picked up with forceps and nicked with a scalpel. A director is then to be introduced, and the sheath slit up upon it. The artery is now to be separated from the internal jugular vein, which lies to the outer side, and from the pneumogastric nerve, which lies back of and between the artery and vein. The ligature should be passed from without inward.

**6. Ligation of the Common Carotid Artery in the Triangle of Necessity.**—The position of the patient should be the same as for the operation just described. The incision should be made along the inner edge of the sterno-mastoid muscle, and from the middle of the neck to the top of the sternum. The skin, superficial fascia, and platysma-myoides muscle are to be divided. Then the deep fascia is to be divided on a director, avoiding injury to the anterior jugular veins. When the sides of the wound are drawn asunder another layer of the deep fascia will be exposed, which must be lifted with forceps, nicked, and then carefully divided on a director. Under this lies the sheath of the blood-vessels, and upon it the *descendens noni* nerve. The subsequent steps of the operation are the same as those described for ligation in the triangle of election.

**7. Ligation of the Subclavian Artery.**—The point of election for ligation of this artery is the outer side of the scalenus anticus muscle. An incision is made parallel to and just above the clavicle, from the outer half of the clavicular insertion of the sterno-cleido-mastoid muscle to the anterior edge of the trapezius muscle, taking care not to go deep enough to cut the external jugular vein. The skin, superficial fascia, and the platysma-myoides muscle are to be divided. Then the external jugular vein is to be drawn aside. If this be impossible, it must be divided between two ligatures. The loose connective tissue must now be carefully broken up with a director and a search made for the artery. It must be remembered that it lies to the outer side of the scalenus anticus muscle and to the inner side of the cords of the brachial plexus. When found, it is to be very cautiously separated from its attachments to the pleura, and the ligature passed from below upward. The greatest care is necessary to avoid injuring the vein or the pleura, or including a nerve in the ligature.