

of the diaphragm is reached, remembering to go, on the right side, to the outside of the falciform ligament of the liver. Put the forefinger of the left hand upon the external surface of the thorax corresponding to the position of the fingers inside. Withdraw the right hand and, beginning at the clavicle, count downward ribs and interspaces until the finger of the left hand, previously placed on the outside, is reached. This gives the position of the arch. Its usual position is the fourth rib on the right, and the fourth interspace or fifth rib on the left. It is lowered when the lung is solidified, and when there is fluid or gas in the pleural cavity. The fluid or gas may be so abundant as to bulge the diaphragm downward. (To determine presence of gas in pleural cavity, see later.)

The next step is the removal of skin and muscle from the anterior surface of the thorax, so as to lay bare the sternum, cartilages, and bony ribs for a distance of two to three inches outside the articular line.

The abdominal flap is seized in its upper part by the left hand, and turned forcibly outward; by doing this the rectus abdominis at its point of origin, the lower margin of the ribs, and the attachment of the diaphragm are exposed. The heel of the blade of the large knife is now placed upon the origin of the rectus, and by means of a single sweeping stroke, carried just above the lower border of the ribs, the rectus and the diaphragmatic attachments are severed. Then seize the flap a little higher up, turn it forcibly outward so as to put the muscles on the stretch, and divide the parts which have been made tense. Continue the cuts in like manner until the ribs on the right side are exposed, removing all the muscle with the flap so as to leave the ribs clean. Repeat the process on the left side. Then expose the sterno-clavicular articulation by dividing subcutaneously the tissues that cover it.

Before removing the sternum a general inspection of the abdominal cavity should be made, to note whether there be an increase in the amount of the serous fluid normally present, or abnormal contents. The reason for making the cursory examination at this stage of the autopsy is that if there be fluid in either of the pleural cavities, some of it will be likely to escape into the peritoneal cavity on removal of the sternum; hence it would be impossible to determine later whether fluid found in the abdominal cavity was there originally or had come from the pleural cavity.

If pneumothorax is suspected, the presence of gas in the pleural cavity should be determined at this stage of the autopsy. It is best done by making a double fold of the skin flap over the anterior portion of the thorax on the suspected side. Water is poured into the space between the folds, making a little pool. The sharp-pointed scalpel is now driven through the muscle of an intercostal space, where the water lies, and the effect noticed. If there be gas in the pleural cavity, it will escape by bubbling through the liquid; otherwise the water will disappear through the opening. One must not mistake the collection of gas from putrefactive changes in the pleural cavity for gas which has collected during life. If present from putrefaction, it will be double-sided, and there will be other evidence of putrefactive changes in the tissues.

The sternum is now to be removed. This is done by opening the sterno-clavicular articulation, and dividing the cartilages of the ribs about one-eighth of an inch from their junction with the bony ribs. The knife to be used is the small pointed scalpel already described. The guide to the position of the sterno-clavicular articulation is the tendon of the sternal attachment of the sternocleido-mastoid muscle. Insert the knife above the clavicle about one inch outside this tendon; then by an up-and-down motion divide the soft parts till the tendon is reached; turn the knife so as to enter the joint; then follow the joint in a semicircle, with the same up-and-down motion of the knife, not trying to guide it, so far as its vertical direction is concerned, for the plane of the joint is a constantly varying one; hence the importance

of holding the knife loosely in the fingers and letting it take its own course. Do not remove the knife after the joint has been opened, but continue the incision outward along the under border of the clavicle for an inch outside the joint, then turn the knife at right angles to its former position and cut the first rib. In opening the sterno-clavicular joint, care should be taken not to carry the point of the knife below the inner part of the joint, as the innominate veins lie beneath and are liable to be cut.

The costal cartilages are to be cut in the place indicated above by a quick, forcible stroke with the scalpel, the heel of the knife striking upon the next rib below as the blade incises the rib. In this way the blade is prevented from going too deeply, and thereby injuring the lung. All the cartilages having been divided, the sternum is to be depressed below the level of the bony ribs and the intercostal muscles cut, the knife being held parallel to the ribs to avoid cutting the lung. Remove the sternum by lifting its lower end up, cutting the attachments of the diaphragm to it, and also the tissues of the anterior mediastinum, keeping as close as possible to the posterior surface of the sternum so as to avoid opening the pericardium. When the under surface of the sterno-clavicular joint is reached some difficulty will be experienced in removing the sternum, owing to the resistance offered by the firm ligaments of the joint, but by prying the sternum outward these ligaments are put upon the stretch, and can then be readily cut with the point of the knife.

The sternum having been removed, a general view of the anterior mediastinum should be taken, especially with reference to the presence of serous fluid or pus in its meshes.

Although the heart is the first organ of the thorax to be examined, yet the pericardium should not be opened until a cursory view of the pleural cavities has been taken with reference to the presence of fluid; for here, as in the peritoneal cavity, fluid present may have come from the pericardium, if that be first opened.

Open the pericardium by seizing the anterior portion of the parietal layer with the forceps and, lifting it up (if there be adhesion of the pericardial surfaces, as a result of earlier inflammatory processes, it will be made apparent by the inability to raise the anterior portion of pericardium), nick it with the scissors; cut upward as far as the reflection of the pericardium upon the aorta; then cut downward to the right and also toward the apex. The incision will have the form of an inverted Y. Lift up the heart and note the contents of the pericardium and its character (serum, fibrin, pus, blood). Also note the appearance of both pericardial surfaces. Examine the heart with reference to its size, shape, and the contraction of its walls. Then open the four cavities of the heart *in situ*, to determine the character and amount of their contents. The method is as follows: Let the heart rest upon the palm of the left hand, with the thumb upon the upper surface; turn the heart toward the left; this will make prominent the right auricle, and will bring into view the superior and inferior cavæ where they join the auricle. Make an incision into the auricle at right angles to the cavæ. Next turn the heart back to its former position; lift the thumb from the anterior surface and incise the right ventricle by a cut parallel and close to its right border, remembering not to carry the cut to the apex, as this is formed by the left ventricle only. Open the left ventricle by an incision along the left border a little to the right of and parallel to the coronary vessels. To open the left auricle, put the forefinger in the cut in the left ventricle and the thumb into the cut in the right ventricle, then lift up the heart and carry it toward the right of the body; in this way the left auricle, with the two left pulmonary veins entering it, will be seen. Open the auricle by a crescentic cut, beginning in the upper vein, thence into the auricle, and outward into the lower vein. Introduce one or more fingers into the incisions and note the amount of the contents and their character. The left ventricle is contracted and empty, unless the individual has died from paralysis

of this part of the heart, when it will be found distended with blood.

The right ventricle and both auricles are usually distended with blood, which may be fluid, as in death from suffocation, or more or less coagulated. In every case of sudden death it is desirable to open the pulmonary artery *in situ*, in order to determine the presence or absence of emboli.

Now remove the heart from the body by lifting it vertically upward, cutting across in succession the inferior cava, superior cava, pulmonary veins, aorta, and pulmonary artery.

After removal of the heart from the body it is to be further examined with reference to its valves, cavities, muscular substance, and blood-vessels. Remove all clots from the pulmonary artery and aorta, hold the heart vertically by seizing in turn the walls of each of these vessels, and allow water to run into them from above. Note whether each of these vessels "holds" the water, or whether it escapes—if the former, the valves are sufficient; if not, they are insufficient, and an idea of the degree of insufficiency may be obtained by noting the rapidity with which the water escapes.

The ventricles are now to be further opened—the right by a cut beginning at the lower end of the incision already made and carried upward to and through the pulmonary artery; the left by continuing the incision already made directly upward into the aorta, between the left auricular appendage on the right and the pulmonary artery on the left.

Opportunity is now afforded for an examination of the cusps of the aortic and pulmonic valves. Having completed this, insert as many fingers as possible into the mitral and tricuspid orifices. Normally the mitral admits three, the tricuspid four. Next examine the segments of these valves and their chordæ tendineæ.

Note the size and shape of the cavities of the ventricles. Continue the incisions already made in the auricles into the auricular appendages as far as the tips, noting the size of the auricles and whether thrombi are present in the appendages. Next examine the muscular wall of the heart and the papillary muscles with reference to thickness, color, and consistency. Follow out the coronary arteries as far as possible, with the probe-pointed scissors, with reference to narrowing of lumen from endarteritis or to presence of emboli or thrombi. This completes the examination of the heart.

The lungs and pleurae next deserve attention. In the previous cursory examination of the pleural cavities with reference to the presence of fluid, the presence or absence of adhesions of the pleural surfaces, over a larger or smaller area, was also probably noticed. If there be any adhesions they should now be torn. If the two surfaces are so adherent that they cannot be separated except at the risk of injuring the lung, the costal pleura should be removed with the parietal pleura and lung, by first cutting the pleura along the under surface of the ribs near the anterior border, then inserting the finger nails, and then the fingers, and tearing it away from the costal wall.

The left lung is now removed by lifting it out of the pleural cavity and supporting it with the left hand in such a way that the primary bronchus comes in the fork between the middle and ring fingers. The bronchus should now be cut across, and the small amount of connective tissue of the posterior mediastinum which supports the lung behind should be divided with the knife, keeping close to the lung to avoid injuring the œsophagus, which lies beneath.

Remove the right lung in the same way. Note the volume of the lungs, the density, whether crepitant or whether in part or wholly solidified. Also note whether or not there are false membranes upon the pleura. The incision into the lung is to be made by resting the organ on its base, then making a sweeping cut from apex to base in the direction of the bronchus, beginning on the convex surface and carrying it sufficiently deep to open the bronchus. This gives two large surfaces for examina-

tion. The bronchi are now to be opened with the scissors, to the smallest tubes in which the blade of the scissors will go. If there be any evidence of embolism in the lung the branches of the pulmonary artery should also be followed out.

Next examine the bronchial lymph glands. This completes the examination of the thoracic cavity for the present, and attention should be turned to the abdominal cavity. The method to be given for its examination is the one to be followed out in case there is no evidence of there having been an acute peritonitis. The variation in the method in this circumstance will be described later.

The spleen is to be removed first. It should be seized in the left hand and drawn outward and upward from its position, then lifted upward above the lower margin of the ribs. In this way the gastro-splenic omentum is put upon the stretch and can be readily divided, together with the splenic vessels at the hilus. The organ is now free. Its size, shape, color, and density, together with the appearance of the capsule, should be noted. An incision is then to be made into it parallel to its flat surface. The follicles, trabeculae, and pulp are the individual parts in the cut surface that demand attention.

The intestines are now to be removed. Lift up the omentum, examine it, then cut away its attachments to the transverse colon. Next separate the transverse colon from the stomach by dividing the two folds of lesser omentum which unite them. Then draw the small intestines over to the right; by so doing the descending colon will be exposed. It should be seized, lifted upward, and its meso-colon divided close to the intestine. The sigmoid flexure is to be freed next, and the rectum cut across a little below the brim of the pelvis. The folds of small intestine are now carried over to the left half of the abdominal cavity so as to uncover the ascending colon. The dissection to remove this should be begun at the hepatic flexure, freeing it from the surrounding parts, using special care not to injure the duodenum, which lies in contact with the ascending colon in its upper posterior portion. Continue the dissection until the cæcum is reached, which can be removed with the vermiform appendix by first cutting the peritoneum that binds it down laterally, and later the loose connective tissue that holds it down posteriorly. The large intestine is now free.

The small intestine is to be freed from its mesentery by cutting the latter close to its attachment to the intestine. This is best accomplished by making traction on the intestine, thereby rendering the mesentery tense, which can then be readily and rapidly divided by a series of fiddle-bow-motion cuts made with the large knife. The separation of the intestine from the mesentery should be continued until the point is reached where the jejunum passes behind the peritoneum.

At this stage in the autopsy the duodenum is to be opened *in situ* by an incision made with the scissors along the outer convex border. This is done that the common bile duct and its orifice may be examined—a point of the first importance, in cases of jaundice, for determining the cause. The orifice of the duct forms a papilla situated on the pancreatic side of the duodenum about the middle of the descending portion and directly opposite the incision already made. The bile duct, in the latter part of its course, lies beneath the mucosa of the duodenum. This portion of the duct should be pressed upon by the finger, and the latter moved toward the orifice, which is to be watched with reference to the expulsion from it of bile or a plug of mucus. Pressure may now be applied to the gall bladder, and the appearance or non-appearance of bile at the orifice be noted. If no bile flows, the common duct should be opened with the fine, probe-pointed scissors and the cause of the obstruction sought. It may be a plug of mucus formed as the result of an inflammatory process extending to the duct in a case of gastro-duodenal catarrh, or it may be a biliary calculus.

The stomach, connected with the intestine, together

with the pancreas and mesentery, must now be removed. To do this, the left lobe of the liver should be lifted up; the diaphragm cut through its middle as far down as the esophagus; the esophagus divided transversely about two inches above the stomach; the cut end compressed between the thumb and forefinger of the left hand; the stomach lifted and dissected away from the underlying tissues; the pancreas and mesentery dissected from the aorta and inferior cava, and the gastro-hepatic and duodeno-hepatic omenta divided. The whole gastro-intestinal tract, together with pancreas and mesentery, is now freed and can be removed from the body.

Although the examination of the intestines is usually postponed until the last, to avoid soiling other parts with its contents, yet the method will be given here. The gastro-intestinal tract should be opened its entire length, either with an ordinary pair of scissors or with an instrument which renders the operation far easier, the enterotome (Fig. 448), the hooked blade being introduced into the inside. The stomach is to be opened along the greater curvature, the reason being that the common lesions—ulcers—are usually situated on the lesser curvature. The small intestine should be opened along the mesenteric attachment, for the reason that Peyer's patches, the usual seat of typhoid and tuberculous processes, are situated on the opposite side. The large intestine is to be opened along one of the three taeniae, or bands, the object being to avoid getting the point of the scissors caught in the pouches lying between the bands.

Much time can be saved by using the scissors, not in the ordinary way by opening and closing the blades, but by keeping the blades immovable and carrying the scissors forward with the right hand, at the same time drawing the intestine backward with the left hand.

The amount and character of the contents of the various portions of the gastro-intestinal tract should be noted; the mucosa is to be freed of its adherent material either by water, when this can be obtained, or else by the fingers, and the mucosa of the entire tract is then to be carefully examined for evidences of inflammatory processes—ulcers, perforations, or other lesions.

The stomach and intestines having been removed from the abdominal cavity, a view can be obtained of the kidneys, ureters, and bladder *in situ*—a point of value, as the relation of one to the others is often needed in explaining the association of lesions. It is the custom of the German pathological anatomists to remove the kidneys before the intestine, hence at a stage in the autopsy when it is impossible to get a view of the urinary tract in its continuity. It seems to the writer that nothing is gained by removing the kidneys before the intestine, but that much may be lost; for if one finds, as the kidneys lie *in situ*, that they present changes, it may be very advantageous to remove them with the renal artery and aorta, on the one hand, as in cases of atrophy, especially when dependent upon a chronic interstitial nephritis, or, on the other hand, with the ureters and bladder and perhaps the penis, if there be hydronephrosis or pyelonephritis.

A general inspection of the urinary tract having been made as the parts lie *in situ*, one should then open the bladder by an incision from one to two inches in length along its upper wall. The amount and character of the contents, and especially the appearance of the mucous membrane, should be noted; for if there be evidence of an inflammatory process it will be desirable to remove the kidneys, ureters, and bladder in a single mass, owing to the fact that inflammatory processes in the mucosa of the bladder may extend upward through the ureters and involve the pelvis of the kidneys and the kidneys themselves.

If there be no evidence of a cystitis, no further examination of the bladder is now to be made, but attention is to be directed to the kidneys. Inasmuch as these organs lie behind the peritoneum, it is necessary to cut this in order to get at them. The incision should be made just to the outside of the kidney along its convex border. The fingers of the right hand should now be in-

duced into the cut and the kidney "shelled out" of its perinephritic fat, lifted upward, the blood-vessels at the hilus cut transversely and traction made upon the kidney, which will strip up the ureter as far as the brim of the pelvis, where it may be divided. The suprarenal capsules may either be removed with the kidney or may be left *in situ* until a later stage of the examination. On the right side it is less easy to remove the suprarenal capsule with the kidney than on the left, owing to its closer adhesion to the under surface of the liver.

The examination of the kidney consists in noting its size, shape, color, and density; and in the removal of the capsule, observing whether it comes off easily or with difficulty, also whether portions of renal substance adhere to it. An incision in the kidney is made by holding the organ between the thumb and fingers of the left hand, with the hilus resting upon the palm, and cutting along the whole convex border through the kidney to and into its pelvis. In the examination of the cut surface the ratio of cortex to pyramids, as to thickness, should first be noted, and then the cortex studied with reference to the appearance presented by the glomeruli and the regions of convoluted and straight tubules. The degree of injection of the vessels of the cortex and pyramids, as determined by the color, is to be observed; then the mucous membrane of the pelvis is to be examined; finally, the ureters are to be opened. If there be evidence of atrophy involving one or both kidneys, the corresponding renal artery should be opened to the aorta to determine whether the lumen is narrowed from chronic endarteritis.

The next step in the autopsy is the removal of the pelvic organs, either with or without the external genitals. In the female, the external genitals should be removed with the internal genitals in cases of death following puerperal fever or abortion; in the male, when there is a suspicion of stricture or wound of the urethra, or of a periurethral abscess.

In case it is not necessary to remove the external genitals the method of procedure for removal of the pelvic organs is as follows: Sweep the knife around the true pelvis, keeping as close to the bony wall as possible; in this way the loose connective tissues will be severed. Seize the bladder by its upper portion and draw it backward, away from the pubes; cut its attachments to the pubes, and then, while still making strong backward traction, cut the vagina and rectum transversely as far forward as possible. In this way the vagina as far as the hymen may be obtained. The same procedure, so far as the drawing back of the bladder and cutting its attachments are concerned, is to be carried out in the male, the prostate and rectum being then divided transversely as far forward as possible.

The removal of the external genitals connected with the internal pelvic organs is accomplished in the following way: The pelvic organs are freed from their surroundings as already described; then incisions are made on the outside, beginning at the lower end of the primary incision, which had been carried to the pubes, and carried to the outside of the labia majora on both sides in the form of an ellipse, the two cuts meeting again in the median line behind the anus at the tip of the coccyx.

The vulva is now dissected away from the pubes until the bony pubic arch is reached. The knife is then to be inserted beneath the pubic arch with the blade close to the bone, and then pushed into the cavity of the pelvis so that its point can be seen. With the knife held horizontally, it is swept around in the two curved incisions described above until the coccyx is reached. This will free the attachments to the pubic arch anteriorly and laterally, and to the coccyx and lower part of the sacrum posteriorly.

The external genitals are now to be drawn under the pubic arch into the cavity of the pelvis. This puts the attachments to the sacrum on the stretch, and gives a better view of the parts that still require to be divided in order wholly to free the organs in question.

In the male the penis may be removed with the internal organs by drawing the dartos toward the glands; cutting

with the scissors the small amount of connective tissue that holds the skin to the body of the penis; then dividing the penis by a transverse cut just behind the corona, unless it is thought desirable to remove the glans also, in which case the dartos should be cut circularly where it is reflected upon the glans, *i.e.*, in the corona. The attachments of the penis to the pubic arch are divided by transfixion, as in the female; the organ is drawn under the arch into the cavity of the pelvis, and the adhesions to surrounding parts divided.

If there be anything abnormal about the perineum, it is desirable to remove with the penis and pelvic organs an elliptical or lozenge-shaped portion of skin, its anterior apex being just behind the scrotum, having its posterior apex at the coccyx. This will include perineum and anus. The removal is accomplished by transfixion with the knife held in a horizontal position, the point being carried well into the pelvic cavity.

The further examination of the male pelvic organs consists in prolonging the incision, made in the bladder while *in situ*, to the urethra through the prostate with the scissors. If the penis has been removed, the incision should be continued along the dorsum to the meatus. The interior of the bladder and urethra can now be examined. Transverse incisions are to be made in the prostate. The vesiculae seminales and the prostatic and vesical venous plexuses should next receive attention. The plexuses are of importance, as likely to be the seat of thrombi.

The rectum is now to be opened along its posterior wall, and the mucous surface examined.

In the female the bladder and urethra are first to be opened and examined. The vagina is then to be exposed along its whole length by an incision along its left lateral wall. In this way one avoids injuring the bladder. When the cervix is reached, the incision should be carried at right angles to its first direction, and the anterior wall of the vagina be cut transversely as far as the middle line of the uterus. The scissors are then introduced through the os into the cervical canal, and the uterus opened by cutting in the middle line anteriorly as far as the fundus. Counter incisions, beginning at about the middle of the body, are now to be made in the direction of the orifice of each Fallopian tube.

If the tubes are enlarged they should be opened with the probe-pointed scissors. In the normal tube the canal is so small that it is almost impossible to follow it out, and it is furthermore unnecessary.

The ovaries are to be opened by an incision beginning on the free, convex border and continued to the hilus, *i.e.*, to the broad ligament. The vaginal and uterine plexuses are then to be examined.

If death has occurred in the puerperal state or after an abortion, the external genitals and vagina should be examined carefully with reference to lacerations, and numerous incisions be made in the vaginal wall, extending into the perivaginal connective tissue, to determine whether a purulent lymphangitis is present.

In the puerperal uterus the inner surface is to be examined for evidence of an endometritis. The uterine sinuses, the pampiniform plexuses, and the ovarian veins are to be examined for thrombi undergoing septic softening. The tubes are to be opened to discover evidence of a purulent inflammation of their mucosa (salpingitis purulenta). Numerous incisions are to be made in the wall of the uterus for evidence of suppurative lymphangitis.

The examination of the testicles can be readily made without injuring the scrotum, by pushing them upward through the canal, so that they will appear at the rings on either side. The peritoneum and then the tunica vaginalis are to be divided, and the testicle can be removed by severing the cord. It should be opened by an incision parallel to its long diameter, beginning on the side opposite the epididymis.

The liver is removed by cutting the ligaments. In noting the dimensions of this organ one should take cognizance of the relations of the right to the left lobe as regards size. The shape, color, density, and any points relating

to the capsule are to be observed. The incision for examining the interior should be made transversely, beginning at the left border and ending at the right border. The appearances of the single lobules are now to be studied; the relative proportions of central and peripheral parts and the color of each being the important points to be observed.

The gall bladder is to be opened by an incision parallel to the long diameter.

The order in the examination of the organs of the abdominal cavity is to be varied in case of acute peritonitis. In making an autopsy one should not rest satisfied in finding evidence of acute peritonitis, but should always search for the cause. Of the causes, the most common are extension of an inflammation from the pelvic organs, this especially in the female; perforation of the vermiform appendix from appendicitis; and perforation of the gastro-intestinal tract at some part. In case of acute peritonitis, no organ should be removed until the *probable* source has been made out. This is done by lifting and separating the folds of intestine, and observing in which part of the peritoneal cavity the inflammatory process is farthest advanced. Then the parts may be dissected away from this organ, whichever it may be, and the attempt made to find the perforation or other lesion which is primary. The questionable organ may then be removed and further examined.

To proceed with the method ordinarily carried out. After the removal of the liver there remain in the cavity of the chest and abdomen the trachea and its bifurcation, the greater part of the esophagus, the aorta, and the inferior cava. The aorta is to be opened *in situ*, with the scissors, along the anterior wall from the arch to the bifurcation, and then the iliac arteries are to be opened to the groin. The inferior cava and the iliac veins are also to be opened. These vessels are opened *in situ* that no injury may be done to thrombi if they be present within.

The aorta and as much of the trachea and esophagus as possible are now to be removed by cutting the two latter as high up in the neck as they can be reached, and dissecting them and the aorta from the vertebral column, the aorta being attached to the vertebral column by a small amount of connective tissue.

The trachea is to be opened along its posterior wall (the cartilaginous rings being interrupted at this part); the esophagus along the anterior wall.

The larynx and tongue may be removed with the lungs, or simply with the trachea. The knife is passed upward under the skin of the neck and the attachments of the trachea and larynx to the anterior, lateral, and posterior parts severed by sweeping cuts starting in the median line and carried to the side and then to the back. The attachments of the muscles of the tongue to the lower jaw are divided, the knife being carried up from below preferably to being introduced through the mouth. The soft palate is separated from the hard palate, and the pillars of the fauces are cut laterally so as to include the tonsils. The tongue is now seized with the fingers of the left hand passed upward through the neck and drawn downward, and the muscles and connective tissue holding the pharynx to the vertebral column are divided.

In this way the soft palate, tonsils, wall of pharynx, larynx, and upper part of esophagus may be removed together, and a good opportunity afforded for their examination—a point of value in diphtheritic processes and the like.

The larynx should always be opened anteriorly. The cavity of the trunk is now empty and a good opportunity is afforded for the examination of the bodies of the vertebrae, if there be anything in the case which renders such an examination desirable.

Unless the brain or cord is to be removed, the examination is now completed. Before returning the organs to the body cavity it should be sponged dry, and the pelvis packed with pieces of old cotton cloth to prevent leakage through the anus. After the organs have been put back the sternum is to be replaced and held by two stitches on either side, taken through the intercostal muscles.