

TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY

Stated Meeting Held November 5, 1923

The President, DR. JOHN H. JOPSON, in the Chair

TREATMENT OF ACUTE TRAUMATIC SYNOVITIS

DR. HUBLEY R. OWEN said that during the past year, since reading the article by Williams which appeared in December, 1922, on the effect in the treatment of acute traumatic synovitis, of repeated aspirations and immediate active mobilization, without splinting, he had treated eleven cases by the method described. Such cases, presenting hæmarthrosis and hydrarthrosis, are usually treated by rest, splints, plaster-of-Paris, etc. In the recent cases which he had subjected to aspirations he had found the period of disability to be greatly diminished, practically to two-thirds of the time it would take by the fixation and plaster-of-Paris treatment. It also greatly relieves the immediate pain and the distention in the joint. He aspirated twenty-two times and the average time of treatment was twenty-four days from time treatment was started until the man was back on duty. In looking up similar cases treated by the fixation method, he found the aspiration method took just about two-thirds as long.

PERICARDIOTOMY FOR SUPPURATIVE PERICARDITIS

DR. J. W. BRANSFIELD presented a youth, aged eighteen years, who was admitted to St. Agnes' Hospital, July 8, 1923, complaining of difficulty in breathing and pain in left chest. Two days before admission he was stabbed with sharp pointed scissors in left chest. States he has had shortness of breath since this accident and severe pain on breathing. Examination shows an abscess over the ninth rib in the nipple line. Patient is very nervous and irritable and complains of pain wherever he is touched. During the following day abscess opened. Two ounces of pus evacuated. Patient feels better, but shortness of breath continues. Dulness found from seventh rib to base of lung in axilla. X-ray report: Pericardial shadow enlarged. Has appearance of fluid present. Diaphragm moves freely on both sides—erosion of bone tenth cartilage.

On July 16, under local anaesthesia, the fourth rib was resected close to sternum—pericardium opened and only one ounce of fluid obtained—fluid cultured—staphylococcus aureus reported from the laboratory. Patient sent to X-ray—fluoroscope made and stereoscopic plates. No doubt of fact pericardium greatly distended. Fluid was suspected lower and posterior so under a general anaesthetic the fifth and

sixth cartilages were resected, the pericardium was brought up into the wound and incised. About one-half pint of fluid escaped. Culture showed staphylococcus aureus again. Patient was dressed daily and the opening maintained. Drainage was continued for two weeks. The pericardium was irrigated with normal salt solution daily. After this the wound was dressed with Dakin's oil and one ounce of oil was poured into the pericardial sac. Convalescence was stormy because the patient was hard to manage. Temperature varied from 100 to 104 for the first three weeks. After the fourth week the temperature became normal and the patient was allowed out of bed after the fifth week. Examinations made of the patient since, at three weeks' intervals have failed to reveal any heart disturbance. The patient has no cardiac involvement and is able to do his regular work. Recent X-ray pictures show the pericardial sac of normal size.

DR. JOHN B. ROBERTS remarked that in suppurative pericarditis it is generally unnecessary to excise the costal cartilages. The same thing is true in pleural suppuration. A horizontal incision in the fourth or fifth interspace will usually afford room for drainage and irrigation without cutting away a rib or costal section. Even in young children resection must rarely be necessary. The vertical incision of Pool is perhaps occasionally required, but the accompanying removal of cartilage requires more time and is more serious. With a good open incision between ribs one can push the pleura to one side by blunt dissection. Of course when pus is coming out of the pericardium, one can understand the fear of pus escaping into the pleural sac, but just as good work can usually be done without mutilating the cartilages as is done in the vertical para-sternal cut.

As to the X-ray diagnosis of pericardial effusions, he related an experience at the Polyclinic Hospital a few years previously when a child, seven and one-half years of age, was admitted and declared to have a large effusion. The X-ray showed definitely, it was declared, that there was an extensive effusion in the pericardium, confirming the diagnosis made by the pædiatrician. Doctor McKnight punctured between the xiphoid and seventh cartilage with an ordinary aspirating needle and obtained no fluid. An incision in the fourth interspace of about three inches long between the cartilages of the ribs enabled him to introduce a finger into the pericardial sac, where he found no fluid, but only a large hypertrophied heart. The X-ray diagnosis was incorrect as was the clinical diagnosis made at first, namely, effusion, as there was none present. This seems to show that one must not take the laboratory findings as final, even of the best men. One must also obtain a careful history and translate the clinical symptoms.

After operation, the child immediately began to improve. The revised diagnosis of valvular disease and secondary hypertrophy led to a change in medical treatment. The splitting of the pericardium, by giving the enlarged heart room, probably was an additional reason for this improvement. The child got practically well and had his tonsils removed before leaving the

PERICARDIOTOMY FOR SUPPURATIVE PERICARDITIS

hospital. A subsequent report showed him running around and in fair health. No harm had come from either aspiration or the correction of the diagnosis by freely opening the pericardium for revising the diagnosis of the exact pathological condition. The horizontal incision in the fifth or sixth interspace gives plenty of room for introducing the finger. The division of the internal mammary vessels may easily be controlled by clamping with a hæmostatic forceps, which in this case was left protruding from the wound for a couple of days.

DR. D. L. DESPARD remarked concerning the taking away of one cartilage that in his case he found that the pleura was not confined to the anatomical description given in the text-books but came well over to the sternal line. However, this particular pleura had fluid in it and if he had gone through one incision he would have gone through the pleura and infected it. There is better control by the vertical incision of the anatomical relations and he did not believe there is serious disadvantage in the more extensive removal of the cartilages.

DOCTOR DESPARD then presented a heart removed from a man on whom he operated last summer with a history that he had been taken ill three months prior to admission to the hospital with bronchitis or bronchopneumonia. He was in bed for one week and then went back to work, but after three days had to give up his position and did not work again up until his admission to the hospital two and one-half months afterwards. The X-ray showed tremendous dilatation of the pericardium. He was operated on under local anæsthesia. The pericardium was opened and drained and Dakin's tubes inserted in place. Two or three days later his temperature began to go up and he got gradually worse and died. The autopsy showed: First, chronic suppurative pericarditis; second, old operative wound; third, chronic adhesive pleuritis, bilateral; fourth, general pulmonary tuberculosis; fifth, tuberculous lymphadenitis, peribronchial; sixth, parenchymatous degeneration of the liver; seventh, chronic diffuse nephritis.

The incision was from above at the fourth cartilage and the left side of the sternum, and downward along the left side of the sternum to the seventh costal cartilage, removing fifth, sixth and seventh costal cartilages under local anæsthesia. Exposure was good. Tube placed to the bottom of the sac. The man did not seem to mind the operation and stated that "anyone could stand the operation."

DR. JOHN H. JOYSON said that Pool's argument in favor of the resection of the fifth, sixth and seventh cartilages was that in this way one could reach the bottom of the sac with Dakin's solution, and it would not accumulate. He had had one case in which he used the old-fashioned method of resecting only one costal cartilage and found that the administration of Dakin's solution was not very successful. The fluid puddled too much. In similar cases he would use the vertical incision and in this case one should remove the fourth, fifth and sixth, or the fifth, sixth and seventh cartilages to get down to the base of the pericardium.

PHILADELPHIA ACADEMY OF SURGERY

INTRA-ABDOMINAL HEMORRHAGE FROM RUPTURED CORPUS LUTEUM

DR. DAMON B. PFEIFFER related the history of a girl aged fifteen and one-half years, who was wakened a 2 A.M. by severe abdominal pain. The pain was general and continued with but little abatement during the night and the following morning. The pain did not distinctly localize except that it seemed to be chiefly in the lower abdomen. This was the first attack of the kind. She had always been healthy and had had no digestive disturbances. She had begun to menstruate two years previously, had always been regular, the periods lasting four to five days and being normal in character. The last period was as usual, two weeks before the present attack.

On admission to the Abington Hospital, February 14, 1923, she appeared rather pale, but she was a pronounced blonde and her skin was usually white. The conjunctiva was not markedly blanched. General examination was negative. The temperature was 97, the pulse 72, and respirations 20 per minute. She still complained of abdominal pain. The abdomen was moderately distended and there was tenderness and moderate rigidity in the right lower quadrant and, to some extent, on the left side over the pelvis. The leucocyte count was 17,600.

She had been very active and athletic, engaging strenuously in basketball. Several days previously she had been knocked over a chair, striking her abdomen violently but the resulting pain soon stopped. The evening of the attack she attended a dance but had no pain, and was in bed at 12 o'clock. No pelvic examination was made because of her age and the absence of symptoms pointing in that direction.

At operation as soon as the peritoneum was reached the blue color betrayed the presence of blood. On incising the membrane fluid blood poured out in abundance. The right ovary appeared slightly larger than normal and on its convex border there was an irregular rupture about .5 cm. in diameter, exposing the interior of a small cyst from which blood was slowly oozing. The left tube and ovary were examined and found normal. As the cyst did not appear enucleable the ovary was removed. The appendix was amputated. Clots in the pelvis were withdrawn by hand and the abdomen closed without removing the bulk of the fluid blood, estimated to be about a litre.

Recovery was uneventful. The blood count the day after operation was: Hæmoglobin 80 per cent., red blood cells, 4,090,000, white blood cells 12,200; on February 26th the blood count was: Hæmoglobin 89 per cent., red blood cells 4,580,000, white blood cells 7100. Her health has been perfect and menstruation normal since leaving the hospital.

Microscopical examination of the ovary showed a cyst about .2 cm. in diameter after hardening and preparation, the lining of which was made up of lutein cells undergoing retrogressive changes. This mantle of cells varied greatly in thickness, being thinnest on the convex border near the point of rupture. Beneath the theca there were a number of interstitial hemorrhages. The ovarian stroma appeared rather loose and œdematous and in some areas there were a few scattered lymphoid cells, but not sufficient to justify the diagnosis of chronic inflammation.

INTRA-ABDOMINAL HEMORRHAGE

The reporter added that this is a rare accident although its existence has been known ever since Scanzoni in 1845 reported the case of a young girl aged eighteen who died of hemorrhage from rupture of a small ovarian cyst, the abdomen containing six pints of blood. In the absence of a microscopical examination, some doubt has been cast on this case as being probably an instance of ovarian pregnancy. However, since that time a considerable number of authentic and thoroughly studied cases have been put on record and it has been proved that grave and even fatal hemorrhage may occur as a result of rupture of an ovarian cyst in the absence of pregnancy. Von Beust in Germany, Jayle in France, Novak, Richard Smith and Bovee in this country, have made the most complete studies and collective reports of the condition.

Ovarian hæmatomata are of four varieties. (1) Interstitial, in which hemorrhage occurs into the stroma, a rare variety and probably not productive of massive intra-abdominal hemorrhage by rupture. (2) Follicular, which are sub-divided again into (a) Graafian follicle cysts and (b) atretic follicle cysts. It is well established that hemorrhage may occur into cysts of this variety and occasionally by subsequent rupture give rise to intraperitoneal hemorrhage. Collective reports seem to show that the more common variety is that of hemorrhage from atretic follicles. (3) Corpus luteum hæmatomata—are relatively common findings in the ovary. The vascularity of the corpus luteum and the delicacy of its lining membrane would appear to predispose to hemorrhage into its interior. Occasionally the wall of the cyst itself ruptures during the stage of involution, followed by outpouring of more or less blood into the abdominal cavity. (4) The fourth variety of blood-containing cysts of the ovary is that which has recently been so brilliantly elucidated by Sampson of Albany, namely, "The Perforative Hemorrhagic Cyst of the Ovary," which he has shown to be adenomas of the endometrium. These structures are in reality ectopic uteri and their contents are the result of menstruation carried on by the endometrial lining. They have long been known as chocolate cysts on account of the color of their contents and Sampson has pointed out their peculiarity of discharging at the height of the menstrual cycle bits of their adenomatous lining which have the power to engraft themselves on the peritoneum, thereby giving rise to secondary adenomas of similar behavior. No such cyst has been connected with massive intraperitoneal hemorrhage as yet, though there is no apparent reason why their penchant for rupture should not occasionally be the starting-point for hemorrhage of some magnitude.

Most of these cases have come to operation under the diagnosis of acute appendicitis. While it is quite possible that the great majority would recover without operation, the extreme difficulty of making a positive diagnosis without operation and the danger of overlooking a more serious condition make expectant treatment inadvisable. Treatment consists in either resection of the cyst or removal of the ovary. It is important to recognize the fact

PHILADELPHIA ACADEMY OF SURGERY

that massive abdominal hemorrhage may arise from the ovary independent of ectopic pregnancy.

DOCTOR MULLER said that he could recall four or five cases in which there had been diagnosed a rather mild type of appendicitis and in which small clots of blood were found in the pelvis without any disease of the appendix. They might have been cases of corpus luteum origin. He also related the history of a woman who had symptoms of extrauterine pregnancy and was operated on in March, 1910, and the right tube removed for extrauterine pregnancy. In October, of the same year, she had the same symptoms, etc., and the same diagnosis was made by her physician. At operation the tube was found normal but the ovary showed a small perforation and there were three or four ounces of blood in the pelvis. The ovary was twisted and although they searched for it they could find no evidence of pregnancy in the ovarian tissues. Ten years later he removed the left ovary for a cyst five or six inches in diameter, showing that probably the original diagnosis should have been cyst.

TREATMENT OF FRACTURES OF THE SKULL

DR. HENRY P. BROWN then read a paper with the above title, based upon one hundred cases observed at the Pennsylvania Hospital. Dr. Edward A. Strecker had collaborated with him in the preparation of this memoir. For this paper, see page 198.