

root of the flap, and the whole secured by narrow and long strips of plaster. Broad straps were then passed round the arm, splint, and body, and a bandage passed over all so as to prevent the slightest relative motion. The rise and fall of the respiratory wave affected both the surface of the abdomen and arm, carrying both equably together.

The child was little affected by the operation, and the arm was perfectly easy in its position. For the first week no more interference was made than was absolutely necessary for cleanliness. At the end of that time a few of the sutures at the edges were removed. About an inch near the fingers was then seen to have become united by the adhesive process. The pressure by the pins was adjusted from time to time by the removal of some of the padding; and about the tenth day the pins were removed altogether from the flap. The body portion of the cuirass was also carefully raised, and the abdominal wound examined; the pins and sutures were removed; no adhesion having taken place, but filled with healthy granulations. The wound was then dressed with simple dressing, and the cuirass readjusted. The flexibility of the gutta-percha admitted of the upper arm-piece being bent down for examining and dressing such parts as became sore from the long continuation in one position under the pressure of the splint. At this time it was evident that the surface of the flap was firmly adherent to that of the wrist wound. The progress of the cicatrization at the edge of the flap was uniform.

On the 13th of December, the union being completely effected close up to the root of the flap on both sides, the first step to its separation from the abdomen was made by an incision about an inch long, directed obliquely from the left side of the root of the flap downwards and inwards, so as to obtain still more skin from the belly. By this means the hand was allowed to be placed further inwards towards the navel, so as to move it from the surface of the abdominal sore. Narrow straps of sticking plaster were then placed round, so as to obtain close apposition of the newly cut edges. The cuirass splint was then left off, and a simple bandage and strapping applied to keep the arm *in situ*. The parts united without hesitation. A week afterwards another cut was made on the opposite side of the flap attachment to the same extent, and with the same obliquity. The hand could then be shifted over from the surface of the abdominal sore, so as to leave it perfectly free for dressing. In a week this was also healed. The union being now quite firm and safe, flexion of the hand and fingers upon the forearm was made at each dressing, and the bandage applied, so as to maintain the bent position. This had the effect of drawing still more of the skin of the abdomen into the side of the flap, which now assumed the shape of a lozenge, with the lower angle attached to the abdomen. After two more separate divisions of small portions of the root in the same slanting direction, the flap was finally severed from its connexion with the abdomen on the 3rd of January, 1863. The pedicle then severed was about half an inch in diameter. There was free bleeding from the cut part of the flap, showing that the vascular connexion was now very free. The sore on the abdomen and that on the arm remaining from the original burn had by this time diminished to small proportions, and both were covered with healthy florid granulations. Up to the present time daily flexion movement of the distorted fingers and retroverted wrist has brought the tips of the former very nearly to their normal relation with the thumb and palm, and the patient can grasp objects with much facility. The flap has remained plump and unshrunk, and the surrounding lozenge-shaped cicatrix has assumed a linear appearance. Both the sores on the arm are now healed, while that on the body is diminished to the size of a half-crown. The patient uses her hand with great freedom. The effect of this motion has been to elongate the flap from two and a half to three inches and a half, and somewhat to narrow it from one lateral angle to the other, since its severance from the body.

ST. BARTHOLOMEW'S HOSPITAL.

PECULIAR AFFECTION OF THE SURFACE OF THE TONGUE;
EXCISION OF THE DISEASED PART.

(Under the care of Mr. LAWRENCE.)

ON a former occasion (THE LANCET, vol. i. 1862, p. 459) we briefly recorded an instance of rather peculiar disease affecting the left side of the surface of the tongue of a patient under Mr. Lawrence's care. He was a middle-aged man, and had been subject to a thickening of the membrane for about eight

years; it was also elevated and fissured, and had a white appearance, not unlike the boiled white of an egg. One very painful part, the size of a nut, was removed, without chloroform, by slicing it off with a scalpel; this was found to be confined solely to the mucous membrane, and did not involve the true substance of the organ. The man recovered, and remained free from any return for some weeks. The disease, however, recurred, and he was again admitted in October, under Mr. Lawrence; and this time the peculiar hypertrophied epithelial surface occupied one half of the tongue—namely, the whole of its left side superiorly, encroaching on the right side. It was very painful at one part, although there was no decided ulceration. This caused much inconvenience both in eating and speaking, and the patient, otherwise in good health, was anxious again to get rid of it, but this time under chloroform.

He was brought into the operating theatre on the 1st November, and chloroform administered in the usual way. He was then seated in a chair, with his head reclining backwards against a cushion, and the influence of the anæsthetic was kept up by means of an apparatus devised by Mr. Copeman, which permitted of inhalation through the nostrils. The tongue was laid hold of with a pair of wide-bladed forceps; but as there was very strong resistance in the way of retraction, it was found necessary to pull the tongue forwards by a pair of hooked forceps, and with a sharp bistoury Mr. Lawrence removed the affected part in one large piece from the surface of the left side of the organ. There was free bleeding, as on the former occasion; but it was not found necessary to tie any of the blood-vessels, as the hæmorrhage readily ceased by the use of cold water; and the patient was removed to the ward. On examining the specimen, the disease was discovered to be of the same character as formerly, not malignant, but simply involving the mucous membrane. It looked like masses of thickened epithelium that had become indurated and fissured in various directions, a longitudinal section giving the boiled white of egg appearance already referred to. The muscular structure of the tongue was not meddled with, as it was quite healthy in every respect. As on the first occasion, the man again progressed favourably; but there is still the probability that the affection, notwithstanding its benignity, will recur.

GUY'S HOSPITAL.

PHTHISIS PULMONALIS, AFFECTING THE LOWER LOBE OF
THE RIGHT LUNG; THIRD STAGE OF THE DISEASE.

(Under the care of Dr. WILKS.)

AMONGST the out-patients at our hospitals, in cases of cough of a doubtful nature, it is the custom to place the stethoscope at the upper part of each lung to ascertain the condition of the breathing, for this is generally the part affected in phthisis, especially in the left side. In a certain small per-centage of cases, the disease commences in the lower lobes, and may escape detection unless the general symptoms are very well marked, so as to induce an examination of the lower lobes.

A case in illustration presented itself lately at Guy's Hospital. The upper lobes of both lungs were found normal; but on particular inspection, the mischief was discovered at the base of the right lung, where it had unfortunately advanced to the third stage of the disease, for there existed one large and several smaller cavities, in which pectoriloquy was very well marked; indeed more so than usual, because the patient, a female aged about thirty-five, in Esther ward, was deaf and spoke in a loud voice, thus permitting it most sensibly to enter the ear through the chest during auscultation.

The fact we have noticed is certainly no novelty in regard to the situation of the tuberculosis; but as it is frequently overlooked in out-patients, a reference to the circumstance may do some good in discovering cases in the earlier stages, when the chances of beneficial treatment are more hopeful.

ST. GEORGE'S HOSPITAL.

SUPERNUMERARY LITTLE FINGER IN AN ADULT;
REMOVAL.

(Under the care of Mr. TATUM.)

THE common practice at the present day is to remove supernumerary fingers and toes when they are observed shortly after birth, and are likely to prove inconvenient. Owing to this it is rare to see them in adults.

A young man, however, was admitted into the above hospital with a second little finger on the right hand, springing from the soft structures at the outer side of the metacarpal bone of the little finger itself, and not possessing any bony attachment. It was nearly two inches long, and as it was very inconvenient it was removed under chloroform by Mr. Tatum on the 15th inst., without any difficulty, the elliptical wound being closed by a couple of sutures.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

TUESDAY, JANUARY 13TH, 1863.

DR. BAERINGTON, PRESIDENT.

ON THE WIRE COMPRESS: A SUBSTITUTE FOR THE LIGATURE.

BY JOHN DIX, M.R.C.S.,
SURGEON TO THE HULL AND SCULCOATES DISPENSARY.
(Communicated by JOHN BIRKETT, F.R.C.S.)

THE wire compress—the subject of this paper—is a modification of the method of arresting hæmorrhage devised by Dr. Simpson of Edinburgh, and introduced by him about three years ago as a substitute for the ligature. This “acupressure,” as it is called, has been tested by but few surgeons of note; and in London, especially, it is almost unknown and ignored. Although probably a real improvement on the ligature, it undoubtedly labours under certain inherent disadvantages, most or all of which (it is believed) are obviated by the use of a fine wire of iron or of silver, instead of the steel needles of Dr. Simpson.

This idea was first promulgated in a paper on Acupressure published in the *Medical Times and Gazette* of June 2nd, 1860; and first put to the proof in a case of amputation of the finger, September, 1860. In this operation two arteries were secured by wire, which was removed on the third day. The case did well: there was no bleeding, and very slight suppuration.

In the next case—Chopart's amputation, performed April 26th, 1861—five wires were applied on as many arteries: four of these were removed in forty-eight hours, and the other on the fourth day. It was found that the wire was easily applied, as easily withdrawn, and entirely effectual for the purpose it was intended to serve—namely, the arrest of the bleeding from the cut vessels. This patient, being the subject of constitutional syphilis, did badly. There was sloughing of the entire surface of the wound, and the flap was totally destroyed; notwithstanding which there was no hæmorrhage; but she died on the thirteenth day after the operation, of pyæmia.

Case 3, (Sept. 21st, 1861.)—In an amputation of the thigh, done after Mr. Luke's method, there were seven bleeding arteries. Upon five of these the wire was used, and with the femoral artery the femoral vein was intentionally included; two very small branches were treated by torsion. This case did well. Seventy-two hours after the operation four of the “presse-artère” wires were withdrawn with perfect ease and without bleeding. The one on the femoral remained five days, when it, too, was removed without any difficulty and without a trace of blood. There was but little suppuration, and an excellent stump was the ultimate result.

These cases prove that this mode of securing arteries is practicable, efficient, safe, and manageable. It is also believed to possess a certain positive superiority over the ligature, as the following comparison shows:—

A ligature in a wound impedes union and induces suppuration. Cure, by primary adhesion, of a large wound—as, for instance, an amputation—is an event of extreme rarity, and this because of the ligatures. A thread of silk is, in fact, a miniature seton, and the whole number required in an operation make up one of considerable size, and can scarcely fail to lead to the formation of pus. Again, the ligature of necessity excites ulceration of the artery upon which it is tied; it cannot in any other way be got rid of. This is another unhealthy process, antagonistic of repair. In applying a ligature, the end of the artery is drawn out from its sheath, by which its natural connexions are disturbed and its vasa vasorum broken up; its coats also are lacerated and bruised. The ligature remains for an indefinite time, long after it is useful or necessary, and it is not unfrequently pulled at by the dresser before it has become detached. Its knot, often deeply buried between the flaps, cannot be withdrawn without tearing through adhesions, or

damaging the granulations. All these are serious obstacles to the healing process both in the stump and in the artery itself, and much protract the period of cure. Moreover, the following is an interesting and noteworthy formula: Pyæmia is the offspring of purulent secretion, of which the ligature is an efficient and probable cause. Bleeding arises solely from ulceration of an artery, of which again the *primum mobile* is the ligature.

From one and all of these objections to the ligature the “wire compress” is almost or altogether free. Thus, in accordance with a well-known pathological law, it, being a metallic substance, is freely tolerated by the living body, and has little or no tendency to excite suppuration or irritation. Neither does it cause ulceration of the artery. This is positively affirmed from actual observation of its effect as witnessed in the sloughing stump before alluded to. It is applied without interference with the natural relations and vital connexions of the vessel. It is removed at any time, according to the will and judgment of the surgeon, without disturbance to the reparative action going on in the artery and in the rest of the wound, without futile premature attempts, and almost without pain to the patient. It is not liable to lose its hold, or to become detached too soon, as not unfrequently happens to a ligature applied upon a brittle or sloughing artery. Twigs of nerve accidentally included in the embrace of the wire are not injured and excited as by the tight strangulation of the ligature, and, if thought advisable, the veins are easily and safely occluded, along with the arteries.

Although this has been spoken of merely as a modification of acupressure, yet it is believed to be a decided and important improvement on “Simpson's skewers,” as the needles have been irreverently called, and which are fairly open to the following objections. When several of them are required, the stump resents, as it were, being thus pierced through and through in various directions. From the injury thus inflicted, and from the obstruction to the capillary circulation caused by the pressure of the unyielding steel, arise much tension, cedematous swelling, and great pain; the pain, especially, has been found a very serious evil. Again, their projecting ends, and the puckering they cause in the substance of the flaps, interfere very much with that accurate adjustment of the cut surfaces and edges which so greatly aids the chances of union by adhesion.

The wire is free from all these shortcomings. It is thus applied:—Take a piece of surgical wire six or eight inches long, and thread each end thereof upon a straight needle. Seize the bleeding mouth of the artery with forceps, and pass one of the aforesaid needles close on each side of the artery just mentioned, about a line above the points of the forceps, directly down through the substance of the flaps, so that they emerge at the cuticular surface, about half an inch distant from each other. Draw them both through together till the curve of the wire compresses the artery on the face of the flap. Now get rid of the needles by clipping through the wire close above their eyes, and also detach the artery forceps. Place a piece of cork, cut for the occasion, upon the skin, between the points of exit of the wire, and over this twist the wire tighter and tighter until the bleeding is arrested. Lastly, cut off the superfluous wire. All which is done quicker than described. Two or more arteries lying near together may be embraced by one wire, and, as has been said, the veins may be included or excluded at will.

The wire should be either of silver, or, what is much cheaper and equally manageable, of the finest and softest passive iron. The generality of wire as used for sutures is too hard and stiff. The needles are about 3 in. in length, straight, and three-edged, with an eye adapted for carrying wire. Special care is necessary in threading the wire that it is kept perfectly free from all twisting. The forceps are used, not to draw out the artery as when a ligature has to be applied (this, indeed, is to be particularly avoided), but merely as a guide to mark the exact position and course of the vessel. The cork is necessary to protect the skin from the pressure of the wire.

The withdrawal of the wire, which at first sight appears an insuperable difficulty, is perfectly simple and easy. It is thus effected:—Clip the wire close to the edge of the piece of cork, and straighten out the curve it has formed, at its exit from the skin. Remove the cork, and apply instead the tip of one finger, with which press firmly upon the flap, making traction gently and gradually upon the other end of the wire. If this were roughly and hastily done, it might break up the adhesion which it is presumed has taken place between the surfaces of the flaps, and it is quite possible that a flexure in the wire might lacerate the artery in passing over it; but it is certain that none of these evils need happen with ordinary care and tact.