backwards, when it was tied. The ligature was not, however, tightened until it was ascertained, by very slightly elevating the vessel, that the influence of pulsation was lessened in the aneurismal tumour, and then that important proceeding was completed.

The difficulties to be encountered in the living subject are much greater than can be supposed by a contrast with the operation on the dead body; for in the former the shoulder is not unfrequently elevated, and the vessel is almost wholly covered by the clavicle, which may be partly due to its being pressed upwards by the tumour itself. In Mr. Clark's patient these conditions seemed to be present, and much care and attention were requisite before finally securing the vessel, which was accomplished within the half hour. There was no hæmorrhage worth mentioning; a little blood had now and then to be sponged away, but nothing unusual from what we have several times witnessed in placing ligatures on this part of the subclavian.

The operation was performed without chloroform, and the only discomfort to the patient was the distressing sensation in his arm and shoulder, from their having to be retained in one position. Judging from his appearance, together with an absence of any disease whatsoever, and considering the nature of the origin of the aneurism, the case may be pronounced as one of the most favourable on record for the operation chosen.

The result to be feared in these cases, as Mr. Fergusson shows in his "Practical Surgery," is subsequent suppuration in the tumour, a frequent occurrence in the history of axillary aneurisms; but it does not invariably end badly. In some 47 cases, given in a tabular form by Mr. Erichsen, of ligature of the subclavian in the third part of its course, he found 23 cures against 24 deaths; of the latter, 10 were from inflammation of the chest, &c., 6 from suppuration of the sac, 3 from hæmorrhage, 1 from gangrene of the hand and arm, 1 from general gangrene, and three from causes not stated.* Suppuration of the sac, however, is the most common result, though it is not the most fatal one; it occurred in 14 out of the 47 cases mentioned by the latter writer, or nearly 1 in 3 instances.

Up to the present moment appearances are favourable for the patient; but we shall not fail to lay the ultimate result before our readers.

A good example of recovery after this operation, by Dr. Cacciopoli, of Naples, communicated by Mr. A. M'Laughlin, of Liverpool, is briefly given in vol. ii. of this journal for 1853, p. 164.

The notes of the following case were taken by Mr. Charles Smith, the dresser of the patient.

Horatio D—, aged forty, an engineer residing at Greenwich. Has never had illness of any kind. About four or five months ago, he says, while occupied in boring holes in a cylinder (he was boring an upper hole, which required him to have his arms at a great stretch; the operation as he describes it appears to call for immense exertion, requiring usually three men, and at this time one man had been called away, so that he and another only were engaged at the work), just as he was exerting himself to the utmost, and had "got the lever half way down," he felt something give way with a "click" immediately below the clavicle. There was no pain, so he went on working as usual. This occurred early in the day—ten o'clock; he ceased working at half-past five. After he returned from dinner, he found that when he raised his arm there was aching and stiffness in the shoulder-joint. After the first day all pain ceased, and he forgot the circumstance of the "strain" until about a week afterwards, when he felt a "lump" (he did not notice if there was pulsation) just in the spot where he had felt the "click." Apparently, the size of the tumour was about that of a large horsebean. There was no pain except aching in the arm itself, nor this in any particular spot. The tumour increased in size till it became as large as a walnut, and after a month disappeared. The man says that he put his hand upon the place, and it was gone. He did not notice if there were pulsation at this time. At the time of the disappearance he had taken to lighter work; but when he resumed heavy work, some two months afterwards (in November), the swelling returned, being about the same size as before; and he had pain and swelling in the axilla. The aching was then worse. The tumour commenced gradually to increase, and continued up to the present time. When the tumour recurred, he felt slight pulsation, and this likewise has increased with the growth. He consulted some medical men about it, and was ordered to rub it with liniment. He was told that if he did light work the tumour would go away.

On the 31st December he was admitted as an in-patient.

He has an anæmic aspect, and speaks with hoarseness, which, he says, followed a cold contracted while at sea some years ago. He has a quiet pulse. The tumour extends from beneath the clavicle to about the fourth or fifth rib, and from below the inner third of the clavicle into the axilla. Tongue anæmic; pulse 75. If his arm is allowed to hang down, he feels an aching all along it; if he raises it, there is pain in the axilla. He has been addicted to drinking: "frequently tipsy, but never drunk." Dr. Barker has examined him, and can detect nothing abnormal in the thoracic viscera.

On Jan. 5th, Mr. Clark stated in the operating theatre that the tumour occupied the sub-clavicular space in the first and second divisions of the course of the axillary artery. This gave a more diffused character to the swelling, and made it appear larger than it really was. There was sufficient space between the aneurism and the external border of the scalenus muscle to apply a ligature. On raising the arm, the tumour could be traced beneath the great pectoral muscle. There was no disease of the heart, and, the patient being a quiet man, all circumstances were favourable to the operation. He accordingly tied the subclavian artery in the third division of its course,—viz., external to the scapular muscles,—in the usual way, the patient lying quiet on a table without chloroform. Mr. Clark proceeded cautiously, so as to avoid a plexus of veins. There was very little bleeding; the omo-hyoid muscle was not seen during the operation. A sharp-pointed aneurism needle was cautiously passed around the artery, which was then tied. The vessel appeared quite sound, and unaffected by atheromatous deposits, nor was there dilatation of its calibre. At half-past three, Mr. Clark ordered a hot-water bottle and cotton-wool to be applied to the limb, and an anodyne at bed-time if required. Tongue coated with yellow fur; pulse 65; arm aching; patient very cheerful. The temperature of the limb was taken: the thermometer, being at 57° before use, rose to 79° when grasped in the hand, and when placed in the axilla, to 98°; whilst in the left hand it indicated 89°, and in the left axilla 95°.

6th.—There was a good deal of aching in the arm last evening, and, the patient being restless, the opiate was exhibited. He slept soundly for three or four hours, and expresses himself more refreshed than he has been since his admission. The tumour has subsided, and there is not the slightest perceptible pulsation. Arm much relieved from pain; tongue clean; pulse 75, very good. To have fish, and a pint of porter. Thermometer, 57°: right axilla 97°, bend of elbow 97°, hand 93°; left axilla 93°, bend of elbow 94°, hand 80°.

7th.—The patient says he has not had a good night's rest; complains of a slight burning pain in the back part of the arm, with aching in the axilla and occasional shooting pains down the arm. He is in excellent spirits, and has a good appetite. Wound healing healthily and rapidly; tongue rather furred; bowels not opened since the operation; pulse 78, soft and full. Thermometer 55°: right axilla 99°, elbow-joint 94°, hand 89°; left axilla 95°, elbow-joint 92°, hand 70°. To have a drachm of castor oil to-morrow morning; half-a-grain of morphia, if necessary, at night; and a mutton chop.

8th.—Passed a very comfortable night without the morphia. The arm is tolerably easy, painful only now and then, especially if it be moved. Tongue much cleaner; bowels opened twice, freely; pulse 80. Hot-water bottle to be discontinued. Ordered two eggs, arrowroot, and an ounce of brandy. Thermometer 48°: right axilla 96°, elbow 95°, hand 84°; left axilla 95°, elbow 92°, hand 78°.

10th.—Has slept very comfortably. Arm quite free from pain, except when he dozes and happens to move it. Tongue clean; bowels opened yesterday; pulse 84, full and good. To have two mutton chops. Thermometer 56°: right axilla 94°, elbow 91°, hand 90°; left axilla 92°, elbow 91°, hand 81°.

11th.—Has had a good night's rest, is quite free from pain, and eats well. Tongue clean; pulse 80; wound looking healthy. Thermometer 56°: right axilla 93°, elbow 89°, hand 88°; left axilla 91°, elbow 89°, hand 84°.

The patient is going on as satisfactorily as can be desired.

ST. BARTHOLOMEW'S HOSPITAL.

AXILLARY ANEURISM OF SEVEN MONTHS' GROWTH IN A SOLDIER;

DELIGATION OF THE SUBCLAVIAN ARTERY IN THE THIRD PART OF ITS COURSE; DEATH ON THE THIRD DAY.

(Under the care of Mr. STANLEY.)

WE take advantage of the present occasion to record another example of aneurism of the axillary artery, which has not been

* Science and Art of Surgery, second edition, p. 571.

before published, and for which the same operation was resorted to as in the previous case, and at which we were present on the 4th of August, 1857.

The patient's general health appeared to be good, although he was a thin, spare man, and had suffered much from bad health during a twelve years' sojourn in India as a soldier. The tumour had been growing for seven or eight months, slowly and gradually increasing in size, and for the last five months he had had numbness of the forearm from the elbow downwards.

A consultation was held by all the surgical staff of the hospital, who were unanimous that the only course to be pursued was to tie the subclavian artery on the outer border of the scalenus anticus muscle, and that it should be done as early as possible. This was accomplished at the date mentioned, and, from the difficulties of depth and other causes, occupied fifty-eight minutes. Pulsation ceased in the tumour, but the patient survived only three days, death resulting from inflammation and suppuration of the deep cellular tissue at the root of the neck, extending to the anterior mediastinum and pleura.

The notes of the case were taken by Mr. Chappell, the dresser of the patient.

George C—, aged forty, admitted on the 31st of July, 1857, with swelling in the right axilla, of fusiform shape, evidently axillary aneurism. He gave as the duration of the tumour a time varying from five to nine months. He had been a soldier in India in the artillery, drank freely, had had several attacks of fever and liver affections, for which he was cupped and bled extensively. For the last six months his occupation had been that of a hawker, during which time he frequently had recourse to opium to soothe the pain: two-pennyworth used to be his quantity, equal to two drachms of tincture of opium. The aneurism appeared to enlarge rapidly, so that immediate operation seemed necessitated.

On the 4th of August, the operation of tying the subclavian, outside the scalenus anticus, was performed by Mr. Stanley. On account of there being a large external jugular vein, the external incision was modified to avoid it. The artery was tied, and pulsation stopped. He had two or three hours' sleep during that night.

5th.—His pulse became irregular, and prostration severe.

6th.—Sudden pain on the left side, with dulness, announced pleurisy, which increased the prostration, and rendered the respiration laboured. Leeches and calomel and opium had some little effect upon it. The symptoms gradually increased, and death occurred at eight A.M. on August 7th.

At the autopsy were found, diffuse suppuration in the superficial and deep cellular tissue of the neck, extending into the anterior mediastinum; also about a pint and a half of curdy serum in the right pleural cavity; the arch of the aorta was dilated, with softening of its internal coat; the left axillary artery had an incipient aneurism, the size of a small nut.

GUY'S HOSPITAL.

EPITHELIOMA OF THE RIGHT LEG AND TIBIA; AMPUTATION; RECOVERY.

(Under the care of Mr. COCK.)

THE peculiarity of epithelioma is the unusual development of epithelial scales, which originate in the part affected, either in the skin or mucous membrane. After a while ulceration ensues, the epithelial infiltration goes on and extends to the deeper structures and tissues, and thus involves a large extent both of surface and of substance. Although this form of cancer is commonly met with in the lip, the scrotum, and the penis, we find it to occur in other parts of the body. We append the notes of two interesting cases of the disease: in the first it affected the right leg, involving the tibia; in the second, the os calcis and integument surrounding it. In both, the limbs were amputated, and recoveries ensued.

Thomas T—, aged forty-five, a hairdresser, residing at Deptford, was admitted on May 25th, 1858, under the care of Mr. Cock. He was a very pale and cachectic-looking man; but he states that his health has not been bad, and his habits have been temperate. Twenty-six years ago he noticed a swelling in the right knee, which continued to increase for some time, till at last he was unable to walk. This swelling then burst, and he was much relieved. The wound, however, never healed, and was sometimes worse than at others. About two years ago he fell down and struck the part; the wound then

rapidly became larger, the bone died, and at last he came to this hospital.

When admitted, the right leg presented over the surface of the tibia a large sprouting epithelial growth, involving nearly the whole bone; in the centre was a deep hollow, which excavated the bone, and at the bottom some dark carious and necrosed bone was visible.

On June 15th, 1858, Mr. Cock amputated the thigh at its lower third, and the man left the hospital cured.

Upon examining the limb, it was clear that both the tibia and the integument over it were involved in one mass of epithelial disease. The bone was for the most part dead, and infiltrated with the elements which characterize the epithelial cancer, or epithelioma. The sprouting cauliflower growths from the integument presented the same characteristics; but the cells in the bone were very well marked, and proved remarkably beautiful microscopical objects.

EPITHELIOMA OF THE OS CALCIS AND INTEGUMENT OVER IT; AMPUTATION OF THE FOOT; RECOVERY.

(Under the care of Mr. BRYANT.)

The notes of the following case were taken by Mr. Charlton, the dresser of the patient:—

Thomas L—, aged thirty-six, a schoolmaster, residing in the country, was admitted on June 30th, under the care of Mr. Bryant. He was a cachectic-looking man, although he stated that he had enjoyed good health. The patient said that twenty years ago his left foot was smashed between two wheels of a threshing-machine. The integuments were much lacerated, and the bones crushed. For six months he was under surgical treatment, and during that time some bone came away from the heel. For eighteen years he managed to walk about with the aid of a stick, and followed his employment; but six months ago a small wound on the heel, which had been closed since the accident, became irritable and began to enlarge, discharging an unhealthy secretion, and again a small piece of bone came away.

On admission, the ankle-joint was found to be ankylosed, and over the calcis and all round it there was an extensive ulcer, with protruding cauliflower granulations, of a hard character; the calcis was entirely excavated, and dead bone was clearly seen.

On July 13th Mr. Bryant amputated the foot, and the man rapidly recovered.

On examination of the part after removal, and making a clean section of the foot and calcis, a very beautiful specimen of epithelioma presented itself. The whole calcis was involved in the disease, and the corresponding integument over it. The bone in parts was carious and dead, and without its cancellated structure; very marked cells of the epithelial form were visible. It was difficult to say where the disease had originated, whether in the bone, and had advanced outwards, or in the integument, and had progressed inwards. The latter is the most probable, as primary epithelioma of the bone it not yet recognised.

CLINICAL RECORDS.

ENCEPHALOID CANCER OF THE TESTICLE AND KIDNEY IN A YOUNG CHILD.

A RARE case of encephaloid cancer of the testicle has come under the care of Mr. Coulson in St. Mary's Hospital. The subject of it was a child aged one year and ten months. No hereditaryness. The origin of the disease was referred to a fall eight months previously. Two months after the fall, the mother noticed a hard swelling in the scrotum, and consulted a surgeon. During the following two months the tumour increased, though continuing painless; and the child was taken to a second surgeon, who tapped the scrotum. This was followed by very free bleeding on the following day. Since then, the discharge had been sanguineous, there had been occasional pain, a florid excrescence protruded from the wound, and the inguinal glands became enlarged. Meantime he became pallid, but otherwise suffered little in general health or aspect. When admitted (Oct. 27th), the scrotum was much distended, and from the anterior surface protruded a diseased mass, opaquely white in parts, but greatly discoloured by dark coagula of blood and yellow fibrinous patches. The inguinal glands of either side were greatly enlarged and indurated, forming hard