Although the evidence which such an examination would have afforded was wanting in both cases, the most prominent facts in their history warrant a presumption that the result would have been in harmony with what has already been observed in other cases of the same sort. Stated briefly, the force of that presumption amounts to this: that, whereas the symptoms were strongly indicative of severe and permanent irritation in some deep seated part, the entire absence of any evidence of mischief in the principal viscera seemed to show that this irritation must have had its source in some organ which, like the suprarenal capsules, is, from its situation or diminutive bulk, or both, beyond the scope of the ordinary modes of exploration.

In the present stage of the inquiry, it would perhaps be premature to speculate on what connexion this singular change in the colour of the skin can possibly have with disease in organs which have hitherto been thought to play so insignificant a part in the living economy. Our chief duty at present is rather to accumulate facts than to reason upon them. Even thus early, however, there can be no harm in hazarding a supposition on the subject. Now, it has occurred to me that the connexion just referred to (assuming its reality to be established) might possibly be explained by supposing that the pigment which is the material cause of the discoloration is a natural excrementitious product, whose riddance in some way it is part of the office of the suprarenal capsules to effect. Under this view, disease of these organs would necessarily lead to accumulation of this product in the system, and the "bronzing" might be supposed to ensue much in the same way as jaundice does when the function of the liver is interrupted. Whether this supposition be true or not, time will show. A fact which gives some colour to it is, that the colouring matter with which the substance of these glands is impregnated is almost identical in hue with that which tinges the bronzed skin.

In conclusion, I need scarcely add, that these singular cases have a physiological interest of a very high order. To see a white man gradually become a "man of colour", whatever may be the conditions which have led to the change, is a phenomenon of great interest in many ways. It is curious that a change which is precisely the converse of this appears to have been observed in the negro. I do not know where the narrative is to be found, but I have been informed that Dr. Inman, of Liverpool, has related the case of a negro who gradually became white. It might not be uninteresting to view these opposite pathological states one by the other. The physiology of the natural Albino deserves also an attentive study in connexion with them. With the exception of what relates to the colouring matter of the bile, the whole subject of the development of pigment, whether normal or morbid, in the living body, is one on which we are as yet wholly in the dark. Of the modes and places of its formation, whether in disease or in health, of the chemical constitution of its different varieties, and still more of the chemical changes—interesting as these must often be—which lead to its extrication, we know little or nothing. These cases of bronzed skin render it probable that relations of very great importance might be brought into view by a clear insight into these various questions.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

TWO SUCCESSFUL CASES OF AMPUTATION AT THE HIP-JOINT.

By GEORGE MURRAY HUMPHRY, Esq., Surgeon to the Hospital.

CASE I. — Burd, aged about 35 years, met with a severe compound fracture of the right thigh, near the middle, from a wheel passing over it. Mr. Welch, of Saffron Walden, who saw him soon after the accident, did not think that the main vessels were injured, but considered

the injury of so severe a nature that he recommended amputation. The man would not submit to this. The limb was accordingly done up with splints and bandages. For the first three or four days, though restless, he was thought to be doing well. Soon after this, it became apparent that mortification had set in. The entire limb below the fracture sloughed, and was separated by the efforts of nature, with little assistance from the surgeon. All this took place without much constitutional disturbance. Unfortunately, the sloughing of the skin extended up the limb higher than the fracture, so that a large uncovered surface was left.

On Nov. 28th, 1854, about six weeks after the accident, I went over to Chesterford to see the patient, at the request of Mr. Welch, who was of opinion that amputation at the hip-joint would be necessary. The bare broken extremity of the bone projected half an inch from the end of the stump: it was surrounded by a great granulating mass, overlying the muscles and other soft parts, which was bounded by the cicatrising edge of the integuments. The latter, for the most part, did not reach to within six inches of the end of the stump. The man, though not unhealthy in appearance, was blanched, and had a quick pulse. He took a large quantity of nutriment, meat, wine, porter, &c.; digested it well, and seemed to thrive upon it. The granulations looked healthy. The stump was large in comparison with the corresponding part of the other thigh, but was not tender; and he could move it at the hip.

The discharge was considerable. It was scarcely to be expected that the health would long hold out under such circumstances. There was little hope of cicatrization proceeding over this extensive surface, so as to close the stump: already it was advancing less actively than it had done. The patient was anxious that something should be attempted to secure the healing of the part, and willing to submit to any measure that we should propose. I agreed with Mr. Welch that it would be the best plan to remove the part at the hip-joint, as this was the surest means of obtaining a sufficient covering of integument. Moreover, the operation in that situation could be performed more quickly than through the upper part of the thigh bone; and the risk from hæmorrhage, which constituted one of the great dangers in the feeble state of the patient, would be diminished proportionately, or nearly so. Accordingly, on Dec. 17th, I went to the patient's house, and removed the stump at the hip-joint. Dr. Webster administered the chloroform; and Mr. Welch, Mr. Bailey, and Mr. Carver, rendered such efficient assistance, that very little, not above four or six ounces, of blood was lost. We placed the patient with his hips projecting beyond the edge of the table. The horse-shoe tourniquet was applied, with one pad upon the external iliac artery; the other upon the back of the ilium, so as not to be in the way of the incisions. This, being tightened and held in its place, prevented the flow of blood through the artery. The stump was raised a little; the point of the knife was inserted an inch below the spine of the ileum, passed across the hip-joint, and protruded a little below and to the side of the anus. The inner flap was then cut by carrying the knife downwards and inwards. Mr. Welch followed the knife with his fingers, grasped the artery between the fingers and thumb, and raised the flap. The hip-joint had been opened, and the head of the thigh bone exposed, by this first cut. A little further division of the capsule enabled Mr. Carver, by rotating the stump, to throw the head of the femur from its socket; enough to expose the ligamentum teres, which was divided, and the bone completely dislocated. The hinder part of the capsule, and the tendons running to the digital fossa, were then cut, so as to allow the knife to pass behind the great trochanter, when the flap from the buttock was quickly formed. During this time, one gentleman with a sponge pressed upon the lower part of the anterior flap, so as to prevent bleeding from the obturator and other arteries; while another, kneeling in front of the patient, followed the knife with a sponge behind the trochanter, so as to compress the gluteal and ischiatic vessels.

In this way the hæmorrhage was almost entirely prevented, and we were able to proceed at leisure to tie the vessels, taking those upon either flap which first bled as they were uncovered. The femoral was about the fifth tied; the sciatic bled briskly when uncovered; the gluteal less than I expected. We took great pains to secure the vessels in the immediate neighbourhood of the acetabulum, the neglect of which has been the cause of fatal hæmorrhage in other cases. Forty-three ligatures were applied. The patient was now rather faint, so we covered up the wounds for half an hour, when he became warm, and his pulse good; and, as there was no bleeding, the edges of the flaps were approximated by sutures. A pad was placed under the hinder flap, and secured there by a bandage passed round the pelvis.

Two hours after the operation, his pulse was good. There was some disposition to sickness, attributable probably to the chloroform; this continued for two days, and subsided gradually. The progress of the case, under the management of Mr. Welch, was most satisfactory. Partial union took place by first intention. Some dirty foetid pus, tinged with blood, was discharged after a few days: this soon ceased, and nothing occurred to interfere with the speedy and complete union of the flaps. I heard a few weeks ago that he was quite well and strong.

CASE II. Richard Fuller, aged 27, a healthy man, blanched and thinned by confinement and disease, was admitted into the hospital June 23rd, 1855, with an ulcer as large as a cheese-plate on the outer side of the left thigh; its upper edge being four or five inches below the trochanter. It was flat, with a coarsely granular surface, which presented a red colour, interspersed with small whitish spots. The discharge was thin and bloody; the edge smooth, not everted or raised, but decidedly indurated. At the middle was a deep depression, extending down to or into the thigh bone. Sixteen years previously, he suffered a severe injury at this part by a thrashing machine; the skin being, he said, torn up a great way, and the ulcer left was a very long time in healing. It appears, however, to have done so quite soundly. A year ago he thought he hurt the cicatrix, by chafing it with a sac of beans he was carrying. At any rate, about that time a sore commenced, which had been gradually increasing up to the time of his admission. There was no enlargement of the inguinal glands.

The ulcer presented the general characters of a cancerous or epithelial disease, and the cursory examination made upon his admission left on my mind no doubt of that being its nature. On the morning of the 25th, I found him agonised by most painful and severe cramps in the thigh, which had come on during the night, and were evidently caused by the giving way of the bone at the part where the ulcer extended down to it. Upon the gentlest handling of the limb the muscles were thrown into action, and he shrieked out with pain. We determined, therefore, at once to remove the limb, through the upper part of the thigh bone, and to extend the operation if it should seem desirable. As the ulcer reached high up on the fore part of the thigh, and the cicatrix higher still, it was necessary to make the incisions very close to the pelvis, especially in front. The pad of the horse-shoe tourniquet was placed above Poupart's ligament. Thrusting the knife from the outer side, a little below the great trochanter, I cut a short flap from the fore part, and then made a longer one behind, sawed through the bone, and tied the vessels. We next examined the thigh bone. At the middle it was quite destroyed; its place being occupied for about two inches by a firm white cancerous mass. A section of the bone showed the disease extending some distance up the interior. It was not certain at what part the disease ceased; for in places, above its apparent termination, were spots in which a white soft substance had been infiltrated between the separated laminæ of the bone. In its whole length the wall of the shaft seemed to be more porous and vascular than natural; a condition which is not uncommonly

met with when a part of a bone is the seat of cancer. In the knee-joint we found the cartilage removed, in an irregular and remarkable manner, from the inner side of the outer condyle. The bone thus exposed, though smooth and covered by synovial membrane, looked dark. It was evident, therefore, that no part of the thigh bone which had been removed was in a very sound state; and my colleagues, Mr. Lesturgeon and Mr. Hammond, agreed with me that it would be the best plan to take out the remainder, now that it could be so easily done. Accordingly, with a long scalpel I carried the incision along the front of the bone to the joint, cut through the fore part and sides of the capsule, and, grasping the end of the bone with the strong forceps made for such purposes, turned the head out of the socket. Having divided the ligamentum teres and hinder part of the capsule, I carried the amputating knife behind the bone, and cut outwards through the posterior flap already made, so as to reduce it to proper dimensions. There was some difficulty in securing the gluteal artery. By the time the operation was done, the man was very faint; for a time pulseless. However, he gradually revived. We took great pains to secure the vessels sufficiently, and waited some minutes to see if there was any bleeding. The flaps were united by sutures, and supported by a bandage, with a pad on the lower one.

No unfavourable symptom occurred till the fifth day after the operation, when hæmorrhage took place. The blood flowed quickly, but stopped when Mr. Carver, the house-surgeon, who was quickly upon the spot, compressed the femoral artery. Mr. Lesturgeon and Mr. Hammond were summoned in my absence. They opened the stump and found a good deal of blood and pus. The bleeding had then ceased; and, being unable to discover its source, they left the stump open, with some lint in it. The patient was very faint, and the prospect by no means bright. However, the next morning he had rallied. Suppuration took place; the lint came away after a time; no further bleeding and no other unfavourable symptom occurred; the wound slowly healed, and the patient was discharged cured in September.

January 11th, 1856. The Rev. Mr. Mortlock, in whose parish he lives, writes me word that he is in full health and activity.

REMARKS. These were favourable cases for the operation. The patients were both healthy men, advancing towards the prime of life. One had just shown the vigour of his constitution by passing through the tremendous ordeal of traumatic mortification and separation of his limb. This, it is true, had weakened him greatly, and he is indebted for his life, not a little, to the very efficient assistance, which prevented much loss of blood. The other man was in better condition; and his greater strength was needed to withstand the longer—it may be called the double—operation, as well as the subsequent hæmorrhage.

When we consider the extent of parts divided, and the shock consequent thereon, the dangers of loss of blood at the time, and of subsequent hæmorrhage, besides the extensive suppuration that may follow—each of these causes having, in many instances, proved fatal—we cannot wonder that the statistics of the operation are discouraging, and that it is regarded with disfavour by many surgeons. Nevertheless, there can, I think, be no question that it is a justifiable operation, one which the surgeon may be in duty bound to perform; I am glad, therefore, to be able to add two to the list of successful cases. We may reasonably entertain the hope that the advantages possessed by modern surgeons, in chloroform, in the improved Assalini's or Liston's forceps for securing vessels, and in the better modes of treating the wounds and the patients which now prevail, will not be without their effect in diminishing the dangers of this necessarily formidable proceeding.