person, that it is almost impossible to get a thoroughly good illustration. I have had, therefore, to fall back upon the two lithographs before you, one of a patient of Dr. Hughes of Dublin, and the other of a patient in Guy's Hospital. The dark picture represents a colour much darker than any that I have seen, but I was assured that it is not darker than the patient really was during life.

The discoloration of Addison's disease is not entirely restricted to the skin; it is also frequently observed upon the mucous membranes of the cheeks and gums, also upon the tongue, and on the lips, where it takes the form of an irregular bluish-black streak, running longways near the junction of the mucous membrane with the outer skin. It is seen on the gums and buccal mucous membrane in the form of irregular stains and patches, mostly brownish, with an ill-defined border. In two of my own cases, the stains on the buccal mucous membrane have corresponded with seats of irritation produced by the pressure of protruding teeth; but, in other cases, I have been unable to verify any such cause. These stains on the gums and buccal mucous membrane form another point of analogy between the discoloration in Addison's disease and the pigmentation natural to the dark races of men; for several Lascars who have come under my own care in hospital have presented on the same parts stains similar to those that I have described. The discoloration of the tongue appears usually in the form of sharply defined stains of a purplish blue, or somewhat inky hue. In my own cases, these stains have always been situated near the free margin of the organ. The conjunctivæ always remain normal, and the contrast between their pearly whiteness and the dusky hue of the discoloured skin is striking, and involuntarily recalls the similar contrast in the mulatto or negro countenance.

We see, therefore, that the discoloration of the skin in Addison's disease usually begins and eventually becomes deepest on those parts which are naturally most liable to become pigmented, either by exposure to the sun and air, or by the excitement of certain physiological processes. To these may be added such parts as may accidentally be subjected to the excitement of local irritation. In other words, this peculiar change of colour is, like many other pathological processes, merely an exaggerated, and therefore a morbid, development of a natural physiological process. On a microscopical examination of sections of discoloured skin, the discoloration has seemed to be due to a deposit of yellowish brown pigment in the deeper layers of the epidermis, more especially in the layer in immediate contact with the papillæ, while the more superficial layers of the outer skin mostly remain free from pigment. Here is a drawing, highly magnified, of a portion of the skin, showing the hair and some deposit in the papillæ; and there is also another drawing of the skin of a negro, which will show that the discoloration in Addison's disease is in the same part as the discoloration seen in the negro and Lascar. The deposit is generally seated in the layer immediately in contact with the papillæ; nevertheless, I have found in several cases traces of pigment in some of the more superficial scales of the epidermis, and also pigment-granules deposited here and there in the cutis. There is a specimen here under the microscope which shows very well the ordinary arrangement of the discoloration over the papillæ, and also shows some of these pigment-granules in the true skin: they are not usually found in that situation, but fortunately I have one specimen which shows that they are sometimes found more deeply seated than is usual. Dr. Sidney Coupland also microscopically observed pigment-granules, both isolated and in groups, in the connective tissue of the cutis at some distance below the epidermic layer. The principal part of the pigment, however, is in every case deposited in the cells of the rete Malpighii; it is accumulated round nuclei, but some of it is generally free and irregularly distributed; this latter portion of pigment has also been originally contained in cells, which have disintegrated and allowed the colouring matter to escape. A physician at Halle, in the case of two patients, on a sectional examination, found many pigmented connective tissue-cells in the papillary portions of the cutis; and Mr. Schäfer observed in the same portion of skin a number of irregularly shaped corpuscles containing a considerable amount of pigment. The colouring matter in the patches on the tongue is deposited in a corresponding situation with the stain on the skin, being seated in the lower cells immediately overlying the papillæ; the superficial layer of epithelium remaining quite free from pigment.

To those who have carefully examined the skin of negroes and Lascars, or persons belonging to other dark races of men, it would be obvious, from this description, that the differences between their normal colour and the abnormal pigmentation of Addison's disease are merely differences of degree; although in the former physiological conditions, and in the latter pathological causes, have operated to produce them.

(To be continued.)

CASE OF ACUTE OTITIS MEDIA: SUPPURATIVE INFLAMMATION OF THE MASTOID REGION: DEATH.

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THE following case presents some features of especial interest to aural surgeons, though not partaking of a very uncommon character. I regret that I had not the opportunity of making more detailed observations of this case; it was seen by me once only, and the rapid termination did not allow a second examination.

C. M. L., aged 16, mechanic, was admitted to the Hulme Dispensary on January 16th, 1875, under my colleague Dr. Railton, one of the surgeons to the charity. He had always enjoyed good health, and seemed a well made youth. He never had any fall or blow upon the head. One month before admission, he noticed slight deafness and pain in the right ear. About a fortnight later, the mastoid process became swollen and tender. A week before admission, after severe pain in the ear and about the temple, a purulent discharge came from the right auditory meatus. On admission, Dr. Railton, knowing my interest in aural diseases, requested me to see the patient with him. I found the boy complaining of severe pain in the depth of the ear, about the mastoid, and down the neck. There was a profuse purulent discharge from the right ear; the mastoid region was greatly swollen, red, and soft, and causing great projection of the auricle. The hearing distance for a watch was 48 c. No tuning-fork was at hand to test by that means. There was no paralysis or affection of any of the cranial nerves. A lotion of sulphate of zinc, with carbolic acid, was ordered to be instilled warm into the ear every two or three hours, and the entire part bathed with it. An incision was made into the mastoid swelling half an inch from, and parallel to, the auricle, without liberating any pus, and followed by linseed poultices, etc. When seen by Dr. Railton on the 19th, the patient had slept very little, owing to severe pain at the back of the head, which had been temporarily relieved by the incision, from which there was now considerable discharge of pus. There was no vomiting nor delirium, or any hæmorrhage from the external meatus. On the 21st, the discharge from the mastoid region was very offensive and profuse, that from the auditory meatus much diminished. The patient was very restless, frequently tumbled down, and kept his head clasped between his hands, which he said "relieved the pain at the back of his head and neck". Convulsive movements of his left arm and leg were now very noticeable. The left arm and leg were constantly being jerked about in an involuntary manner. His appetite and vision remained good to the last.

On the 22nd, the symptoms grew worse, though he still ate well, and was quite conscious, answering questions put to him. The convulsive twitching of the left extremities continued, and he sat with his head upon a pillow placed over the back of a high chair. About 8.30 p.m., his face changed colour very frequently; the left ear and side of the head suddenly became of a dark purple hue, his head dropped forward, and, after a few groans, he died. On carefully questioning his mother, she was certain that there was no squinting or facial paralysis; that "she was sure there was nothing the matter with his face at any time during his illness". No signs of cerebral irritation were present when he attended at the dispensary. Unfortunately, permission to make a *post mortem* examination could not be obtained.

REMARKS.—The above account gives all the facts of the case; but, in the absence of any pathological examination, some caution is necessary in accounting for the exact mode in which death ensued in this patient. This fatal attack of mastoiditis was unlike most cases, in being the result of an acute aural catarrh, and not of a chronic otorrhœa. Toynbee speaks of having seen but one case of abscess of the brain due to acute ear-disease. There was no history of any throat-affection, but it is probable that such existed to a slight extent at first. Want of opportunity did not enable me in this case to discriminate between mastoid periostitis and caries at the outset: a distinction often difficult to determine. The discharge from the right meatus did not suddenly cease, as it usually does, on the development of cerebral complications. If death arose from ulceration into the lateral sinus or carotid canal, there would probably have been hæmorrhage from the nose, mouth, and ear. Abscess of the cerebrum is scarcely probable in the absence of coma, vomiting, and delirium. May we not conclude that examination after death in this patient would have disclosed partial meningitis, with abscess in the right cerebellar lobe and purulent effusion about the medulla oblongata?