treatment was continued till October 10th, when his dropsy altogether subsided; during the period he took the infusion he passed from 112 to 140 ounces of urine daily; subsequently he was treated with small doses of iron. He left the hospital cured on January 11th, 1887.

CASE II.—Daniel, aged 40; male; civil condition, married; race, Singalese; birthplace and residence, Hawadiawella. This was an extremely anæmic Singalese man, admitted into hospital on September 23rd, 1886, with extensive general dropsy, depending on long continued and repeated attacks of ague. His condition on admission was the following. His face was swollen, conjunctivæ and tongue pale and bloodless, abdomen distended with fluid, feet œdematous, bowels inclined to be relaxed, urine scanty, appetite indifferent. Suspecting the cause of anæmia was due to the presence of *anchylostoma duodenale*, he was put upon half-drachm doses of oil of male fern for two days, and on the third day a dose of calomel as a purgative. On October 2nd he was put upon infusion *asteracantha*, and continued till October 8th; during this period he passed from 32 to 56 ounces of urine daily; from November 9th, for three days, he was put upon small doses of rhubarb, soda, and santonin, and from the 11th he was again put upon infusion *asteracantha*, and the treatment was continued till the 19th; during this period he passed from 64 to 144 ounces of urine daily; under this treatment dropsy entirely subsided. Subsequently he was put upon small doses of iron. He left the hospital on November 8th, cured of his disease.

CASE III.—Penyhamy, aged 40; male; civil condition, unmarried; race, Singalese; birthplace and residence, Kahatapeteya. An anæmic Singalese man, suffering with extensive general dropsy, depending on long-continued and repeated attacks of ague. His condition on admission was the following, namely: his conjunctivæ and tongue pale, liver and spleen enlarged, abdomen distended with fluid, urine scanty, bowels costive, appetite bad, and feet œdematous. He was put upon salts and sulphate of iron, and a pill containing podophyllin at bedtime. This mode of treatment was continued for a week, and finding no improvement, it was changed for a mixture containing tinct. digitalis. During the period he was taking this mixture, he passed on an average 48 ounces of urine a day. The treatment was then changed to infusion *asteracantha* for a period of six days; during this time he passed from 32 to 112 ounces of urine a day. This treatment had to be discontinued as symptoms of inflammation of the lungs showed themselves.

CASE IV.—Savery Muthu, aged 20; male; civil condition, widower; race, Malabar; birthplace, India. An anæmic Malabar coolie, resident of Mallowapetteya, in Kurunayala District, was admitted into the hospital on November 8th, suffering with general dropsy of about three months' standing. His condition on admission was the following, namely: his conjunctivæ and tongue pale and bloodless, abdomen distended with fluid, feet œdematous. He complained of pain along the limbs, general weakness, and inability for exertion; bowels regular, urine scanty. Suspecting that the cause of anæmia was due to the presence of *anchylostoma duodenale*, he was put upon small doses of rhubarb, soda, and santonin, and subsequently on tincture of iron and infusion of quassia. On the 14th he was put upon infusion of *asteracantha*, and the treatment was continued till the 20th. During this period he passed on an average 96 ounces of urine a day. On the 21st he was put upon small doses of tinctura digitalis; under this treatment he passed on an average 48 ounces of urine. On the 24th he was again put upon infusion of *asteracantha*, and the treatment was continued till December 5th. During this period he passed from 128 to 192 ounces of urine a day. He left the hospital on December 10th cured of his dropsy.

CASE V.—Hawadia, aged 30; male; civil condition, married; race, Singalese; birthplace and residence, Ranawana. An anæmic Singalese man, admitted into hospital on March 21st, 1887, suffering with extensive general dropsy. His condition on admission was the following: face bloated, conjunctivæ and tongue pale and anæmic, abdomen distended with fluid, urine scanty, feet dropsical, bowels costive. He was put upon a mixture containing sulphate of iron, salt, and digitalis, and afterwards on infusion of *asteracantha*. During the time he was taking the infusion he passed at the rate of 40 to 68 ounces of urine a day. He left the hospital on April 5th. His stay in the hospital was too short to be relieved of his disease.

CASE VI.—Adrian, aged 30; male; civil condition, single; race, Singalese; birthplace, Myombo. This was a Singalese man, native of Myombo, but living from his younger days at Polgahawella as a cultivator; admitted into hospital on February 7th, 1887, suffering with extensive general dropsy depending on anæmia. His condition on admission was the following: face pale and bloated, conjunctivæ and tongue pale and bloodless, heart-sounds normal, abdo-

men distended with fluid, appetite fair, bowels regular, urine scanty, feet œdematous. He was put upon thymol, santonin, and extract of opium, but he did not pass any *anchylostoma duodenale*; then he was put upon squills and tinct. digitalis, and subsequently on iron, and finding no improvement, he was treated with small doses of liq. arsenicalis, and as there was no diminution in dropsy, he was put upon inf. *asteracantha* from March 20th, and continued till the end of the month. During that period he passed from 80 to 104 ounces of urine a day. He was discharged from the hospital cured of his dropsy on April 9th, 1887.

AN EXAMPLE OF FRACTURE OF THE FIRST RIB ALONE.

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In a paper (Pathology of Changes produced by Pressure on the Trunk and Shoulder Girdle) in the *Guy's Hospital Reports*, 1886, I described at some length the manner in which the clavicle transmits to the thorax pressure applied to the shoulder-girdle, and I showed both experimentally and pathologically that fracture of the first rib alone, which is regarded by surgical authors as the rarest of all fractures, since there is only one case (Holmes's *System*, vol. i, p. 808) on record, is produced with greater facility and occurs more frequently in the adult than does fracture of the centre of the clavicle, which point of the clavicle is described by many surgical writers (Holmes's *System*, vol. i, p. 948) as being its most common seat of fracture.

Since I wrote that paper I have found in the dissecting-room another instance of united fracture of the first rib alone, so that in less than 200 subjects which I have examined consecutively in the dissecting-room, I found four undoubted examples of fracture of this rib. I say "undoubted" as I have not included several which I believed had been fractured, but concerning which there might be some difference of opinion; nor does that number comprise several examples of fracture of the first costal cartilage, though both in its unossified and ossified conditions it may fairly be regarded as a portion of the first rib. In the latter case especially it is practically impossible to determine the original limits of the cartilage, since a portion of it has united to the rib to form with it a single bone, and a portion to the manubrium, the two divisions being connected by ligaments to form an arthrodial joint.

I think we are therefore justified in concluding that fracture of the first rib alone occurs in at least 2 per cent. of that class from which our dissecting-room supply is drawn.

The fourth example of fracture of the first rib was present on the right side in the body of a strongly-built male subject. The neck of the rib had been broken through transversely, immediately internal to the facet for articulation with the transverse process of the first dorsal vertebra. The fragments, though somewhat displaced, were united firmly together by bone. The inner fragment was displaced so that the head of the rib was on a lower and more anterior plane than normal; a considerable interval, which was filled in by ligament, being present between the anterior portion of the head of the rib and the body of the vertebra. The gradual curve formed by the inner margin of the rib was therefore broken somewhat abruptly at the seat of fracture.

Projecting from the posterior aspect of the seat of the fracture was a large mass of bone which articulated by a flat surface with a corresponding facet on the anterior surface of the transverse process of the first dorsal vertebra, the opposing aspects of bone being firmly united by dense ligamentous tissue.

On the same side, there was an ununited fracture of the acromion, whose direction extended outwards and backwards from the centre of the clavicular facet. The fragments which were not displaced were connected to one another by a strong capsular ligament, and the margins of the opposing articular surfaces were thickened by the deposit of bone upon them.

In the paper in the *Guy's Hospital Reports* already referred to, I proved both by experiment and by pathological results that the usually received statistics of the relative frequency of fracture of the acromion and of the outer portion of the clavicle were absurdly inaccurate, and that the obvious cause of this was the fact that the comparatively slight displacement of the fragments in these fractures prevented their recognition at the time of the injury.

I also pointed out that a theory (*A Treatise on Fractures and Dislocations*, p. 244) originated by Professor Hamilton, of New York, was

made use of to explain away the obvious frequency of the presence of ununited fractures of the acromion in the dissecting-room, and that this theory, which has been accepted by many English writers, is to some extent responsible for the supposed rarity of fracture of this bone.

Professor Hamilton would wish us to imagine that such specimens are not ununited fractures, but "merely separations of the epiphysis, the bony union having never been completed." I will not refer further to this theory here, as I have already criticised it fully. It would hardly seem necessary to mention another explanation of this condition made by Dr. Adams, namely, that this separation of the epiphysis takes place at a later period of life, and that it is due to the presence of the so-called disease, rheumatoid arthritis, except that this astonishing theory is perpetuated by, and consequently, I suppose, receives the assent of surgical writers of the present day. It is, however, an interesting example of the manner in which a pathologist may confuse and transpose cause and effect. I have treated this subject in detail in the *Transactions of the Pathological Society*, 1886 (The Causation and Pathology of the so-called Disease, Rheumatoid Arthritis, and of Senile Changes).

I have frequently been able to determine clinically the presence of ununited fracture of the acromion and of united fracture of the outer third of the clavicle in patients who had been regarded and treated as suffering from simple contusion of the shoulder or deltoid.

Since writing the paper in the *Guy's Hospital Reports*, 1886, I have found in the dissecting-room many more specimens of these fractures. For instance, in the first twenty-two subjects dissected this session, 1886-87, there were two examples of fracture of the portion of the clavicle external to the conoid tubercle, and two examples of ununited fracture of the acromion, yet during the last five years I have observed in the dissecting-room no single instance of fracture of the clavicle inside a point two lines internal to the conoid tubercle. I mention this external limit instead of the conoid tubercle, as I have seen one instance of fracture internal to the tubercle, its direction running obliquely downwards and outwards from a point two lines internal to the conoid tubercle, so that a portion of the conoid ligament was attached to the outer extremity of the inner fragment.

✓ CONGENITAL PIGMENTATION OF THE SCLEROTIC.

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H. T., aged 3½, was brought to the Children's Hospital in Great Ormond Street with severe rickets. She was an intelligent good-tempered child, with darkish complexion and brown hair. There was a curious deposit of pigment in both sclerotics; it was much more marked in the right eye than in the left, and in the right ear, also, there was a small round outgrowth at the upper part of the helix, like the vestigial ear figured in the *Descent of Man* (ed. 1871, i, 22); the left ear had a normal helix.

In the right sclerotic, all round the cornea, there was a deposit of greyish-purple pigment, like an ink-stain, surrounding the cornea with a ring, a quarter to half an inch broad, of dark, irregular, cloudy spots. This ring of pigment was broken at the level of the outer and inner margins of the cornea, but it just touched the cornea above and below. The cornea and the conjunctiva were clear and natural. The iris was of a very dark brown, much darker than its fellow; it was not easy to see its edge against the pupil.

The left sclerotic was discoloured in the same way, but much more faintly, and the ring of pigment was altogether wanting towards the outer part of the eye. Pupils 5 min., equal, sensitive, dilating well under homatropin. There was no pigmentation of the eyelids, either inside or outside. (See Illustration.)

Mr. W. H. Jessop made the ophthalmoscopic examination. Both the discs were normal; the choroidal pigment was more clearly seen in the right eye than in the left; there was no abnormal distribution of it, but of nine recorded cases of this congenital pigmentation of the sclerotic, four at least had melanotic cancer of the eye in later life. There is an admirable account of it, with references and illustrations, and three cases, by Hirschberg, in Graefe's *Archiv*, 1883. The cases are as follows:—

1. A boy, aged 17, dark-skinned; right iris was much darker brown than left; right sclerotic round cornea was marked with large dark-purple stains, clearly congenital. Right fundus much more darkly pigmented than left. Sight of both eyes perfect.

2. A woman, aged 34, dark-haired; had for some months been losing sight of left eye. Right iris of a mingled grey-green and brown; left iris a dark-brown; round the cornea the sclerotic was marked with

large, well-defined purple stains, which here and there extended almost to the equatorial line. The ophthalmoscope showed a tumour near the optic disc, with detachment of the retina. No treatment had succeeded in arresting its growth; enucleation would probably be necessary.

3. A woman, aged 56, dark-haired; had for some months been losing sight of left eye. Right iris of a greenish-grey; left iris of a dark brown. The left conjunctiva showed near the edge of the cornea four dark-brown spots of pigment, 3 to 4 millimetres broad. Also on the sclerotic were some well-defined, much larger, dark-violet patches, chiefly on the equatorial region, but also coming here and there close

to the edge of the cornea. It was said these were more red when she was a baby. The ophthalmoscope showed a new growth at the centre of the fundus, with detachment of the retina. On excision the sclerotic was found marked with streaks and masses of pigment almost as far back as the optic nerve; here, too, and in other parts of the eye, there was an unusual quantity of pigment. The tumour was a sarcoma of the choroid.

4. A lady, aged 62, dark skinned, with jet-black hair; skin of right brow and eyelids deeply bronzed, and right sclerotic singularly mottled, from birth, with rich brown spots; had found the sight of this eye begin to fail. Symptoms of new growth. On excision the sclerotic was found discoloured by a web of brownish-black pigment, thickest in the ciliary region and at the back of the eye. The optic nerve and choroid, also, were abnormally pigmented. The tumour was a melanotic cancer of the choroid (Mr. Hulke, *Ophthalm. Rep.*, 1860).

5 to 7. Liebreich says: "I have only seen three cases of 'cyanosis bulbi'; they were all just alike. In all one eye only was affected; the iris was of a darker shade, and the sclerotic was marked with purplish-grey stains. In one case the optic papilla was deeply pigmented: Mr. S., aged 21, with light-brown curly hair, light eyebrows and lashes; the left iris was bright brown, the right was dark-brown, of so deep a shade that one could only just distinguish the pupil. All round the cornea, at some distance from its edge, the sclerotic was marked by patches of dark-grey, almost purple, pigment (*Atlas of Ophthalmology*, ed. 1863, p. 38).

8. Schöler (*Berl. Med. Gesellsch.*, 1882 3) gives a case of pigmentation of the conjunctiva and sclerotic, followed in after life by melanotic sarcoma.

9. The present case. She has a sister younger than herself, whose eyes are natural. There was a history that the mother of my patient, while pregnant with her, was continually looking at her husband's stepfather, who is said to have a similar discoloration of the eyes. Hirschberg also gives a history of "maternal impressions" in Cases 2 and 3; but the practical value of these cases is in the close relation between the deposit of pigment before birth and the occurrence of melanotic disease in later life.

Hirschberg points out that the iris also may be the seat of congenital black pigment, becoming in later life the seat of malignant disease; and that out of sixteen recorded cases of sarcoma of the iris, three were in irides which had these congenital black spots on them.

CHOLERA.—Cholera is reported to have broken out at Kharkov. Eighteen cases with seven deaths have occurred.