

A catalogue descriptive chiefly of the morbid preparations contained in the Museum of the Manchester Theatre of Anatomy and Medicine, Marsden Street : with occasional explanatory remarks / by Thomas Fawdington.

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XI

A CATALOGUE

DESCRIPTIVE CHIEFLY OF THE

MORBID PREPARATIONS

CONTAINED IN THE MUSEUM OF THE

MANCHESTER

THEATRE OF ANATOMY AND MEDICINE,

MARSDEN STREET.

WITH OCCASIONAL EXPLANATORY REMARKS.

BY THOMAS FAWDINGTON,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS, LONDON; LECTURER
ON ANATOMY AND SURGERY, &c., &c.

MANCHESTER:

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1833.



TO THE
STUDENTS OF THE MARSDEN STREET SCHOOL
OF ANATOMY AND MEDICINE.

GENTLEMEN,

It was for your use that this Catalogue (brief and imperfect I allow) was expressly drawn up; and therefore it is natural I should inscribe it to you. In doing this, perhaps I may be permitted to add a few words of friendly caution and advice. It is the fashion of the day for the Student to devote a large share of attention to Morbid Anatomy; and you cannot be ignorant how greatly the opinions of Medical men are influenced and directed by its results. Far be it from me to discourage in any of you the pursuit of this study; it is one in which I myself have spent many of the most interesting hours of my professional life. But I should fail in my duty did I not remind you, that unless the symptoms of disease in the living body are attentively observed, alterations of structure in an organ or series of organs, as ascertained by a post mortem examination, will furnish but little valuable information. It is only by an accurate and

careful comparison of what you have noted at the bedside, with what is disclosed (anatomically speaking) after death, that you can ever hope to become good Pathologists.

Not long ago he who was regarded as the most skilful Anatomist was, in popular estimation, considered the best qualified to cure diseases of whatever kind they might be—functional or organic, external or internal. Erroneous in some respects as such a notion is, it nevertheless involves a most important truth, namely, that Medicine and Surgery cannot be pursued as distinct and separate studies, without some injury to both. The intimate relation which exists between Medical and Surgical Pathology, requires that the two be combined in the aim of the student. He ought to be an Anatomist doubtless—to have his eye and touch familiar with the healthy structures of the human body, the relative situation of its component parts, and its mechanism, or he will be but a poor Physiologist, and a worse Surgeon: and in no less degree must he be familiar with those changes from the healthy state, in all their gradations and diversities, which are the result of disease, otherwise, (however he may have attended to symptomatology,) he will make but a sorry Pathologist: if destined to Physic—he will be a Physician without enlightened principles; and if to Surgery, a pernicious empiric—at the very best an adroit performer of operations.

My object then, Gentlemen, is to urge upon you the great importance of attending to every department of your studies; and of bearing in mind that whether you are in-

tending to practise Physic or Surgery, or both, it is essential that you should acquaint yourselves with the whole science of your profession.

In the Collection of Morbid Preparations which you have an opportunity of studying in this School, (and the study of which the present Catalogue will, I trust, somewhat facilitate,) should any of the specimens appear to be obscure, and seem to require illustration, I am happy to inform you that there are colored drawings of nearly all of them, made with care and fidelity from the recent parts, which you will have opportunities of examining. In conclusion, I beg to assure you that neither my colleagues nor myself will lose any opportunity of adding to our Museum, (in this respect indeed my colleagues have not hitherto been remiss,) and thereby increasing the means of illustration in the delivery of our respective Lectures.

Believe me, Gentlemen, to remain

Your faithful friend,

THOS. FAWDINGTON.

Lever Street, February 28th, 1833.

CATALOGUE

OF MORBID PREPARATIONS, ETC.

ALIMENTARY CANAL.

1. Malignant Tumour of the Cheek.

The cervical absorbent glands, which are attached, have undergone secondarily a similar change of structure.

PHARYNX.

2. Abscess situated between the Pharynx and Spine.

The infant, *ætat.* ten months, died apparently in consequence of spasm of the glottis, which recurred uniformly during the night, while in the day the little patient remained tolerably exempt from difficult respiration. Towards the close of life, the surface was beset with an eruption of purpura simplex. It is remarkable, that though in the outset the swallowing was slightly impeded, and there was a degree of swelling opposite the angle of the jaw on one side, yet, at a subsequent period, the child experienced no difficulty of deglutition, and sunk in consequence (so far as could be determined) of obstructed respiration dependent upon spasm of the glottis.

3. The effects of Venereal Phagedæna of the Throat.

The whole of the velum pendulum palati and the sides of the pharynx have been more or less destroyed. The ala of the thyroid cartilage has become involved, and appears as if exfoliating. The individual was considerably worn by the continuance of the disease; but died more directly from its effects on the laryngeal functions.

4 Extensive carcinomatous Ulceration of the Pharynx.

During life the patient exhibited signs of stricture, and was rapidly sinking from inanition; when by the encroachment of the disease upon the larynx, its functions in turn became disordered, and death was more immediately occasioned by suffocation from repeated attacks of spasm of the glottis.

ŒSOPHAGUS.

5. Stricture of the Œsophagus in two points, the result of the healing of ulcers, produced by incautiously swallowing an ounce of Linim. Ammoniaë.

The patient found considerable relief from the introduction of bougies, but was foolishly induced to relinquish them, and she ultimately died from inanition, about a year and a half from the period of the accident.

6. Fungoid disease of the Œsophagus which has opened into the Trachea immediately above its bifurcation.

STOMACH.

7. Mucous Membrane of Stomach injected to show the Villi and mucous Glands, partially reflected from the serous and muscular coat.

8. Stomach of Fœtus minutely injected, and inner surface exposed.

9. Human Stomach with muciferous Glands extremely developed.

The man, ætat. 68, from whom it was taken, an inveterate dram drinker, died from delirium tremens, without any signs of gastric irritability or morbid vascularity of mucous lining.

10. Human Stomach from a man, ætat. 48, who died in consequence of an attack of Apoplexy.

The numerous bosses displayed near the pyloric orifice appear to resemble those which have been described by Andral, as resulting from chronic inflammation of the mucous follicles. No signs, during life, of impaired digestion or disordered function of this organ.

11. Ulceration of various parts of the Stomach, of an equivocal nature, some of which have apparently healed.

12. Two poisoned stomachs of rabbits; one with Nitric Acid, (eschar) the other with Oxymuriate of Mercury. Death in three minutes.

13. Stomach of the dog poisoned with Sulphuric Acid.

This produced abrasion of the mucous coat; and, as the dog lived three days, the first step in the process of restoration had become established.

14. Stomach of a dog poisoned with Liquor Potassæ.

The general surface deeply inflamed, and the prominences of the rugæ disorganized. Death occurred in nineteen hours.

15. Stomach of Dog poisoned with Oxymuriate of Mercury.

The stomach is generally contracted, and near its pyloric extremity will be observed a deep purple stain indicating incipient mortification. The animal died in twenty-five hours.

16. Ulceration of the right extremity of Stomach near the Pylorus, which has implicated the three tunics.

This was followed by extravasation into the cavity of the abdomen, and its fatal consequences. The tunics of

the whole circumference of this part of the organ are thickened and diseased. (Norton, ætat. 47.)

17. Great thickening of the coats of the stomach with puckering of the mucous membrane, leading to a deep cavity, at the bottom of which is situated an aperture, through which the contents of the stomach escaped into the cavity of the abdomen.

The patient had for many months exhibited signs of disordered digestion associated with pyrosis. No medicine had produced relief until the Strychnos was employed, which so far removed the pain, &c. as enabled him to follow his employment (spinner). A few weeks after this he was suddenly attacked immediately after dinner, with symptoms of extravasation, and died in thirteen hours. (Wharton, ætat. 35.)

18. Carcinomatous disease of the cardiac orifice, implicating the lower part of the Œsophagus, which was constricted by deposition in the submucous tissue.

The coats of this part of the stomach are destroyed by the disease, but effusion has been prevented by an adhesion to the spleen. The more notable circumstances referring to this case were, the absence of sickness, and the pain, on the attempt at deglutition, existing in that part of the gullet opposite the upper bone of the sternum. (Battersby, ætat. 73.)

19. Carcinomatous thickening and ulceration of the cardiac extremity of the Stomach; the Œsophagus opening in the centre of the diseased mass.

The liver is extensively adherent to this part, and itself in turn has become the seat of ulcerated excavation. What is most remarkable with regard to this case is, that the patient never complained of pain or uneasiness of the stomach, but spoke of cramp of the extremities, occurring during night, as the principal evil. (Birtles, ætat. 90.)

20. Fungoid disease of the cardiac orifice of the Stomach, encroaching upon the caliber of the lower extremity of the Œsophagus.

The capacity of the stomach is diminished, and its tunics generally diseased. The symptoms very strikingly resembled those of Battersby. (No. 18.)

21. Considerable thickening of the coats of the Stomach, and ulceration about the middle of the posterior and superior surface of its internal boundaries.

The external surface had contracted adhesions to the pancreas and liver, and the latter was studded with small white tubercles. A fibrous tubercle of the size of a large Seville orange was situated in the fundus uteri, and likewise in the subserous cellular tissue adjacent to the pancreas and small intestines, were situated smaller tubercles, apparently possessing a similar organization. The symptoms in this case led to the opinion of organic disease of the stomach. (Erskine, ætat. 58.)

22. Carcinomatous disease of the pyloric extremity of Stomach, tending to contract its orifice.

The patient, a woman ætat. 58, exhibited the usual signs of organic disease of this portion of the organ. The tumour, however, which appeared, during life, to be the size of a pullet's egg, received so strong an impulse from the aorta over which it was laid, as to render it somewhat difficult to decide whether the swelling had its origin in the artery constituting aneurism, or was really what the examination of the body afterwards proved.

23. Carcinomatous disease of the Pylorus, with a leaf-like deposition of lymph approaching it, which concealed large veins running from the tumour. These were lost upon the general surface of the Stomach.

The patient, Rowlands, ætat. 44, had enjoyed an uninterrupted state of health until the occurrence of this disease, when she became affected with the ordinary

signs of impaired digestion, and afterwards the specific characters of carcinoma of the pylorus. One circumstance in this case was sufficiently remarkable to merit notice, viz. that the tumour, which was situated towards the right and lower boundary of the epigastrium, admitted of being pushed below the umbilicus, and transversely, even so as to be buried in the left hypochondrium. The liver was likewise occupied by three large fibrous tubercles, corresponding in character with the white tubercle of Baillie, and the first representation of the *tuber diffusum*, in Dr. Farre's work on the Morbid Anatomy of the Liver.

24. Disease of the Pylorus, with great contraction of the orifice.

The person from whom this preparation was obtained, (Margaret Williams, *ætat.* 37,) experienced very characteristic symptoms. The only circumstance requiring particular note, was the very moveable state of the tumour, which was still more so than in Rowland's; and the existence of another tumour of similar dimensions, below the umbilicus, which appeared to be imbedded in the omentum. The patient likewise was harassed by repeated attacks of diarrhœa. She also suffered from slight dyspnœa and cough, with occasional palpitations. It was discovered, on examination after death, that the tumour situated below the umbilicus, consisted of a congregation of enlarged mesenteric glands, possessing a spongy cavernous texture, intermediate in physical character to tuberculous degeneration on the one hand, and medullary sarcoma on the other; there was likewise the same altered and enlarged state of the bronchial glands which had been followed by œdema of the heart. Tubercles also existed in the lungs, none of which had advanced to ramollissement.

25. Genuine carcinomatous disorganization of the pyloric extremity of the Stomach, with deep ulcerated excavations, which had perforated the tunics of this organ.

Effusion, however, had been prevented by the adhe-

sion of the transverse arch of the colon to this part. The symptoms during life were sufficiently expressive, and the only remarkable circumstance was, the situation of the tumour (below the umbilicus) and its extreme mobility. The patient remained under my notice a year and half. Though early constipation prevailed, she was latterly teased and exhausted by the occurrence of diarrhœa, with subsidence of vomiting. (Feddon, ætat. 45.)

26. General scirrhus thickening of the three tunics of the Stomach, with contraction or diminution of its capacity.

The patient, for some months, laboured under profound hypochondriasis, and afterwards became affected with manifest signs of impaired digestion, pyrosis, and obstipation alternated with diarrhœa. About three months before the close of life, pain on the reception of aliment, with excessive irritability of stomach. About the same time, ascites and anasarca. The cæcum in this individual had undergone similar changes. No appearances of ulceration in any part of the canal. (Amberly, ætat. 32.)

27. Fungus Hæmatodes of the Stomach, implicating the central part of its lesser curvature, and projecting into its interior.

The patient for the last six months had complained of occasional pain in the stomach, without any evident impairment of its functions; and during this time he had not been prevented from following his employment as husbandman. A fortnight previous to his death, he was attacked with hæmatemesis, accompanied with considerable pain in the right hypochondrium, which continued unabated, in spite of remedies, until his death. No tumour was cognizable externally, and the irritability of the stomach was inconsiderable. He sank apparently from hæmorrhage. The only additional appearances were slight inflammation, and adhesions of the peritoneum covering the liver and stomach, opposite the situation of the tumour. (Allen, ætat. 50.)

28. Scirrhus Pylorus, with ulceration of the ad-

jacent mucous surface, and cretaceous interstitial deposit.

29. Stomach of an infant which died three days after birth, under suspicious circumstances. The left extremity perforated.

INTESTINES.

30. Fœtal Intestine injected, dried, and immersed in spirits of turpentine, to show the minute distribution of the mesenteric arteries. In the same glass, will likewise be observed a portion of Liver prepared in a similar manner.

31. Fœtal Intestine minutely injected, to show the vascularity of the Villi.

32. Rupture of Intestine from external violence, beautifully exhibiting eversion of the mucous coat.

The man laboured under inguinal hernia, and received a blow upon the part, which occasioned the accident.

33. Introsusception of the Intestinum Ilium.

34. Introsusception.

In this specimen the ilium, cæcum, and ascending portion of the colon are invaginated. On opening the abdomen of the infant, ætat. ten months, there appeared to be malposition of the intestines, the right side of the cavity being almost unoccupied, and the epigastrium containing a firm, solid mass, which led to the impression that, besides the displacement before-mentioned, an unnatural growth existed. Further investigation explained the nature of the case.

35. Inflammation of the serous surface of the small Intestine, and portion of the Omentum.

The vascularity and fibrinous effusion (which has assumed an imbricated form) are clearly exhibited.

36. Tuberculous accretion of the Peritoneum, covering the small intestines, injected.

Coexisting with this was a similar state of the pleura. The cavities formed by each of these membranes were distended by dropsical effusion.

37. Tuberculous disease of the Peritoneum in a more advanced stage.

In this preparation some of the tubercles are attached by peduncles, and most of the large ones are very prominent.

38. A portion of the Ilium interspersed with melanotic tubercles, situated chiefly between the layers of the Mesentery.

39. Ulceration of the Colon, apparently depending upon Abscess which had formed externally to the Intestine.

The external breach is considerable, and occupied by the everted mucous coat, which contains a small opening in its centre. A similar aperture will be observed at the upper part of the preparation, though of less dimensions. The patient (Goodall, ætat. 58) died in consequence of extravasation of the contents of the bowel into the cavity of the abdomen.

40. A portion of Ilium, the internal surface of which is coated by layers of Fibrine partially separated.

The patient (Jones, ætat. 30) had long been affected with diarrhœa, which, three weeks before death, assumed that form of the disease denominated diarrhœa tubulosa. The subjacent mucous membrane exhibits a healthy appearance.

41. Circumscribed inflammation of the mucous membrane of the Ilium, constituting what the French Pathologists have called "Plaques Muqueuses."

42. This preparation exhibits the same state of disease, and is connected with the mesenteric glands; which, under these circumstances, generally become enlarged.

43. This specimen shows the same circumstance; the vascularity of the parts being preserved by immersion in Macartney's solution.

44. Ulceration of the mucous membrane of the Ilium, coexisting with inflammation of the peritoneal tunic, which is coated with lymph.

These states occurred during the progress of fever.

45. Ulceration of the Intestine, showing its different stages.

The patient died from phthisis pulmonalis.

46. Large scirrhus tumour generated in the Omentum, and attached to a portion of the Colon.

47. Scirrhus tumour, of larger dimensions.

48. Ulceration of the Ilium very minutely injected, exhibiting considerable progress in the work of regeneration of the mucous tissue.

The margins of the ulcers are becoming smooth by absorption, while the centre is occupied with a beautifully vascular and villous structure, nearly, if not perfectly, resembling that of the surrounding healthy parts. As the reproduction of the mucous tissue has been disputed, this preparation deserves to be studied with attention.

49. A duplicate of the same, less highly (artificially) injected.

50. This preparation exhibits a peculiar disorganization of the mesenteric glands, apparently intermedi-

ate in point of physical character between tubercular degeneration and medullary sarcoma.

A portion of *intestinum ilium* connected with the mass, presents an excavated ulcer, limited, however to a very small space. This state of disease was coexistent with a few scattered tubercles of the lungs, and considerable enlargement and conversion of the bronchial glands, of similar appearance with that of the mesenteric. There existed also, which would seem to be the more immediate cause of death, disease of the pyloric orifice of the stomach. The symptoms were sufficiently expressive of the latter condition, and the tumour formed by the mesenteric glands was easily distinguishable during life.

51. Extensive ulceration of the *Ilium*, *Cæcum*, and ascending portion of the *Colon*, with complete destruction of the ilio-colic valve.

Immediately below the site of the valve, it will be perceived that the intestine has become perforated, this process having been preceded by the adhesive action, which had agglutinated the intestine to the abdominal parietes. These in turn had yielded to ulcerative absorption, and a breach was formed which opened immediately above *Poupart's* ligament, giving rise to a constant stillicidium of fæculent matter up to the period of the man's death. The symptoms presented little obscurity even at an earlier period of the disease.

52. Chronic ulceration of great extent affecting the mucous membrane of the *Ilium*, *Cæcum*, and *Colon*, with entire destruction of the ilio-colic valve.

The muscular and serous tunics of the bowels are greatly thickened, and the mesenteric glands enlarged and converted into a tuberculous mass. This preparation was obtained from an individual in whom the absorbent glands generally had undergone a like change, coexistent with tubercles of the lungs, pleura, and peritoneum. The patient had laboured under continued diarrhœa with occasional violent tormina, for fifteen months, producing emaciation and gradual exhaustion of the vital powers.

Towards the close of life, cough and copious expectoration occurred. He was of a peculiarly phlegmatic temperament, and what is singular, exhibited but few signs of general hectic. (Huddleston, ætat. 28.)

53. Appendix vermiformis of the Cæcum, in which a pin has become engaged during life.

Adhesions of this part had been formed to the parietal peritoneum, and a natural process was proceeding with a view to the elimination of the foreign body.

54. Ulceration of the Cæcum in consequence of the encroachment, from the exterior, of a mass of singularly formed gelatinous tubercles, which are seen projecting from the bed of the ulcer.

Various other masses of the same peculiar structure will be observed embedded in the omentum. The patient died from irremediable obstruction of the bowels. (Galley, ætat. 62.)

55. Post-mortem perforation and dissolution of the Colon, injected so as to exhibit the open mouths of the vessels through which the injection escaped.

The apertures are of considerable size, presenting flocculent ragged margins, and, in some parts, implicating nearly the whole circumference of the bowel. The person from whom the specimen was obtained, fell a victim to phthisis pulmonalis, which was accompanied in its progress by the attendant evils, diarrhœa and colliquative sweats. There were no symptoms of the effects of perforation previous to death, the patient not having experienced, for some days, any degree of abdominal pain. There were no traces of inflammation of the peritoneum, nor extravasation; the contents of the canal, which were consistent, occupying the openings. (Taylor, ætat. 45.)

56. A duplicate of the same specimen uninjected.

57. Scirrhus disease of the Cæcum and corresponding portions of the Ilium and Colon.

The case of the person from whom this was taken, is described page 9, No. 26.

58. The Colon of a child which died from epidemic Dysentery of a week's continuance, no remedies having been employed.

The mucous follicles at its lower extremity are remarkably developed, and the villous surface of the membrane has become more prominent. The whole of the interior is more or less coated with layers of lymph. (Bardsley, ætat. $1\frac{1}{2}$ years.)

59. The Colon exhibiting the state of the mucous membrane resulting from chronic Dysentery. (Stitt, ætat. 28.)

60. The effect of acute inflammation of the Colon constituting Dysentery.

The child (Woodhouse, ætat. 2) survived the attack for a fortnight.

61. The lower part of Colon and Rectum disorganized by the continuance of epidemic Dysentery.

The patient, six weeks after the attack, appeared to be recovering, but the disease returned, and proved fatal. The former circumstance will probably be accounted for in the state of the next preparation. (Knight, ætat. 18.)

62. The upper portion of the Colon exhibiting numerous cicatrices of ulcers which had apparently healed. (Knight.)

63. Ulceration of the mucous membrane of the Colon.

The bowel is minutely injected.

64 Stricture of the sigmoid flexure of the Colon.

This was owing partly to an intrinsic change in the tunics of the bowel, and particularly to a tumour externally encircling it. The patient at the same time laboured under inguinal hernia, which it was supposed had become strangulated; but on the return of the hernia, the symptoms were unmitigated, and hence the operation was performed on the supposition that a portion of the bowel was engaged in the upper ring. No relief followed this step, and after four days the patient died. (Johnson, ætat. 63.)

65. Inguinal Hernia.

The sac, which contains omentum, and the different coverings, are displayed.

66. The sac of an old umbilical Hernia divided into three compartments.

This circumstance proved a source of considerable embarrassment during the performance of the operation. (Merryweather, ætat. 69.)

67. Hernial Sac and adjacent parts.

The sac was so thick and cartilaginous, as to maintain its form after the removal of the contents. This preparation was taken from the case previously alluded to, No. 64.

68. Inflammation of the lower intestines of the Dog, occasioned by poisoning with a solution of Arsenic.

The prominences of the plicæ are deeply injected and inflamed, while the interstices are comparatively destitute of morbid vascularity.

69. Inflammation of the mucous membrane of the Rectum.

This is accompanied by a marked development of the mucous follicles, which are surrounded by areolæ of capillary vessels. Some parts of the surface are covered with lymph.

70. Imperforate Anus connected with the urinary Bladder, dried and preserved in spirits of turpentine.

The trocar was employed previously to death, without effect. The child survived five days from its birth.

71. Imperforate Rectum, the anus presenting its natural aspect.

In this case the trocar was introduced so as to penetrate the extremity of the gut, which was situated about half an inch from the external orifice: a quantity of meconium issued, and a bougie was afterwards inserted. The child, however died, and the preparation shows that the opening was inadequate to the purpose intended. The bougie, which had imperfectly entered the opening, was not sufficient to preserve it pervious. The child lived four days.

72. Cabinet of Alvine Concretions.

LIVER.

73. Old and elongated adhesions, extending between the peritoneal surface of the Liver and corresponding surface of the Diaphragm, intended to illustrate the nature and organization of adhesions in general.

74. Change of structure of the Liver, in which the secernent or granular divisions are confounded with the cellular; or, in other words, the distinctions between the two are lost.

The section presents a uniform and homogeneous surface of a light fawn colour. This state, which is accompanied with great enlargement of the viscus, occurs especially in young subjects, in conjunction with scrofulous disease of other parts of the body. In the present instance, it was connected with tubercles in the lungs, and strumous disease in the hip joint.

75. Section of the granular or nutmeg Liver.

This condition is most frequently met with in those who have been habituated to the use of ardent spirits; of which fact this specimen is an illustration.

76. A section of the granular Liver.

In this preparation the granules are on a larger scale, and even approximating to the character of tubercles, pretty equally disseminated through the substance of the organ. The patient was an inveterate dram-drinker.

77. Specimen of scrofulous Tubercles in the Liver of the sheep.

78. Disease of the hepatic ducts in the Sheep, in consequence of the generation of Flukes, *Fasciola hepatica*.

79. Tubercles of the Liver of the Ox, the organ injected.

80. Scirrhus induration of the human Liver.

This state co-existed with immense enlargement of the spleen. The person from whom it was taken had been long a resident in tropical climates, and although jaundiced for some time, sank more immediately from an ungovernable attack of melæna. (Davies, ætat. 48.)

81. Abscess of the Liver, of great extent.

This condition being perceptible previous to death, the abscess was punctured, but the individual, who had been habitually most intemperate, sank rapidly after its evacuation. (Turner, ætat. 30.)

82. Small white Tubercle of the Liver, besetting the organ in almost every part of its substance.

This state co-existed with fleshy tubercle of the uterus. The patient's life was terminated by dropsy. Vide No.

83. Scrofulous Tubercle of the human Liver.

In the same subject a tuberculous mass, partially softened, was found in the parietes of the uterus. (Murray, ætat. 50.)

84. A section of the large white Tubercle of the Liver.

This is intended to show the mode in which the hepatic veins become obliterated in such species of disorganization, some of which are involved in the morbid growth. (Rowlands. Vide No. 23.)

85. Large white Tubercle of the Liver.

The external appearances and slight structural vascularity, are preserved by immersion in pure alcohol. (Rowlands.)

86. Duplicate of the same, prepared in a similar way. (Rowlands.)

87. Large white Tubercle of the Liver, as prepared by long-continued maceration. (Rowlands.)

88. *Tubera circumscripta* (Farre) of the Liver.

The patient had resided long in a tropical climate, and died, soon after his return to this country, in consequence of the supervention of ascites. (Kipling, ætat. 46.)

89. A large section of the Liver, containing several hydatid tumours, in one of which suppuration had partially taken place.

The patient presented no symptoms of disease of the liver, but died from the occurrence of phthisis pulmonalis, subsequently complicated with disease of the brain. (Presented by Mr. Clough.)

90. Hydatids, projecting from the anterior margin of the Liver, contained in a sac which had become quite cartilaginous.

No signs of this state of disorganization were cognizable during life. The patient, three weeks after delivery, died suddenly, without any assignable cause.

91. External and internal view of Melanosis of the Liver.

92. Section of Melanosis of the Liver, to exhibit its minute texture.*

93. Melano-medullary Tubercles of the Liver, prepared by continued maceration.

In this specimen will be observed every variety of state; some of the tubercles exhibiting truly the character of medullary sarcoma, others a union in about equal proportions of the melanotic and medullary, and others again showing exclusively the melanotic. In the same subject existed similar tubercles on the exterior of the body, in the substance of the lungs, and between the layers of the mesentery. (Williams, ætat. 18.)

94. Liver beset with melano-medullary Tubercles, prepared by immersion in alcohol, so as to show both the external and internal appearances. (Williams.)

95. Duplicate of the same preparation.

96. Gall-bladder thickened apparently in consequence of the irritation occasioned by the presence of biliary calculi.

The increase of thickness does not seem to be owing so much to the development of the fibrous tunic, as of the cellular tissue connecting that to the serous.

97. Cabinet of Biliary Concretions, displaying every species and variety.

* Vide Fawdington on Melanosis, plate 4.

SPLEEN AND PANCREAS.

98. Hypertrophy of the Spleen. (Vide No. 80.)

This preparation constitutes what is popularly called ague-cake.

99. Scrofulous Tubercles of the Spleen.

This state occurred in conjunction with tubercles of the lungs, and tuberculated accretion of the peritoneum. (Yarwood, ætat. 32.)

100. Duplicate of the same immersed in pure alcohol.

101. Tubercles in the Spleen of the ring-tailed Monkey.

102. Abscess formed in the human Spleen.

103. Melanosis of the Pancreas.

 URINARY ORGANS.

KIDNEYS.

104. Foetal Kidney injected; showing, at the same time, its lobulated conformation.

105. Section of the Kidney of a child: the veins and arteries minutely injected.

106. Section of the adult Kidney, minutely injected.

107. Corroded preparation of the Kidney.

108. Sections, of great tenuity, of the injected human Kidney, dried and immersed in spirits of turpentine, to show the internal arrangement of the vessels and ducts.

109. Enlarged Kidney; of which the infundibula and pelvis are occupied by a considerable quantity of coagulated blood.

The patient died from carcinoma uteri and its consequences. (Vide No.

110. Almost complete absorption of the glandular structure of the Kidney.

This specimen was met with accidentally in a subject brought for dissection, and the change of structure in the kidney seems to result from a scirrhus tumour existing in the neighbourhood, which so effectually compressed the ureter, immediately below the pelvis of the kidney, as to hinder the flow of urine into the bladder. The history of the case is, of course, from the manner in which it was obtained, unknown.

111. Kidney of the Calf injected.

The glandular structure of two of its lobules is completely absorbed, and their capsule distended and thickened. This appears to be the result of closure of the infundibula, at the points where they naturally communicate with the pelvis.

112. The human Kidney exceedingly enlarged, and converted into a mass of Hydatids.

Not a vestige of the natural structure of this organ remains. Both exhibited the same state of disorganization, and the patient died from ischuria.

113. Large calculus in the Kidney.

The glandular structure of the organ is partially absorbed, and, in some parts, abscesses have formed. The

infundibula and pelvis of the kidney are entirely occupied by the calculus. No signs of this disease existed until a few days before death, when the urine became loaded with pus. The patient died in the puerperal state. (Thomas, ætat. 21.)

114. Calculus of the Kidney.

The glandular structure is greatly attenuated. The infundibula extended and completely occupied, as well as the pelvis, by an extremely large arborescent calculus. The symptoms, during life, indicated disease of the kidney, the particular nature of which was by no means clear. (Richardson, ætat. 26.)

115. Granular Kidney.

116. Scrofulous Tubercles of the Kidney.

117. Fungus Hæmatodes of the Kidney.

118. Melanosis of the Kidney.

URINARY BLADDER.

Abscess of the Prostrate Gland.

This body has become entirely destroyed by the suppurative process, being converted into a bag of matter. The morbid state of the prostrate gland had given rise to retention of urine, which unfortunately had not been relieved by surgical interference. Ultimately the posterior inferior part of the bladder had given way, partly by ulceration, partly by slough, which caused urinary abscess between the rectum and this viscus externally to the peritoneum. The patient died within a short space of time. (Presented by Dr. Hull.)

120. Bladder containing a small calculus.

121. Bladder thickened and sacculated, containing eight calculi.

In conjunction with these circumstances, is existing an extremely enlarged condition of the three lobes of the prostate gland, and a striking development of what has been described by Sir Charles Bell, as the muscles of the ureters.* The patient, in this case, died in consequence of a rude and ineffectual attempt to remove the calculi by means of Sir Astley Cooper's forceps.

122. Fungus Hæmatodes of the mucous membrane of the Bladder.

In this case the disease in its progress had involved the muscular and serous coats; and the extremities of both ureters had likewise become engaged, so that after death, their canals were found much distended with urine. The case presented features during life of a somewhat expressive, and yet equivocal nature. (Presented by the late W. Simmons, Esq.)

123. Extreme thickening of the muscular coat of the female Bladder, with disorganization of its mucous membrane.

This condition of the viscus was present with distention and absorption of the glandular structure of the kidneys. There was also existing a vascular tumour, which was embedded in the fundus uteri, implicating the tendons of the ureters, which exhibited many of the characters of fungus hæmatodes. The patient died from operation of the brain, probably the result of ischuria.

124. Cabinet of Urinary Calculi.

This contains almost every species and variety of these concretions. (Presented by the late Wm. Simmons, Esq. Senior Surgeon to the Manchester Royal Infirmary.)

* Vide Medico-Chirurg. Transactions, vol. 3.

GENERAL PRINCIPLES

The first principle of the theory is that the system is in a state of equilibrium. This is expressed by the equation $\sum F = 0$ and $\sum M = 0$. The second principle is that the system is in a state of motion. This is expressed by the equation $\sum F = ma$ and $\sum M = I\alpha$. The third principle is that the system is in a state of deformation. This is expressed by the equation $\epsilon = \frac{\Delta L}{L}$ and $\sigma = E\epsilon$. The fourth principle is that the system is in a state of energy. This is expressed by the equation $W = Fd$ and $P = \frac{W}{t}$. The fifth principle is that the system is in a state of momentum. This is expressed by the equation $p = mv$ and $F = \frac{dp}{dt}$. The sixth principle is that the system is in a state of angular momentum. This is expressed by the equation $L = I\omega$ and $\tau = \frac{dL}{dt}$. The seventh principle is that the system is in a state of conservation of energy. This is expressed by the equation $\Delta E = Q - W$. The eighth principle is that the system is in a state of conservation of momentum. This is expressed by the equation $\Delta p = F\Delta t$. The ninth principle is that the system is in a state of conservation of angular momentum. This is expressed by the equation $\Delta L = \tau\Delta t$. The tenth principle is that the system is in a state of conservation of mass. This is expressed by the equation $\Delta m = \rho\Delta V$.

The first part of the book is devoted to a general survey of the history of the subject, and to a description of the various methods which have been employed for its investigation. The second part is devoted to a detailed account of the experiments which have been performed, and to a discussion of the results which have been obtained.

III. The History of the Subject

The history of the subject is a very interesting one, and it is well worth the attention of every student of the subject. It is a subject which has attracted the attention of some of the greatest minds of the world, and it has been the subject of many of the most important discoveries of modern science.

The first part of the history of the subject is devoted to a description of the various methods which have been employed for its investigation. These methods have been the result of the ingenuity and skill of many of the greatest minds of the world, and they have been the subject of many of the most important discoveries of modern science.

The second part of the history of the subject is devoted to a detailed account of the experiments which have been performed, and to a discussion of the results which have been obtained. These experiments have been the result of the ingenuity and skill of many of the greatest minds of the world, and they have been the subject of many of the most important discoveries of modern science.

The third part of the history of the subject is devoted to a discussion of the results which have been obtained. These results have been the result of the ingenuity and skill of many of the greatest minds of the world, and they have been the subject of many of the most important discoveries of modern science.

GENERATIVE SYSTEM.

TESTIS.

125. The structure of the Testis unravelled.

126. The Epidydimis and Vas Deferens injected with quicksilver.

127. Chronic or interstitial enlargement of the Testis, with partial Hydrocele.

The coverings are accurately exposed.

128. Strumous enlargement of the Testis, with caseous suppuration of the Epidydimis.

129. Enlargement of the middle lobe of the Prostrate Gland, producing valvular obstruction to the passage of the urine.

130. Thickening and adhesion of the two layers of the Tunica Vaginalis, giving rise to an apparent enlargement of the Testis.

The structure of the epidydimis is, in a great measure, obliterated, though the substance of the testis appears perfectly healthy. The organ was removed at the patient's urgent request, on account of the perpetual annoyance which its size and weight occasioned to him. (Smith, ætat. 31.)

131. Encysted Hydrocele of the Spermatic Cord. (Cooper, ætat. 53.)

132. Fungus Hæmatodes of the Testis, of large size.

The abdominal viscera and lumbar glands were likewise similarly disorganized. (Presented by W. Lambert, Esq., Thirsk, Yorks.)

UTERUS.

133. Human Uterus three days after parturition.

Its interior exposed.

134. Human Ovum about the fourth month, with the membranes reflected.

135. Section of the Uterus and Placenta minutely injected from the Funis.

The vascular connexion between the two is manifest, not only by the existence of demonstrable vessels, but also by the presence of the injection in the uterine sinuses, which are purposely displayed in this preparation. It does not appear that the placenta contains cells, or any impenetrable separation between the foetal and maternal portions, if any such exist; as its substance is uniformly reddened by the injection, which was introduced through the umbilical artery. It seems probable, therefore, that the internal portion of the uterine parietes, cellulous decidedly as it is, has proved a source of error, the line of demarcation between the external placental surface, and the internal corresponding aspect of the uterus, not having been sufficiently observed, perhaps, by former anatomists. This preparation distinctly shows vessels of small caliber filled with injection passing from the placenta to the uterus, or rather to its investing decidua. The woman died in consequence of disease of the brain, about the seventh month of pregnancy.

136. Another specimen of Uterus and Placenta similarly injected, exhibiting the fact of vascular continuity between these structures.

The woman committed suicide during the progress of her labour.

137. A portion of the same Uterus.

The cells were inflated, and the part afterwards dried, and preserved in spirits of turpentine, to show that the capillaries of the uterine parietes are also minutely injected.

138. The deciduous membrane of the same Uterus injected from the same source, and reflected.

The vascularity of the inner surface of the Uterus, where the decidua is detached, is clearly shown, and few preparations better display, as injected, the arborescent arrangement of capillary vessels, than may be observed in the decidua, which is here, in part, undisturbed from its connexion with the uterus.

139. Immense varicose enlargement of the Funis.

The distention falls chiefly upon the umbilical vein.

140. Human Uterus, in which a mass of tuberculous matter has become generated in the Fundus.

This had made its way into the cavity of the organ, so that on pressure being applied, a portion escaped through the os tinæ. The woman had fallen a victim to epidemic cholera, and presented no other signs of scrofula. She was about 48 years of age, and had ceased to menstruate. She had been subject to mucous discharge from the vagina. (Murray.)

141. The Fallopian Tube occupied and distended by tuberculous matter.

This was taken from a woman who died from phthisis pulmonalis, combined with tubercular accretion of the peritoneum. (Tissington, ætat. 25.)

142. Enlargement of the Uterus, with fibrinous effusion from the inner surface of the Vagina.

This disease was not ascertained until after death. The patient, having concealed the local affection, was supposed to have died from fever. The person, ætat. 23, was a cyprian.

143. Flethy Tubercle of the Uterus. (Vide No. 81.)

144. Carcinoma Uteri extensively implicating the Vagina.

There exists, at the posterior part of the uterus, an ulcerated opening, which has exposed the peritoneal cavity. The symptoms, physical and physiological, were sufficiently characteristic of the nature of the disease. (Koran, ætat. 48.)

145. Carcinoma Uteri, with abscess situated beneath the mucous membrane of the Urinary Bladder.

The disease involved the termination of both ureters, so as, in a great measure, to render them impervious. The consequence has been, great dilatation of these tubes, and partial absorption of the glandular structure of the left kidney. The opposite kidney was somewhat increased in size, and occupied by a large coagulum of blood. (Vide No. 109.)

146. Fibrous Polypus of the Uterus, of immense size.

This was suddenly extruded from the vagina whilst the patient was performing some slight exertion. She was a widow, (ætat. 39,) and was not previously aware of the existence of any disease of the uterine system. On a close interrogation, however, she acknowledged that she had experienced impediment in the evacuation of both the bladder and rectum. It is remarkable that she had neither leucorrhœal discharge in a degree to attract her notice, nor menorrhagia during any period of the growth of this very large substance. The tumour, which was found to be attached to the cervix uteri, was removed by ligature with perfect success. (Presented by W. Lambert, Esq., Thirsk.)

147. Great enlargement of the Nymphæ, which required extirpation. (Morton, ætat. 33.)

148. Cauliflower excrescences arising from the Mons Veneris, and integuments surrounding the Pudendum.

The female, ætat. 19, was beyond suspicion, morally speaking. She had submitted to the removal of the excrescences by extirpation once, and afterwards by ligature. On the separation of the parts after the latter process, a great part of the surface was freely touched with potassa fusa, yet the morbid action again showed itself in the reproduction of the growth; and the patient was worn out, partly by irritation and partly by the profuse discharge which was constantly poured forth by the diseased structure.

MAMMÆ.

149. Large fungous Excrescence arising from the mammary integuments.

The disease, comprising the gland, was successfully removed by the knife. The woman was about 50 years of age.

150. Carcinomatous Tumour of the Mamma.

151. Carcinoma of the Breast, which had proceeded to ulceration.

The peculiarity of this case consists in the circumstance, that the ulcer, which possessed all the characters of malignancy, healed soon after the occurrence of the same species of disease in the cervix uteri, which latter ultimately caused death.

152. Genuine Carcinoma of the Breast.

The disease was extirpated along with an enlarged gland in the axilla. The wound rapidly healed, and the patient appeared to go on favourably for a few months, when the disease recurred in the form of cutaneous tubercles in the vicinity of the cicatrix. The clavicular

and cervical glands soon participated, and the general health afterwards gave way, so as to prove that the system was generally contaminated.

153. Carcinoma of the Breast.

The integuments had become closely attached, upon which were developed two florid vascular tubercles, one on the point of ulceration. Several of the axillary glands on the same side were decidedly indurated, but not much enlarged. Imbedded in the mammary gland on the opposite side, was a hardened tubercle about the size of a pea, and one or two of similar character were situated on its surface. Though the general health of the patient was not obviously impaired, the removal of the breast was deprecated. The lady was desirous, however, to submit to extirpation, as the tubercles were on the eve of ulcerating, with the view that her life might be prolonged. The operation was accordingly performed, and up to this period (13 months) she has remained tolerably well, there having been little if any advance of the disease of the axillary glands, or of the tubercles mentioned above.

154. A section of Fungus Hæmatodes of the Breast. (Roberts.)

155. Fungus Hæmatodes of the Breast, which had gone on to ulceration.

The progress of the case was rapid, and death seemed to be occasioned partly by irritation, but chiefly by repeated hæmorrhage. The internal viscera, which is somewhat remarkable, had escaped contamination. (Hughes ætat 37.)

156. Encysted Tumour of the Breast.

This, which is of large size, was imbedded in the adipose cushion which supports the gland, and had en-

croached upon the latter so as to excite absorption of a considerable portion of its substance. The disease was successfully removed by the knife.

RESPIRATORY SYSTEM.

LARYNX.

157. Cartilages and Ligaments of the Larynx.

158. The Larynx, with its muscles, blood-vessels, and nerves dissected.

159. Acute inflammation of the internal surface of the Larynx, with fibrinous effusion.

This preparation represents the morbid condition of the parts in genuine croup. The lymph occupies the trachea at least an inch below the inferior boundary of the larynx. (Panther, ætat. 2.)

160. The Larynx and upper part of the Trachea occupied by a delicate film of lymph.

It represents the morbid state which exists in secondary croup, or that affection of the larynx, supervening upon exanthematous diseases.

161. Chronic Laryngitis, which occurred in childhood.

The laryngeal membrane appears completely disorganized, and the sacculi laryngis are occupied by fungous excrescences.

162. Ulceration of the lining membrane of the

Larynx, with abscess of the aryteno-thyroid articulation.

The right arytenoid cartilage is separated from its connexions. This form of disorganization was concomitant with phthisis pulmonalis, both of which the symptoms sufficiently indicated. The inspection proved that there was existing, besides what is pointed out by the preparation, an extensively cavernous state of the lungs. (Whitehead, ætat. 23.)

163. Thickening, with ulceration of the laryngeal membrane.

The apex of the epiglottis is destroyed, and the sacculi laryngis have become reduced to mere chinks. It will be observed, too, that the follicles of the mucous membrane of the trachea are largely developed, many of which are on the eve of ulceration. This state of the larynx also occurred in conjunction with phthisis pulmonalis, and both conditions exhibited characteristic signs of their presence.

164. Extensive ulceration of the internal surface of the Larynx.

It will be noticed also, that there is incipient ulceration of the tracheal membrane, with enlargement of its mucous follicles. The base of the epiglottis is deeply excavated. The person from whom this specimen was obtained, likewise fell a victim to phthisis pulmonalis. (Spratt, ætat. 32.)

165. Abscess situated beneath the mucous membrane of the Larynx, constituting, in its result, one form of Phthisis Laryngea.

The history of the case, until three or four hours before death, could not be ascertained; at that period there was copious expectoration of a puriform matter, with laryngeal difficulty of breathing.

166. Extensive ulceration of a strumous nature, implicating and destroying nearly the whole apparatus of the Larynx.

The thyroid cartilage anteriorly has been opened by ulcerative absorption. The arytenoid cartilages are destroyed and exfoliating, and the epiglottis rendered bifid by the destruction of its apex. Ulcers exist likewise at the base of the tongue, and on the internal surface of the trachea. The symptoms of laryngeal disease which continued for eighteen months, were strongly marked, and the patient died from this cause alone.

167. Abscess situated between the posterior shield-like surface of the Cricoid Cartilage, and anterior paries of the Pharynx.

The abscess had encroached upon the aryteno-cricoid articulation, and had even extended to the internal surface of the larynx. The only report that could be obtained of the case was, that the child, ætat. 4 years, had died from cyananche trachealis.

168. The Thyroid Gland immensely enlarged, constituting the form of disease denominated Bronchocele.

Sections have been made of different parts of the tumour, in order to display its internal structure. It had been supposed by the parties who had previously been in attendance upon the case, that organic disease of the heart was present, the opinion being derived not only from physiological, but stethoscopic evidence. The lungs were adherent to the parietes of the chest on each side, but their internal structure was perfectly natural, and the heart presented no deviations from the normal condition. The abdominal cavity was distended with dropsical fluid, and the lower limbs anasarcaous. If any thing peculiar in the case presented itself, besides the thyroid tumour, it was the diminished size of the liver, which, though singular in this respect, evinced its natural organic characters. (Greenfield, ætat. 48.)

LUNGS.

169. Lung inflated, dried, and preserved in spirit of turpentine, to show the air-cells and divisions of the pulmonary lobuli.

170. Lung injected so as to indicate the vessels and air-cells.

The arteries are injected with red size; the veins with yellow, and the bronchiæ and air-cells with black.

171. Lung of an old man beset with black pulmonary matter, and containing likewise a few scattered tuberculous concretions.

The patient had apparently died from psoas and lumbar abscess, connected with caries of the lumbar vertebræ and sacrum.*

172. Grey hepatization of the Lung.

173. Partial hepatization of the Lung, combined with dilatation of the air-cells, and ecchymosis beneath the Pleura.

The individual had long suffered from chronic bronchitis, combined, a few weeks before his death, with purpura hæmorrhagica. No other visceral disorganization appeared on the inspection of the body. (Tipping, ætat. 42.)

174. Numerous small abscesses of the Lung, with hepatization.

The child, about 10 months old, was considered by the practitioner in attendance, to labour under pneumonia.

* Vide Fawdington on Melanosis. Plate viii.

175. Gangrene of the Lung.

The recent appearances were such as to resemble carbuncle.

176. Clusters of Tubercles suspended from the margin of the Lung of the Ox, minutely injected.

A vessel imbedded in the duplicature of the pleura will be observed, from which branches are given off to supply the tubercular masses.

177. Tuberculous infiltration of the Lungs, with small excavations.

178. Large pulmonary Vomicæ, with Tubercles. (Vide No. 51, Huddleston.)

179. Large pulmonary Vomicæ.

These are intersected by blood-vessels and bronchial tubes, the former, if not the latter of which, have become obliterated.

180. Extensive excavations of the Lung: with tubercular infiltration.

The lung is injected. The symptoms were of the most decisive nature. (Lunt, ætat. 35.)

181. Large masses of Tubercles raised upon the surface of the Pleura of the Ox.

The peculiarity of this species of disease consists in the formation of a highly organized structure, which becomes gradually transmuted into a tuberculous material. Hence the objection to reasoning by analogy from the diseases of the lower class of animals in reference to those of the human subject, which appear to be distinct in the processes whereby similar effects are accomplished.

182. Tubercles of the Lung.

The lung is injected; and the peculiarity of the case consisted in the circumstance of the patient dying with all the symptoms of phthisis pulmonalis, without the occurrence of suppuration in any portion of the organ. (Tissington, ætat. 31.)

183. Duplicate of the same.

184. Tubercular infiltration of the Lung.

By this the organ has become greatly consolidated, and the tuberculous masses are strictly defined. They are freely intercepted only by healthy texture on the one hand, and cavernous excavations on the other. The preparation is minutely injected.

185. Apoplexy of the Lung.

186. Fungus Hæmatodes of the Lung.

187. Melano-medullary Tubercle of the Lung.

Some of these exist in the substance, and others are elevated upon the surface of the organ. (Williams, vide No 94.)

188. Duplicate of the same.

189. Melanosis of the Lung.

Some of the tubercles occupy the substance, and others are raised upon the surface of the Pleura, being attached to this membrane by slender peduncles.*

190. Lung of a child, ætat. 4 years, who died from Empyema.

This is intended to show not only the diminution of size, but also the change of structure which the organ

* Vide Fawdington on Melanosis. Plate viii.

undergoes when compressed, whether by dropsical or any other kind of secretion.

CIRCULATORY SYSTEM.

HEART.

191. Transverse section of the Heart.

Intended to show the disproportion between the cavities and parietes of the left and right ventricles, as occurring from obstructed respiration.

192. Portion of the human Heart.

The coronary vein is injected with coloured size, to indicate the breach of a small branch which had previously escaped observation. The individual died suddenly; and, on inspection, a quantity of blood was found in the pericardium.

193. Hypertrophy of the Heart.

The pericardium is universally adherent. The signs of this species of disorganization were remarkably distinct, and followed an attack of acute rheumatism (metastasis) several years before death. Dropsy, with extensive gangrenous inflammation of the lower extremities, put a period to life. (Twig, ætat. 19.)

194. Specimen of chronic Pericarditis.

The surface of the heart is thickly coated with lymph, disposed in irregular masses, the pericardium extended, and the whole viscus unusually hypertrophied. (Turner, ætat. 8.)

195. Anasarca of the Heart.

This peculiar condition appeared to be owing to enlargement and change of structure of the bronchial glands, which remain attached in the preparation. (Vide No. 24.)

196. Tuberculous accretion of the Pericardium.

The pleura and peritonæum were similarly disorganized. In the abdomen, indeed, the disease had proceeded so far as to destroy the other tunics of various portions of the bowels, and thus to establish communications between one and the other, by the intervention of sacs, which seemed to form common cloacæ, into which feculent matter was received. One of these, before death, gave way by ulceration at the umbilicus, and there resulted, of course, an artificial anus. (Williams, ætat. 27.)

197. Ossification of the Pericardium.

The expression refers to that division of the membrane chiefly which invests the muscular surface of the heart. It was obtained from the body of an old man, who had presented, for many years, symptoms of embarrassed circulation ; yet not in a degree to warrant the opinion that so complete a state of disorganization had existed.

198. Melanosis of the Heart.

199. Congenital deficiency of the Septum Auricularum.

The patient lived for twelve years ; and though there was general evidence of disease of the heart, the characters of cyanosis were never developed. The person was destroyed by the supervention of bronchitis and dropsy. (Wilson.)

200. Dilatation of the right Auricle, with incipient ulceration of its inner surface.

The girl had for several years been supposed to labour under disease of the heart. She ultimately became dropsical. (Tomlinson, ætat. 9 years.)

201. Constriction of the left auriculo-ventricular aperture, with coalescence of the Chordæ Tendinæ.

A mere chink of communication between the auricle and ventricle remains. The symptoms were characteristic of the state of disease. (Presented by Dr. Gaulter, Physician to the Chorlton-upon Medlock Dispensary.)

202. Earthy degeneration of the valves of the Aorta.

This has produced so decided a limit to the passage, that even a small urethral bougie could not be introduced. The disease ran its ordinary course.

203. Peculiar excrescences (vegetations) attached to the aortal valves.

The valves are likewise altered in their form, and similar excrescences were observed connected with the cardiac lining. (Presented by Dr. Gaulter.)

204. Wound of the Heart implicating the apex of the right Ventricle.

The ribs were extensively fractured, and the sixth on the left side dislocated from its vertebral attachments. The injury of the heart appeared to have been inflicted by the fractured extremity of a rib which was broken through the middle of its body. The pericardium was wounded, and its cavity distended with blood. The lungs were also much lacerated. (Presented by T. Kelsall, Esq., Oldham.)

ARTERIAL TISSUE.

205. Portion of the Aorta of the Calf.

Minutely injected so as to display the vasa vasorum. The vessel has been dried and afterwards kept in spirits of turpentine.

206. Reflection of the elastic tunic of the Arch of the Aorta.

By this the fibrous coat is distinctly exposed. A section of the arteria innominata has been made, which displays a considerable mass of cretaceous, or, what Scarpa calls steatomatous deposition, which, by encroaching upon the caliber of the vessel, has diminished its capacity. Probably a further result would have constituted aneurism.

207. Reflection of the internal or serous tunic of the Artery.

This exposes the internal aspect of the fibrous coat. Ossific or cretaceous matter in great abundance is deposited in the texture of the reflected portion.

208. The external iliac Artery and Vein, connected with the anterior crural Nerve.

A portion of bougie has been introduced into each vessel, which, as well as the nerve, is rendered scabrous by the deposition of small masses of lymph. These appear to have presented a barrier to the extension of suppurative and ulcerative inflammation. The vessels were completely insulated, and exposed in the bed of an immense psoas abscess, and yet remained quite pervious, the blood having been transmitted through them as in a natural state.

209. Partial Aneurism of the ascending Aorta.

The tumour had given way within the boundaries of the pericardium: the two surfaces of which being adherent, the effusion of blood was inconsiderable. The woman died suddenly. (Wood, ætat. 33.)

210. Aneurism of the Arch of the Aorta, of extremely large size.

The left carotid and subclavian are rendered comparatively impervious, partly from a plug, and partly from organic change in their tunics. No pulse could be felt at the wrist of the left side; and it is singular, that

though some months before the man's death, the right side became paralysed, (hemiplegia) no distinct state of disease of the brain, after a very careful examination, could be detected. The right femoral artery near the middle of its course was likewise aneurismatic. (Lord, ætat. 38.)

211. Partial Aneurism of the Arch of the Aorta.

In this preparation will be observed an aneurism of but small size, communicating with the œsophagus, into which it burst. The encroachment of the tumour at once upon the trachea and œsophagus, will afford an idea of the character of the symptoms which prevailed during life. (Henshaw, ætat. 28.)

212. Aneurism by dilatation of the Arch of the Aorta.

The tumour has burst into the trachea immediately above its bifurcation; as indicated by the presence of the bougie. Anteriorly it is imbedded in the upper piece of the sternum, which has become hollowed, and expanded laterally by ossific growth. The individual, a female of middle age, had formerly been treated for some pulmonary affection, and then appeared to be much relieved. At a subsequent period she was suddenly attacked with hæmoptysis, and almost instantly expired. (Presented by Dr. Carbutt, Physician to the Manchester Royal Infirmary, &c.)

213. State of the tunics of the Artery which forms one of the concomitants, if not the cause of Aneurism.

It is the arch of the aorta which is here represented, the coagula having been separated and removed by art. In some points the tunics of the vessel are completely destroyed, hæmorrhage having been resisted by the connexion of the surrounding textures. Other parts of the sac, much attenuated, were extremely lacerable. (Presented by Dr. Carbutt.)

214. Axillary vessels and integuments.

The preparation is intended to exhibit an ulcerated opening of the axillary vein, consequent upon the spread of malignant ulceration, which had originated in the axillary glands. The man died suddenly from hæmorrhage. (Bradley, ætat. 52.)

NERVOUS SYSTEM.

215. Effusion of blood into the substance of the right hemisphere of the Brain.

The quantity amounted to about six ounces. The attack which occasioned death was spontaneous.

216. Extravasation of blood upon the surface of the Brain.

This was the result of external injury, unconnected with fracture of the cranium.

217. Another specimen of a similar kind.

218. Dura Mater, to which is adherent a large coagulum of blood.

This was in consequence of injury inflicted upon the cranium, independent of fracture.

219. Aneurism of the Basilar Artery.

The tumour will be observed at the inferior surface of the medulla oblongata; it had burst, so as to produce extravasation and fatal compression. (Inchbald, ætat. 27.)

220. Dura Mater coated with fibrinous effusion.

The result of inflammation consequent upon external injury.

221. Softening and ulceration of the substance of the Brain, following spontaneous extravasation of blood.

Hemiplegia continued for several months, and the powers of life gradually declined. (Smith, ætat. 57.)

222. The cervical portion of the Spinal Cord, with the nerves and ganglia displayed.

The case was singular in this respect, viz., that the paralysis commenced partially in the lower extremities, and gradually ascended, until the influence of the phrenic nerves was cut off so as to produce suffocation, from which cause the patient apparently died. The intellectual functions were not at all deranged up to the period of his death. The specimen is preserved merely to show a thickening and opacity of the dura mater, which will be observed to exist in its upper division. (Hume, ætat. 29.)

OSSEOUS SYSTEM.

223. Human Scapula deprived of its calcareous material.

This was effected in the usual way, by maceration in dilute muriatic acid. The preparation not only shows the animal base of bone but the cellular arrangement of the ossific deposit, especially in the costæ, from which the latter has not been entirely removed.

224. Human Radius prepared in the same manner.

The bone had been previously injected, and is formed into a knot in order to prove the flexibility of the animal base.

225. Fœtal Thigh-bone minutely injected.

This is likewise similarly prepared to demonstrate the vascularity of bone.

226. Sections of Bone.

These have been taken from individuals of different ages, to exhibit the relative proportions of the cancelli and compact structure, at different periods of life.

227. Longitudinal section of the injected Humerus of the Pup.

The preparation beautifully displays the trunk and ramifications of the nutrient artery.

228. Skeleton of a small human Fœtus.

Dried and preserved in Spirits of Turpentine, to demonstrate the progress of ossification in the respective divisions of the system, at the third month of utero-gestation.

229. Skeleton of the human Fœtus.

This is preserved in the same way, and shows the advance of ossification at the sixth month. One fact in connexion with this specimen appears to be worth noticing, viz., that the female had conceived of twins, and that though the ovum, of which this was a part, was thrown off at the period above indicated, the other was retained until the full term of gestation was accomplished. (Presented by Frederick Hutton Esq., Stayley Bridge.)

230. Section of the cartilaginous nidus of Bone, minutely injected.

This had been formed in a recently necrosed limb, and consequently may be looked upon as adventitious.

231. Fracture of the Tibia and Fibula of the Dog.

The fractured extremities are in close apposition, and the vessels of the bone have been minutely injected. The preparation is intended to represent the degree of repair which is accomplished under the most favourable circumstances, within eight days from the infliction of the injury. It also shows the extent of agency manifested in the process of reparation as regards the periosteum, on the one hand, and the medullary membrane on the other.

232. Section of the fractured Tibia and Fibula of the Dog.

This specimen has been dried and afterwards preserved in spirits of turpentine, in order to point out the mode and degree of reparation spontaneously effected in twenty-eight days.

233. The fractured Humerus of the Rabbit.

The fractured extremities of the bone considerably overlap each other, and exhibit the degree of repair as accomplished in twenty-one days. In the same glass will be observed another humerus similarly situated, as respects the unfavourable position of the fractured extremities, which has been obliquely divided to show the internal appearance of the bone at the point of union.

234. The Tibia and Fibula of the Dog fractured.

The soft parts remain attached, and the whole is preserved in spirits of wine. The specimen was removed eight days after the occurrence of the injury.

235. Section of an ill-repaired fracture of the human Tibia.

The extremities overlap each other to some extent,

and at a considerable angle. The cancellated structure in the medium of union has become developed.

236. Oblique fracture of the human Femur.

The breach of continuity has extended through the trochanter major, and the re-union, though irregular, has become tolerably firm. The woman, ætat. 69, lived two years after the accident.

237. Fracture of the lower third of the human Femur.

The two portions of bone have become united at an angle; the cancellated structure in the bed of the union is fully developed.

238. Ill-united fracture of the upper third of the human Femur.

A longitudinal section of the shaft of the bone has been made.

239. Compound fracture of the Ankle-joint.

The external malleolus has exfoliated, and the internal which remains, is united by an isthmus of bone to the shaft. The combined efforts of nature and art were insufficient to restore the limb, which consequently required amputation.

240. Caries of the human Rib.

This state was the result of fracture, which had occurred in two points so as to insulate the portion which this specimen represents. The accident was followed by abscess and escape of the carious bone; but the patient ultimately died from accumulation of fluid in the corresponding side of the thorax. (Byfield, ætat. 24.)

241. Foot of the Fox.

The metacarpus is encircled by a portion of wire. This preparation shows beautifully the process which the osseous system sustains in eliminating a foreign body.

242. Fracture of the Spine.

The injury implicates the body of the fourth lumbar vertebra, the corresponding articular processes, and the spinous process of the vertebra above. There is little displacement, which will account for the possession of a tolerable degree both of volition and sensation of the parts below, subsequently to the accident. (Harrison, *ætat.* 62.)

243. Fractured human Fibula, irregularly united.

244. Duplicate of the same, united at a considerable angle.

245. Human Femur, showing the manner in which the extremities of bones are repaired after amputation.

246. Human Ulna, exhibiting the same fact.

247. Diseased human Femur.

The object of this specimen is to demonstrate the changes which the surface of the bone undergoes in consequence of inflammation of its periosteum. (*Exostosis diffusa.*)

248. Abscess of the interior of the human Humerus.

This preparation appears to demonstrate the changes of structure which the external as well as the internal surface of the bone undergoes, in consequence of inflammation followed by abscess in the cancelli. The large aperture in the upper third of the bone would seem to indicate the channel through which the matter had escaped to the exterior.

249. Beautiful preparation of Caries of the Cranium.

The disease involves the greater part of the frontal, parietal, nasal, and ethmoidal bones; all of which it has, in a considerable degree, destroyed. Large masses of the three former are nearly separated by exfoliation, and one of these portions has become completely detached, so as to leave an aperture of communication with the interior of the cranium. The patient died from other causes than either drain from the system, resulting from the local disease above mentioned, or extension of mischief to the brain, the latter maintaining the integrity of its functions until the close of life. Combined with the above circumstances were enlargement, and altered structure of the liver, accompanied with ascites. (Dyer, ætat. 28.)

250. Caries of the adult Tibia.

By which morbid process the shaft of the bone has become completely severed so as to leave an interspace of nearly two inches. The fibula is entire, though scabrous on its surface from the effects of periosteal inflammation.

251. Various specimens of caries of the Tarsal and Metatarsal Bones.

These represent the appearance which they assume after long continued maceration.

252. Section of the injected Foot, affected with carious disease of the Tarsal and Metatarsal Bones.

It will be observed that the intervening joints have participated in the mischief, and that some of the cartilages are entirely detached, while the others are in progress of becoming so. The ankle joint appears to be free from disease.

253. Carious disease of the Tarsal Bones, with external ulceration.

From the surface of the ulcer is projecting a fungus of considerable size, which in its general appearance, might lead to a suspicion of malignancy. Amputation was performed about two years ago, and the person at this period remains well. The whole of the parts are minutely injected.

254. Caries of the four inferior Dorsal, and first Lumbar Vertebrae.

This state of disease occurred in a child two years of age, and was indicated by sufficiently marked symptoms at an early stage of its progress. The three lower ribs are consecutively dislocated; psoas and lumbar abscesses were subsequently associated with the disease of the bones.

255. Destruction by Caries of the last Dorsal, and three superior Lumbar Vertebrae.

The individual, apparently about eleven or twelve years of age, was brought for dissection. Psoas abscess existed on both sides: the sac on the left extending *even as far as the heel*, and that on the right as far as the knee. No communication with the surface had been formed by ulcerative action.

256. Caries of the bodies of the two last Dorsal, and two superior Lumbar Vertebrae.

The disease was ultimately followed by a striking degree of angular incurvation from the almost entire destruction of the bodies of two of the vertebrae, a small portion of one which had resisted the influence of the morbid process, being dislocated laterally, so as to fall out of the line of the vertebral column. This had become ankylosed to the vertebra above and below. It will be seen that another portion has become completely necrosed. The preparation affords evidence of the disease having commenced in the inter-vertebral substance, and extended from that structure to the bone itself. The patient died from the drain of psoas abscess, which had opened on each side a few months previous to the termination of life. (Taylor, *ætat.* 23.)

257. Caries of the anterior and lateral surfaces of the bodies of all the Dorsal Vertebrae.

From the diseased action having extended to the costo-vertebral articulations, the ribs have become separated, and their heads as well as tubercles are likewise carious. It will be perceived that the intervertebral substance connecting each bone of the dorsal division of the spinal column, has disappeared in consequence of ulcerative absorption. A sac containing a large quantity of pus had encroached upon the thoracic cavity, the boundaries of which, i. e. the sac, are here preserved. At the same time it will be noticed that there is little displacement of the vertebrae relatively, from their natural position. (Presented by R. T. Hunt, Esq.)

258. Section of the Lumbar division of the Spine, with the soft parts attached.

It is intended by this specimen to exhibit caries of the vertebrae in an early stage, with incipient formation of psoas abscess.

259. Anchylosis of the second and third Cervical Vertebrae.

This is effected, not only between the bodies, but also between the articulatory processes.

260. Anchylosis of the bodies of four of the Dorsal Vertebrae.

261. Anchylosis of the last Lumbar Vertebra, with the base of the Sacrum.

262. Caries of the head of the Tibia, of great extent.

This would appear to be the result of disease propagated from the knee-joint, which was thoroughly disorganized. The external surface of the bone which abuts the carious portion, presents a rock-work of new deposi-

tion beautifully arranged, the result of course, of a sanatory process. The limb, after considerable delay, was removed with a successful result. (Kelly, ætat. 31.)

263. Caries of the Condyles of the Femur, with Anchylosis of the Patella.

Considerable masses of ossific deposit extend from the condyles to the middle of the shaft, giving the bone a distorted appearance. This specimen forms the counterpart of the one last described. (Kelly.)

264. Caries of the whole of the Tibia and Fibula.

The disorganization is so complete, that not a vestige of the natural structure remains. Various portions of the shell of bone are seen on the surface in a state of exfoliation, and the cancelli have become more open and expanded. In the middle of the shaft of the tibia, it will be noticed that a circular portion has been removed by the trephine, an operation dictated by the opinion that the disease was necrosis. The ankle joint had become implicated in the devastating process; but, so far has nature proceeded in the work of repair, that the astragalus has united by anchylosis with the articulating surfaces of the tibia and fibula.

265. Caries of the upper part of the shaft of the Femur.

The trochanter major is likewise carious, from which the external compact structure of the bone has exfoliated. That part of the head of the bone to which the ligamentum teres is attached, has suffered from the same process in such a degree that the ligament has become nearly separated. (Hibbert, ætat. 28.)

266. Caries of the floor of the Acetabulum.

This, by the morbid action, has become perforated in numerous points, so as to present a cribriform appearance. It will not be overlooked, that the tuberosity of the ischium has also participated in a similar change of

organization, a considerable portion of its external surface having been separated by exfoliation. This preparation corresponds to the one last described. (Hibbert.)

267. Caries of the head of the Femur.

The articulating surface of the bone has become entirely deprived of its cartilage, and is also altered in its form. The ligamentum teres was completely detached and laid loose in the capsule which enclosed the joint. (Schofield, ætat. 28.)

268. Caries of the whole internal surface of the Acetabulum.

The margins of the acetabulum present a peculiar aspect in consequence of an irregular deposition of bone, whereby the cup has become deepened. What may be regarded as singular in this case is, that superficial caries of the lumbar vertebræ having existed, with its consequence psoas abscess, a communication had been formed between the sac and the cavity of the joint. The abscess presented on the inner part of the corresponding thigh, and was repeatedly tapped. This preparation is the counterpart of the one previously described. (Schofield.)

269. Fracture of the Cervix Femoris.

The person, ætat. 65, from whom the preparation was obtained, had been restored to a tolerable use of the limb, though the accident occurred but two years before her death. The neck of the femur is shortened by absorption, and the two parts are united principally by a ligamentous, and partially by an osseous structure.

270. Change of form of the head of the Femur.

In consequence of caries. It will be observed that a porcellanous deposit has taken the place of cartilage.

271. Duplicate of the same.

The margin of the head, together with the cervix, is surrounded by large irregular masses of adventitious deposit.

272. Section of Necrosis of the lower third of the Femur.

The preparation is minutely injected with size, and the soft parts remain attached, in order to exhibit the malignant appearance of an ulcer, which often results from simple disease of bone. Preserved in dilute spirit.

273. Counterpart of the same.

This represents the condition of the bone after maceration.

274. Necrosis of the lower third of the Femur.

This again shows the state of the disease after maceration of the bone.

275. Absorption of a considerable portion of the shaft of the Femur.

This effect was dependent upon pressure, occasioned by the presence of a malignant tumour. (M'Cormick, ætat. 43.)

276. Complete Necrosis of the Tibia.

The original shaft of the bone enclosed in a new osseous case, is entirely detached through its whole length.

277. Fracture of the Humerus.

Which occurred as a result of the generation of malignant disease in the cancellated structure. (Roberts, ætat. 44.)

278. Fracture of the Radius.

This was obtained from the same individual, and arose from the same cause. The solution of continuity in both bones, originated from very slight exertion, a short time previous to death.

279. Os Innominatum affected with Fungus Hæmatodes.

It was removed from the same individual.

280. Fungus Hæmatodes involving three of the Ribs.

Both sides were similarly affected. The tumour internally adhered to the lungs, on the surface of which were existing numerous vascular fungoid tubercles. (Roberts.)

281. Immense fungoid Tumour attached to the palm of the Hand.

The whole mass, together with the natural structures, has been finely injected. The preparation was removed from the patient above referred to; and the history of the case would seem to warrant the conclusion that the disease had originated in the metacarpal bone of the thumb. After amputation of the limb, the patient went on favorably for a period of eight or ten months, when evidence of a like kind of mischief occurred in other parts of the osseous system. None of the abdominal viscera had become contaminated.

282. Caries of the petrous portion of the Temporal Bone.

Which implicates especially the foramen auditivum internum. The early effects of the disease were paralysis of the muscles of the face, with loss of hearing on the corresponding side. Death was occasioned by extension of mischief to the brain. (Kilvington, ætat. 33.)

283. Fracture of the internal condyle of the Humerus.

284. Section of the human Femur which had been affected with Rickets.

The bone is greatly incurvated, and demonstrates the ultimate mode of reparation.

285. Counterpart of the above.

286. Section of rickety Tibia.

Which is preserved to illustrate the fact alluded to at No. 284.

287. Counterpart of the same.

288. Human Radius very accurately united after Fracture.

289. Caries of the carpal extremities of the Ulna and Radius.

290. Caries of the Carpal Bones.

291. Angular contraction of the Female Pelvis, from Malacosteon.

The singularity of this preparation consists in the circumstance of the disease having occurred at an advanced period of life. The woman had given birth to a numerous family without difficulty or impediment in the process. (Arrowsmith, ætat. 73.)

292. Sternum, and sternal extremities of the Ribs, connected by their cartilages.

These were distorted from the same cause, and were obtained from the same subject.

293. Sterno-costal Cartilages converted into Bone.

The result of old age.

294. Disease of the Rib and Costal Cartilage.

Intended to demonstrate the relative susceptibility of the two textures to ulcerative absorption.

295. Hydrocephalic Cranium of large dimensions.

296. Spina Bifida.

The parts have been dissected in order to display the arrangement of the spinal cord and nerves as connected with the tumour.

297. Natural Skeleton of human Monster.

In this instance the malformation has fallen chiefly upon the spine and cranium. The lower limbs are also deformed.

298. Acephalous Fœtus.

299. Mis-formed Cranium of Fœtus.

This specimen affords an example in which the principal part of the brain was situated externally to the cranial cavity. The different bones are existing in a tolerably perfect state, with the exception of the occipital, which presents an aperture in its superior angle, to allow of the communication between the cerebral mass and cerebellum, which latter principally occupied the small cavity that remains. The diminished capacity of the cranium is owing to the approximation of the summit and base of the skull.

300. Os Occipitis of Child.

It will be observed that an unnatural opening exists, through which is protruding a portion of the membranes of the brain. This condition was connected with congenital hydrocephalus, and the tumour afforded a convenient medium for the discharge of the fluid by puncture; which operation was repeatedly done without apparent advantage.

301. Separation of the Head of the Radius, from Caries.

JOINTS.

302. Scrofulous disease of the Knee Joint.

This preparation affords an example of consecutive dislocation, the tibia being thrown behind the condyles of the femur by the action of the flexor muscles, so completely had the ligaments lost their tenacity.

303. Scrofulous disease of the Knee Joint.

In this specimen may be observed the articular cartilages which are in progress of being absorbed. In some points the articular surfaces of the bones are quite denuded and carious, while in others a lymph-like deposit has taken the place of the cartilage.

304. Human Patella with Synovial Membrane.

Calculated to show the changes which the articular cartilages, as also the synovial membrane, undergo in consequence of chronic inflammation.

305. Strumous disease of the Ankle Joint.

The preparation is minutely injected, and a longitudinal section of the tibia and astragalus has been made, with the view of exhibiting the internal state of the bones.

MISCELLANIES.

306. Gelatinous Polypus Nasi.

307. Fleshy Polypus Nasi.

308. Section of the cavity of the Nares in a morbid state.

It will be observed that the Schneiderian membrane is thickened, and that polypous growths are projecting from various parts of it. The anterior portion of the parietes of the antrum has been removed to exhibit a similar increase of growth of the membrane lining this cavity. In this case the orbital plate of the ethmoid bone had become carious, and from pressure the nasal duct had also become closed. (Presented by — Kay, Esq., Ashton-under-Lyne.)

309. Cervical, Bronchial, and internal Inguinal Glands.

This preparation was put up, in order to show the different stages of tubercular disorganization. The only other circumstance worth observing is, that the latter so thoroughly encroached upon the external iliac artery, (which is preserved, along with the vein, in this specimen) as to derive such an impulse from it, that it was at first mistaken for aneurism. The lobulated feel of the swelling, however, on a further examination, corrected this impression.

310. Melanoid tumour extirpated from the ball of the Thumb.

The disease involved the cutis alone; and up to this time, three years from its removal, the person has enjoyed the full vigour of health.

311. Encysted tumour containing hair.

This was extirpated from the forehead.

312. A very large Encysted Tumour, with the integuments attached.

Removed from the nates of an infant, ten months old. The recovery was complete. (Presented by R. Flint, Esq., Stockport.)

313 Large fungoid Tumour removed from the Thigh.

(M'Cormick, ætat. 43.)

314. Peritoneum, from which are projecting several melanotic tubercles.

These have apparently originated in the sub-serous tissue.

315. Pleura and Peritoneum coated with fibrinous effusion, the result of inflammation.

316. Product of Melanosis.

317. Product of Tuberculous Disease.

318. Serum of the Blood, which became, after standing, perfectly milky.

The person from whom it was obtained was the subject of peritoneal inflammation; and the same condition of fluid appeared on a second bleeding, after an interval of twelve hours. The specimen is preserved by the addition of an equal quantity of alcohol, the principal effect of which has been to render the fluid flaky.

CASTS.

319. Cast of the Muscles of the Face and Neck after having been accurately dissected.

320. Cast of Hydrocephalic Head of large size.

321. Another cast of Hydrocephalic Head of extreme size.

322. Cast of the Head of an Idiot.

The interest of this specimen rests especially upon the irregularity of development of its different parts.

323. Cast of fracture of Os Frontis with great loss of substance.

The patient recovered, with full possession of his mental faculties.

324. Head and Bust of a child exhibiting Fungus Cerebri of vast extent.

It is unnecessary to observe that this was the result of fracture of the cranium, complicated with wound of the brain. (*Coloured.*)

325. Cast of Head and Face in a morbid condition.

The man had fallen a victim to extensive cancerous ulceration which had apparently commenced in some part of the nasal organs. (*Coloured.*)

326. Head and Bust, showing the ravages committed by Cancer.

The mischief probably commenced in the lower lip; but the absorbent glands beneath the inferior maxilla rapidly took on the morbid action, and the spread of the disease from the parts (on this supposition) secondarily affected is truly fearful. On the anterior and superior aspect of the throat the excavations are deep and extensive. (*Coloured.*)

327. Cast of the posterior part of the Head.

Taken with the view of exhibiting fracture of the cranium with marked depression, in a case which required little surgical interference. The trephine was not applied, and yet the person recovered, retaining the usual powers of his mind, and was afterwards exempt from the occasional evils by which an individual so circumstanced is more or less liable to be assailed.

328. Cast of the Head of a Man affected with Exostosis of the lower Jaw.

329. Duplicate of the same.

330. Bust of a Female, exhibiting Bronchocele of unusually large size. (Vide No. 168.)

331. Bust of a Female, in which the Bronchocele is of comparatively small dimensions.

The peculiarity of this specimen will appear in the tortuosity and large diameter of the veins, which run not only over the surface of the tumour, but are abundantly existing around and traversing its base.

332. Partial enlargement of the Thyroid Gland.

The swelling was at first mistaken for aneurism, in consequence of the pulsation which it presented. A subsequent examination however showed that this peculiarity arose from the pressure of the tumour on the carotid in part, and again from its having descended behind the clavicle so as to encroach upon the subclavian, or perhaps the arch of the aorta, whereby the impulse (which was equal on the anterior and superior divisions) derived from the action of these vessels had misled us as to the existence of aneurism. (Hadfield, ætat. 54.)

333. Cast of Aneurism of the Subclavian Artery.

This is the more interesting, inasmuch as the origin of the aneurismal tumour was the subject of considerable difference of opinion. While some believed it to arise from the arteria innominata, others felt equally confident that it was confined to the subclavian. The dispute involved the proposal of tying the arteria innominata, which the patient, amidst the conflict of opinions, wisely refused to submit to. After death it was determined that the disease was limited to the subclavian.

334. Duplicate of the last.

335. Cast to represent Chronic Abscess of the Neck, of unusually great extent.

On the opposite side, it will be remarked that the glands are enlarged. A similar state was the forerunner of the abscess which probably depended upon a simultaneous suppuration of the glands; these afterwards opening into a common cavity from which the pus was discharged by incision.

336. Bust representing the external form and character of angular Distortion of the Dorsal division of the Spine.

337. Cast of the kind of Distortion produced by caries of the Cervical division of the Spine.

338. Cast of angular Distortion of the Lumbar division of the Spine.

This of course is the result of caries, and is accompanied by large psoas abscess.

339. Duplicate of the same.

340. Cast of Psoas Abscess.

The specimen will also exhibit, clearly I think, the complication of this state with disease of the hip-joint.

341. Cast of change of form in the Thorax, the consequence of Empyema.

The observation refers to the period before the matter is discharged.

342. Cast of the Thorax in a morbid state.

This representation is intended to illustrate the discrepancy of form presented by the two sides, as the effect of chronic pleurisy, and some other conditions of the thoracic contents. It was obtained from a subject who had sunk under very expressive signs of phthisis pulmonalis; but in whom the tubercles of the lung, whether crude or mature, were confined chiefly to the left side.

343. Cast of partial Dislocation of the Shoulder Joint.

344. Cast of complete Dislocation of the Shoulder Joint.

345. Cast of Fracture of the Acromion.

346. Cast of Dislocation of the Ulna and Radius backward.

347. Cast of Fracture of the internal Condyle of the Humerus.

348. Cast of Dislocation of the Radius *backwards* upon the external Condyle.

349. Cast of Exostosis of the Hand.

The disease was ultimately discovered to implicate all the bones of the hand except the thumb and forefinger; and hence the operation, which was afterwards performed, left behind these two important members.

350. Cast of the Hand after the object of the operation had been attained.

351. Cast representing the anatomy of Inguinal Hernia. (*Coloured.*)

352. Cast of a large Scrotal Hernia.

The different parts are coloured, more particularly the contents, and the coverings have been displayed with great care.

353. Cast of large Scrotal Hernia of peculiar form.

354. Cast of Bubonocoele.

355. Cast of Hydrocele of ordinary size.

356. Cast representing the complication of Scrotal Hernia with very large Hydrocele.

357. Cast exhibiting the peculiarity of form and size of the Scrotum and Penis dependent upon Anasarca.

358. Cast of Varicocele in which the veins are exceedingly prominent.

359. Cast exhibiting congenital malformation of the human Bladder. (*Coloured.*)

360. Another, in which the characters are modified.

361. Cast of extraordinarily large Femoral Hernia in female.

362. Cast of Femoral Hernia.

The tumour, which was reducible, was accompanied with such an enlarged and distended state of the pudendal veins as to prevent the permanent application of a truss; the pressure occasioned by the instrument preventing the return of blood from the parts, and thus adding to the inconvenience.

363. Cast of Fracture of the Patella.

The fragments are separated from each other, and the interval, which is considerable, is occupied by a ligamentous medium.

364. Duplicate of the same.

The only difference existing between this cast and the other is, that in the former the limb is extended, while in the present the knee is bent.

365. Cast of Varix of the veins of the Lower Extremity.

It will be noticed that the surface of the leg is almost clothed in a vascular network, and that the saphena major which is dilated in its whole length, presents large projections from a partial yielding of its coats. In the upper part of the course of the saphena minor, similar appearances are observable.

366. Another variety of the same condition of the veins.

367. Distortion of the Knee Joint.

368. Distortion of the Ankle Joint.

COMPARATIVE ANATOMY.

369. Muscular and Vascular preparation of the common Baboon. (*Simia Sphynx.*)

370. Muscular and vascular preparation of the common Monkey. (*Simia Mona.*)

371. Natural Skeleton of the common Monkey.

372. Natural Skeleton of the Ring-tailed Monkey. (*Lemur Catta.*)

373. Artificial Skeleton of the Lion. (*Felis Leo.*)

374. Natural Skeleton of the Lynx. (*Felis Lynx.*)

375. Artificial Skeleton of the Laughing Hyena. (*Canis Hyæna.*)

376. Natural Skeleton of the Fox. (*Canis Vulpes.*)

377. Artificial Skeleton of the Brown Bear. (*Ursus Arctos.*)

378. Natural Skeleton of the Badger. (*Ursus Meles.*)

379. Natural Skeleton of the Hedgehog. (*Erinaceus Europæus.*)
380. Natural Skeleton of the Ichneumon. (*Viverra Ichneumon.*)
381. Natural Skeleton of the Civet Cat. (*Viverra Civetta.*)
382. Natural Skeleton of the Stoat. (*Mustela Erminea.*)
383. Natural Skeleton of the Mole. (*Talpa Europæa.*)
384. Natural Skeleton of the Brown Eagle. (*Falco Fulvus.*)
385. Natural Skeleton of the Wild Swan. (*Anas Cygnus.*)
386. Natural Skeleton of the Pelican. (*Pelicanus Onocrotalus.*)
387. Natural Skeleton of the Heron. (*Ardea Major.*)
388. Natural Skeleton of the Macaw. (*Psittacus Macao.*)
389. Natural Skeleton of the Gurnet. (*Trigla Gurnardus.*)
390. Natural Skeleton of the Male Tortoise. (*Testudo Græca.*)
391. Natural Skeleton of the Female Tortoise.
392. Natural Skeleton of the Crocodile. (*Lacerta Crocodilus.*)
393. Natural Skeleton of the common Snake. (*Anguis Eryx.*)
394. Skull of the Lion.

395. Skull of the Cat. (*Felis Catus.*)
396. Ligamentous preparation of Anterior Extremity of the Lion.
397. Ligamentous preparation of Posterior Extremity.
398. Section of the Skull of the common Monkey.
399. Skull of the Striped Hyena. (*Canis Hycæna.*)
400. Ditto of the Newfoundland Dog. (*Canis Terræ Novæ.*)
401. Ditto of the Mastiff. (*Canis Mastivus.*)
402. Ditto of the Bull Dog. (*Canis Molossus.*)
403. Ditto of the Greyhound. (*Canis Leporarius.*)
404. Section of the Head of the Greyhound.
405. Skull of the Pug. (*Canis Fricator.*)
406. Section of the Head of the Calf injected.
407. Skull of the Horse. (*Equus Caballus.*)
408. Ditto of the Ox. (*Bos Taurus.*)
409. Ditto of the Sheep. (*Ovis Aries.*)
410. Ditto of the Wild Boar. (*Sus Scrofa.*)
411. Ditto of the common Sow. (*Ditto.*)
412. Ditto of the male Fallow Deer. (*Cervus Dama.*)
413. Ditto of the female Deer. (*Ditto.*)
414. Ditto of the Rabbit. (*Lepus Caniculus.*)
415. Ditto of the Crocodile.
416. Ditto of the Turtle, of extremely large size. (*Testudo Mydas.*)

417. Stomach of the Crocodile minutely injected, and laid open.

418. The Gastric Glands, Gizzard and Intestine of the Domestic Fowl, minutely injected. (*Gallus Domesticus*.)

419. The lining membrane of the different compartments of the Stomach of a Ruminant Animal, injected with coloured size.

420. The Ovaria and Oviducts of the Domestic Fowl, minutely injected.

421. Heart of the Turtle; its cavities and vessels displayed.

422. Section of the injected Lung of the Turtle.

423. Œsophagus of the Turtle, injected.

424. Small Intestine of the Turtle with the Mesenteric vessels, injected.