ILLUSTRATIONS OF THE PATHOLOGY OF
CANCER.

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PART II.

THE HEREDITARY (!) NATURE OF CANCER.

MR. PAGET states that, in 160 cancerous patients, there were 26, or very nearly one-sixth, who were aware of cancer in other members of their families.* M. Lebert, that "he sought with much care for hereditary predisposition in 102 cases, and found it in 14 of these patients.† In 54 cases which I have observed myself, and in which I have specially noted the point, I find 6 cases of an apparent hereditary predisposition. [1. Scirrhus of the breast: a cousin died of the same disease. 2. Scirrhus of the breast: the mother died of the same disease. 3. Osteoid cancer of the femur: a grandmother and a sister died of cancer of the breast. 4. Scirrhus of the breast: a maternal aunt died of cancer of the liver. 5. Epithelial cancer of the malar bone: the mother died of scirrhus of the breast. 6. Scirrhus of the breast: the mother died of the same disease.]

Summing up these cases, we have, in 316 cases, 46 cases of apparent inherited tendency to cancerous disease, about one-seventh of the total number of cases, or about 14.5 per cent. This proportion is too small to establish the hereditary nature of cancer; but even this statement must be taken *cum grano salis*; for a reason which Louis advances in his *Recherches sur la Phthisie*, viz., that the bare statement of a patient, that one of his relations died of cancer, is not sufficient evidence to the pathologist that such was really the case; he must endeavour to elicit the main features of the disease, and then judge for himself whether the patient's statement and his own opinion are in sufficient unison to warrant a positive conclusion. Louis, in this way, found, even in the case of phthisis, that, "of 31 phthisical patients, only 3 sprang from parents who were obviously phthisical, 12 from parents who were not phthisical, and 16 from parents the nature of whose disease could not be determined with precision." Now, if Louis considered such precautions necessary to elicit the hereditary character of phthisis, *à fortiori* should they be observed in a disease the hereditary predisposition to which is yet *sub judice*. We may very well conclude that all the above numbers in the case of cancer are, in this point of view, open to objections. I have hence attempted to solve the problem by a totally different method.

Let us assume, in the first instance, that phthisis may be safely taken to be the type of an hereditary disease, then, from the fact that phthisis and cancer are both fatal diseases, we have the means of instituting the following comparisons, which are best exhibited in a tabular form.

COMPARATIVE MORTALITY OF CANCER AND PHTHISIS IN LONDON
IN THE YEARS 1845-1850.

Year.	Deaths from Cancer from the age of 25 to 80.		Deaths from Phthisis from the age of 5 to 65.	
	Males.	Females.	Males.	Fem.
1845 ..	160	519	3233 ..	2762
1846 ..	174	626	3441 ..	2862
1847 ..	177	574	3407 ..	2923
		(from ages of 20-80.)		
1848 ..	205	640	3266 ..	2739
		(from ages of 20-80.)		
1849 ..	195	645	3045 ..	2740
1850 ..	208	656	3049 ..	2683
Sum	1119	3660	19531	16709
Total	4779		Total	30240

Hence the average annual mortality in London from cancer in both sexes, from the age of 25 to 80, and from phthisis from the age of 5 to 65, is respectively 796.5 and 6040; and the ratio of the average mortality of cancer

to phthisis is 1.7-5.* Now, I contend that, if cancer is less than one-seventh as fatal as phthisis,† this fact alone is sufficient to render it highly probable that cancer, as a rule, is not a hereditary disease.

Any objections to this conclusion, founded on the disparity of frequency of the two diseases, are met by the probability that, if cancer, *ab origine*, was a much rarer disease than phthisis, but that both propagated themselves by hereditary transmission, after the lapse of so many centuries, their numerical ratios would by this time have equalised themselves to a greater degree than is the fact.

CASE OF IRREPRESSIBLE HÆMORRHAGE FROM
THE INCISION OF A GUM-LANCET.

By D. NICOL, M.D., Swansea.

MY child, an infant of sound constitution, who, after the first month, had been chiefly dry-nursed and thriven well, had an attack of infantile cholera when about four months old. From this he quite recovered; but at the age of six months he was again seized with a similar affection. On this occasion, he was supported mainly by a diet of gum arabic and barley; and frictions over the abdomen with opiate and camphor liniments, a blister on the epigastrium, astringents, including tannin by the mouth and injection, and hydrocyanic acid to allay vomiting, were the remedies which, after a duration of rather more than three weeks, ultimately arrested the disease.

In the course of the treatment—i.e., thirteen days before death, while he yet manifested no indications of exhaustion, and when some general wasting and depression of the fontanelle were the only constitutional effects of the disease—it was thought proper to scarify the gums over the upper incisors for the relief of topical swelling and redness with flushing of the cheeks, and restlessness. The incisions bled moderately, and healed as usual. Four days subsequently, the incisions, for the same reasons, were repeated; but one of them continued to bleed long beyond the ordinary term; and, although styptics were applied with little success, after the lapse of two or three days the hæmorrhage ceased. No sooner, however, had it been arrested in one than it recurred in the other incision, and persisted until the death of the child—a period of twelve days in all. During this time, numerous means of repressing the hæmorrhage were used with great assiduity, and with painful but unavailing solicitude; the blood continued to flow with pertinacity, and the infant sank anæmic on the thirteenth day from the second incisions.

The styptics and escharotics employed were the tincture of sesquichloride of iron, saturated solutions of alum and of sulphate of zinc with sulphuric acid, strong solution of nitrate of silver, solid nitrate of silver, dry tannin, dry gallic acid, solid sulphate of copper, oil of turpentine, freezing mixtures, the actual cautery, lint dipped in saturated solution of tannin applied with compression, charcoal, solution of bichloride of mercury in alcohol, pure nitric acid, liquor plumbi, and tincture of iron sesquichloride with hydrochloric acid. Several of these were applied repeatedly. The solid nitrate of silver alone once arrested the hæmorrhage for several hours; but on the eschar becoming detached by the motion of the lips and jaws, the bleeding recommenced. The actual cautery, applied freely under chloroform, had little or no effect; and the same may be said of the nitric acid, likewise used while the child was in a state of anæsthesia. None of the other styptics in any degree controlled the flow of blood; and for obvious

* The deaths in London have been taken as the basis of calculation, because from the large proportion of deaths that occur in public institutions the diagnoses can better relied on. Deaths from "phthisis" before the age of five have been excluded on account of the doubtful nature of the diagnosis. It is satisfactory, however, to find that deaths at all ages from the two diseases being taken as the data, nearly the same result is arrived at, viz., 1.7-9.

† It is not unworthy of remark, that this ratio is also nearly that which the number of hereditary cases of cancer bears to the total number of cases of cancer, in which this particular has been inquired into.

* Op. cit., vol. ii, p. 538.

† Lebert's "Maladies Cancéreuses", p. 134.

reasons compression, the most efficient on any other part of the surface, could not be maintained for a sufficient length of time to give it effect.

For the greater part of the last week, the stomach retained all food and medicine administered, and the elements of blood were given in profusion—beef-tea, with its fibrinous dregs, calves-feet gelatin, albumen of egg, and salt—together with citrate of iron, aromatic spirits of ammonia, and occasionally wine. Tannin was given in enema; but neither lead, tannin, nor gallic acid, were administered by the stomach, that their chemical action might not deprive the child of any of the elements of his food—on which my last hope rested.

That the bleeding was not referrible to the hæmorrhagic diathesis is shown by the ordinary healing of the first incisions. Neither did there exist any evidence of scorbutus; towards the end, the blood discharged became pale and serous; but for several of the earlier days—during which the styptics were assiduously applied—it retained its usual colour, the pulse was good, and the lips and gums were florid. There was no saltus or pulsation, but a gentle and continuous flow, as from the mouths of numerous capillaries.

I am desirous that the case should be put on record, as I have never met with, nor can I remember, a similar instance of protracted bleeding from incisions so trivial and frequently practised; or of a superficial hæmorrhage resisting the means that, in this case, were used for its suppression.

Lectures ON THE STRUCTURE, FUNCTIONS, AND DISEASES OF THE SKIN.

DELIVERED AT THE BELFAST GENERAL HOSPITAL DURING
THE SESSIONS, 1851-2 TO 1855-6 INCLUSIVE.

BY

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LECTURE I (*concluded*).

I MIGHT now proceed, with some claims upon your attention, to the proper discussion of the subject of the course; but it is a usual and not unprofitable custom, before breaking ground, to revert to the steps which have been taken to elucidate the subject by the worthies of past time. In accordance with this time-honoured custom, I shall occupy the remainder of this lecture with a brief retrospect of the literature of my subject, especially noticing those epochs in history which mark decisive advances towards its present state of maturity.

Prior to the time of Hippocrates, we have nothing on record of a decisive nature touching the treatment of disease among the early inhabitants of the world. The allusions in the writings of the Old Testament respecting the manners of the Egyptians and neighbouring nations, and the traditional lore connected with the ancient history of India and China, give us the most meagre evidence on the subject; and all we can learn induces us to believe that ablutions and regimen, and a few simple medications, were the agents chiefly employed in the cure of cutaneous as well as other diseases.

We are compelled, then, to come down to the period of "the father of physic", who lived, it is recorded, some time about three hundred years before Christ; and whose works have been, by a wonderful providence, handed down through the long lapse of two thousand years. This extraordinary man wrote medical observations derived from his practice, chiefly in the temples, which were then the only hospitals for the sick, upon a great variety of diseases, and, among others, those of the skin. He considered carefully their nature, their relations to age and season, and to internal diseases, and divided them into two classes—first, those

purely local, or independent; and, second, those which may be considered, agreeably to his humoral pathology, the depositories of disease. This classification is both practical and pathological, and to the present day, in the management of cutaneous diseases, we act in a great measure upon the broad grounds of distinction which he then laid down.

Celsus, who lived in the year 30 of the present era, gave a good description of the commoner forms, and his advice, though alleged not to be derived from actual practice, is of the most judicious kind. Galen, one hundred and twenty years after, perpetuated the views of Hippocrates, but notices more particularly the diseases of the skin peculiar to or frequently associated in regions. In the year 550, Ætius, one of the minor Grecian authors, especially notices the cutaneous diseases of children; and Paulus Ægineta makes several judicious remarks upon the nature and treatment of these diseases. Soon after this, both the Grecian and the Roman name retire for a time from the stage; and, for a period of three hundred years, the darkness of the mental world was not broken by a single light. The Arabian authors now appear upon the scene, and one of them, Rhazes, first makes mention and gives a full description of the measles and small-pox—diseases which, as you know, have since spread over, and continue to infest, the whole civilised world. Avicenna, who lived about the year 1000, described the carbuncle of the plague; and Avenzoar, in 1179, was the first to notice and record a description of the *acarus scabiei*. Though the numbers of the Arabian authors were few, yet they appear to have been intelligent observers, and advised several valuable additional medicines, and especially, for the treatment of cutaneous diseases, sulphureous mineral waters and baths.

We come now to the period technically called "the middle ages", which are distinguished in the history of cutaneous literature by the appearance of two new epidemics—I mean lepra and syphilis. The former, originally from Egypt, raged throughout the whole of Europe, and has disappeared only since the commencement of the seventeenth century, by retiring to the tropics, where it still continues. Remains of the leper hospitals, which were erected in vast numbers for the isolation of patients afflicted with this disease, are still visible in many parts of the continent. The latter appeared about the middle of the fifteenth century. Its origin is unknown; but it is certain that it assumed the character of a most virulent epidemic during that and the succeeding century. Fallopius, Fernelius, Forestus, Schenck, and Astruc, have all published largely upon the early appearance of this disease; while Hunter, Petit, Alibert, Duvergie, Carmichael, Ricord, with others, have well nigh exhausted this highly interesting subject.

The first mention of varicella, or chicken-pox, is made about this time by Vidus; and affections of the scalp, of the sebaceous gland, and of the pigmentary functions and hair-follicles, are very minutely described by Senertus, of France. In 1610, an attempt at a classification of diseases of the skin, based on their appearances, was made by Joannes Riolanus. His three classes were, pustules, deformities, and tubercles. From this to the time of Turner, one hundred years later, we meet with no systematic work, though there were abundance of writers, who contented themselves with recording rare cases, as adjuncts to their other works. Turner, in 1714, turned the previous knowledge to good account, in his very practical and excellently descriptive work. Plenck, a German, published, in 1776, what may be deemed the first regularly classified and systematic work. He employs fourteen divisions, which form the basis of Willan's and other later classifications. Lorry, in the following year, brought out a most philosophical work on cutaneous diseases, in which broad and judicious views and principles are laid down, and the causes, prognoses, and all their relations, are elaborately, and at the same time practically, set forth. On the other hand, his classification is meagre, and he is deficient in particular descriptions. Twenty-one years after, a great step was taken by Willan, of London. His classification, though evidently based upon that of Plenck, avoids that author's