

BIBLIOGRAPHICAL NOTICES.

XII. *A Short Tract on the Formation of Tumours, and the Peculiarities that are met with in the Structure of those that have become Cancerous; with their mode of Treatment.* By Sir EVERARD HOME, Bart. &c. &c. 8vo. pp. 98, with several plates. Sept. 1830.

No department of surgery is more replete with interest than that which treats of tumours, and particularly that class which eventuate in cancer. While many conflicting opinions have been advanced as to their origin and development, and much adverse experience elicited to sustain this contrariety of speculation, Sir Everard Home has been industriously employed searching out and arranging all the testimony which a long life sedulously devoted to professional pursuits could afford. If severe industry and unremitting perseverance can offer a rational hope that this abstruse subject can be elucidated, we would expect to receive ample information from the researches of the veteran surgeon.

Tumours, according to Mr. Home's investigations, result from the extravasation of blood, or some of its ingredients, after external violence, in greater quantity than is necessary to repair the injury.

Fatty tumours are but the deposition of fat in parts slightly injured, not recovering their healthy action, but continuing to deposit that substance. The materials of tumours after severe injury differ according to the quantities and new combinations of the effused fluids, but although differing from each other, are generally of the same character of the surrounding healthy parts; this fact renders it necessary for the surgeon to be familiar with the physical attributes of the texture in which the tumour is seated.

There is a peculiar species of tumour, yellowish-white colour and resembling a kidney, located in the neck, involved in a cyst, and attached to the neighbouring parts by small blood-vessels and loose cellular membrane; to remove it the surgeon must merely lay open the cyst and turn out its contents. There is another character of tumour, involved in a nerve and deriving an investment from it.

"A lady, twenty years of age, had a tumour on the outer side of the biceps muscle of the right arm, the size and shape of a pullet's egg; it was moveable in the surrounding parts; it had been several years in acquiring its present size, and was very painful when pressed upon. Its rapid increase induced her to have it removed by the knife. When the parts were fully exposed, the surface was smooth and shining. At both ends the tumour terminated in a white cord: upon cutting through the outer covering, the real tumour was found to be inclosed in a nerve. When this discovery was made, it was thought prudent to divide the nerve at both ends and remove the whole. The patient had no use afterwards of her thumb and forefinger, and had a numbness in these parts; the skin which covered them was unusually rough and dry, and the cuticle came off in scales.

"On examining the tumour, three inches of the nerve itself had been removed; it was separated into two portions, each much flattened, and passing over the

sides of the tumour. There was also a thin nervous expansion, not thicker than a membrane, completely investing the whole. This was readily separated, although more firmly attached at the extremities." p. 5.

The tumour seemed to be made up of serpentine fibres in the course of the nerve, separated from each other by its substance: a radiated structure was discernible at its surface.

The second case cited, is analogous to the above, and displays a similar involvement of the nerve, the tumour being involved in the axillary plexus; it was removed as in the former case. Four days after the operation the appetite flagged, pulse became frequent, skin hot, spirits depressed, and on the following day the patient died. Post mortem examination revealed the cyst contracted and four times thicker than at the time of the operation, cavity almost filled with coagulated blood and lined with coagulable lymph. The cause of death in this case is ascribed to the consequent inflammation. Mr. Home assumes as diagnostic of this character of tumour, absence of pain when moved laterally and an excessively acute pain when motion is attempted in the other direction.

The next class embraces those tumours which have their origin in the diploe of the skull and eventually make their way through the external table. In the case related, the tumour which resulted from the kick of a horse many years before, was located originally underneath the external table of the right parietal bone, and the tumour in its progress approached so near the outer edge of the orbit, that there was only space sufficient to admit the blade of a saw between them. The superior and massive part was soft, consisting of fat mixed with a steatomatous substance, while the base was strictly bony. The tumour was successfully removed, and Mr. Home deduces the following surgical corollary.

"This case establishes the fact, that all tumours on the head may be removed without danger, provided no symptoms have occurred during their increase of any of the functions of the brain having been interfered with." p. 16.

Hitherto cancer has been esteemed a disease originating in a poison generated in different parts of the body from accidental or other causes, and especially in the glandular structure.

"As the same parts in different individuals, under similar circumstances of violence, do not always form cancerous tumours; when they do so, it must arise from a peculiarity of constitution, disposing the injured parts to take on this disease, and therefore the tumour in its origin cannot be cancerous." p. 17.

We cannot discover the justness of Mr. Home's conclusion from the above general position, that all persons under similar circumstances of violence are not subjects of cancer, viz. that the early stage of this class of tumours is free from cancerous taint, but, so far as the mode by which the injury is inflicted is concerned, we are prepared to admit that it is not a cause of cancer, for had an injury of the same amount been inflicted in a different manner, the cancerous condition of the constitution would have been alike prepared to excite this disease; were it not thus, the recuperative powers of the system would immediately have repaired the breach.

Our author denies that disease is hereditary, but admits, what we conceive to be the same in substance, an hereditary constitution predisposing children to the disorders to which their parents were most obnoxious.

In glandular structures, in which the vessels composing the glands are

wounded and their contents poured out, the effused fluid consists of the peculiar secretion of the organ and the ingredients of the blood, which are undergoing the necessary changes to produce this secretion. The tumour formed in this instance is composed in one part of lymph globules, with tubes passing through them, containing carbonic acid gas and which become vessels filled with red blood. This character of tumour is denominated scirrhus and is the preparatory stage to true and stony cancer. By analysing this structure and observing the changes which the several parts underwent in the different stages of cancerous disease, Mr. Home was induced to consider the serum and lymph globules to be the parts that become vitiated and are enabled to propagate the morbid poison.

"This opinion receives strong confirmation by the red blood not being met with in such tumours, in the latter and confirmed stages of the disease, and the tumour itself in its increase, becoming harder in its texture; to which we may add, that the only discharge that takes place, when such tumours produce any, is an aqueous fluid, or, in other words, serum devoid of its coagulable lymph, which in a natural state it contains in considerable quantity." p. 24.

"The compacted lymph globules, among which there is no apparent circulations of any kind, is probably the morbid part, and that which comes on the disease by its contact and absorption; since, as the malady continues, it increases in bulk; and when any part of it remains, after an ineffectual attempt at its removal, a rapidity in the progress of its increase takes place." p. 28.

The aqueous fluid which is separated from the consolidated mass of lymph globules does not partake of the morbid poison: this is illustrated by several cases of hydatids in the mammæ. The tumours in these instances proceeded from blows received accidentally, and it is probable that the blood effused from the accident left the serum which constituted their contents.

Tumours of this character were formerly termed cancerous hydatids, but in the opinion of Mr. Home, have not the slightest connexion with this disease.

Scirrhus is more frequently seated in the mammæ of females than any other part. Climate and constitution have a very considerable influence in forming such tumours: in Otaheite and the neighbouring islands the women decide their quarrels by fighting, the blows are principally aimed at the breast, which is unprotected, and yet cancer is never met with in these islands. Our author introduces a number of cases to exemplify the various stages through which scirrhus tumours pass in becoming open cancer, with many anomalous concomitant symptoms, and others to illustrate that form of tumour which is strictly pseudo-scirrhus. We will quote a few.

"A lady, fifty-eight years of age, had a tumour in the breast, which for nine or ten years had been growing to its present size. Several glands in the axilla were enlarged; the tumour itself made slow progress, but the skin, which firmly adhered to the tumour, and had the appearance of being tucked down upon it, had in the neighbourhood become studded over with small tumours, resembling split peas: they first appeared there, but in nine months they were met with all over the body, on the opposite side as well as that on which the tumour had formed. They were in no place close together, being about an inch apart and nearly the same in size, but rather larger near the original disease. They gave a considerable degree of uneasiness and her health was much impaired. In a few months she died. The tumour had previously become painful, frequent retchings had been produced, and her stomach retained little or no food." p. 40.

It is questionable whether the small tumours of the skin were cancerous, since they are found in cases in which we have no reason to suspect the existence of cancer.

"A lady, who had occasionally matter, blood, or bloody water issue from the nipple, had, some months after, a tumour formed, and the nipple ulcerated; the glands in the axilla swelled, and all the symptoms of cancer came on, of which she died." p. 45.

"A woman was received into St. George's hospital with a small tumour at the basis of the nipple, which was very moveable. The first symptom of the disease was blood oozing from the ducts in the nipple. It was removed with the surrounding parts. The tumour, when examined, after the removal, was found to be no part of the gland of the breast, but a newly-formed structure; and I never heard of the disease having returned." p. 45.

"A lady, twenty-three years of age, had a tumour in the breast, hard to the feel, giving occasional pain: it had continued for a year, when Mr. Hunter extirpated it with the parts surrounding it. Upon examination of its structure, it was found to be a solid mass, distinct from the neighbouring parts, to which it was slightly attached." p. 46.

The character of this tumour was doubtful, but Mr. Home thinks it would eventually have become cancerous.

"A lady, thirty-two years of age, the mother of several children, discovered by accident a tumour in the breast; as the tumour was moveable, means were taken to disperse it; but these proving ineffectual, I was consulted, and advised its removal, which was acceded to. At the time of the operation the tumour moved freely in one direction, but was more confined in that of the fibres to which it was found to be attached, and part of that muscle was removed along with it. The wound healed in three weeks. In six months after the operation a fulness was felt in the pectoral muscle attended with pain; in a twelvemonth a tumour had formed and the skin was put on the stretch. The pain had become intolerable; the tumour daily increased; and, upon her being seized with vomiting, the lower part became discoloured from the rupture of the smaller vessels. A fortnight afterwards the skin broke, and a fungous excrecence appeared, covered with blood, from the vessels in the surface giving way. In about three weeks she died." p. 48.

We here discover the difference between cancerous disease of a glandular and that of a muscular structure; in the muscular it assumes the character of true hæmatodes. The following case is introduced to illustrate the symptoms which frequently attend those tumours which encroach upon a nerve without involving it in the diseased mass.

"A lady, between fifty and sixty, had a tumour in the breast, which was removed by Mr Hunter. The parts healed kindly; but at the end of a year and a half a gland in the axilla enlarged, and the pain was dreadfully severe, and she coveted an operation. In performing it, upon dividing a nerve that passed over the surface of the tumour, she said, 'the pain is gone;' and it never after returned: but the progress of the disease was not stopped, and in two or three years she died." p. 50.

We have already stated, that the mammæ of females are most frequently the seat of scirrhus, and next to them in proclivity is the tongue. Almost every local disease of the tongue is prone to become cancerous from the glandular structure of this organ. In relation to the treatment of tumours in this part, we have but one principle, which is arbitrary—namely, remove them immediately, upon determining that they are cancerous, or disposing to that char-

acter. Mr. H. performs the operation for removing diseased portions of the tongue entirely by the ligature; this mode, while it prevents the danger from hæmorrhage, entails pain and suffering upon the patient; but still the favourable result of the many cases which fell under Mr. H.'s care, seems to warrant its use, notwithstanding the inconvenience arising from the temporary salivation, resulting from the irritation of the ligature, and the unpleasant factor attendant upon it. In this expression of cancerous disease, the same exclusive rule, relating to scirrhus of the mammæ, maintains, to wit: when the disease is strictly local and circumscribed, the operation offers a rational hope of relief; but if it has become constitutional, and by this term we do not mean that irritable state of the system which appertains to almost all local diseases, but rather that cancerous condition which is *sui generis*, and can only be recognised by its manifestations in different glandular structures, no local address can offer the most remote expectation of cure, for the primary seat of disease is no longer the irritating agent, but the assimilating apparatus has become impressed with a peculiar and malignant ability to establish and propagate diseased action.

"Margaret Dalton, forty years of age, was admitted on the 25th of December, 1801, into St. George's Hospital, on account of a tumour, the size of a pea, on the right side of the tongue, near its edge. It had begun by a pimple, and increased without pain. It impeded her voice, and, when bruised by the teeth, bled freely. It was removed in the following manner:—The tongue being thrust out, a crooked needle with a double ligature was passed through its substance, some way beyond the tumour; one ligature was tied behind the tumour, the other before it, including a segment of the tongue. A considerable salivation ensued, which was much more troublesome than any other symptom, and continued till the slough came away. The ligature furthest from the tip separated on the sixth day, and the other on the seventh. In three days the wound healed, and she got well." p. 63.

"A gentleman, sixty years of age, consulted Sir William Blizard for a tumour on the tongue, the size of a swan shot, hard, and firmly connected to the surrounding parts. I was requested to assist in the operation. A needle with double ligature was passed through the tongue, behind the tumour: when tied it gave a good deal of pain, but the sensibility was immediately destroyed. After the operation the patient sat down to dinner with great cheerfulness: on the sixth day the ligature came away. On meeting the patient a few days afterwards, I could only perceive a slight indentation where the tumour had been."

"A gentleman, thirty-six years of age, had a small sore upon the edge of the tongue, the effect of irritation of the tooth, with which it came in contact. The tooth was extracted; a second tooth was drawn, but the sore put on a malign aspect, and gradually increased. In a few months it had ulcerated so much as to make talking painful, and his words indistinct. He lingered in this melancholy state for six months, and died." p. 68.

The next character of cancerous disease which attracts our attention, is that of the testicle. Two modes of progress is discernible, the one becoming hard and involving the cord, and finally, the lymphatic glands as high as the loins; this is genuine cancer. The other contaminates the neighbouring parts, and is propagated by means of the absorbent glands.

"In either of these local diseases, the parts are not capable of contamination of the neighbouring parts, till after those have long continued to have lost their healthy state; and when the organ is extirpated early, the patients, I believe, always get well." p. 71.

Mr. Home, in the above paragraph, labours to impress his original position upon us, that the early stage of scirrhus is not malignant; but we apprehend that we shall find the cancerous infection to be the sole cause of the loss of tone in the parts in proximity to the disease, and the distinction made above, is more precise than just; for surely, if in this condition of things, we should remove the organ, leaving the neighbouring parts in this unhealthy state, not cancerous, according to our author, but merely declining in tone, we should not have eradicated the disease, or even arrested its course; this Mr. H. admits in the following words:—

“But this is a rare occurrence,” (speaking of the removal of the disease by extirpation of the testis,) “when the disease has completely established itself; and when it has not, an operation, or any other violence committed on the parts by its irritation, accelerates the progress of the disease.” p. 71.

Cancer is not unfrequently located in parts of the system not glandular in their structure; in many instances local injuries give expression and development to the latent cancerous leaven.

We will quote a paragraph from Mr. H. which, while it confirms our views of the previous existence of a cancerous temperament, enforces upon us the necessity of managing judiciously every local affection, however slight in the first instance its tendency may be to become malignant.

“When parts have been long in a diseased state, we have no security against their not ultimately taking on a cancerous action; but in all such cases, there must be a peculiarity of constitution existing previously to the parts undergoing such a change.” p. 77.

The last character of tumour mentioned by Mr. H. is seated under the lower jaw, and from its structure appears to be cancerous.

“A gentleman, thirty-five years of age, had a tumour formed behind the angle of the lower jaw, considered to be a lymphatic gland; this increasing, was removed. Three years after another formed, and slowly increased to the size of a pullet’s egg; it had no sensation; he received a blow upon it with a stick, in a drunken brawl, which did not injure the skin. In a few weeks it became double its former size, and was removed by Mr. Hunter. The tumour, when examined, was in its substance one half white, the other black. The colour was from blood, which pervaded the part formed after the blow, but did not extend to the original portion.” p. 93.

Notwithstanding the labour and attention devoted to this subject, still all is indefinite and conjectural in relation to that peculiar condition of the system, which generates true cancerous disease, and consequently, no definite or accurate prognosis can be ventured in reference to local affections. Whether or not, peculiar expressions of disease would prove malignant in their termination, constituted a quere, which Sir Everard Home, after a half century’s attention to the subject, was unable to determine.

While it is a subject of painful regret, that diagnostic acumen could not be attained, it is a much more melancholy consideration to humanity, that little has yet been done to check the malign flight of the fell destroyer. Hemlock used internally and externally, has been found to be a valuable mean in mitigating the sufferings of the patient, while sarsaparilla, in powder, before it has been exposed to the deteriorating influence of heat, has proved a most valuable adjuvant in controlling indurated glands, evidently tending to scirrhotosity.

In taking leave of this little volume, we experience those painful emotions which characterize the departure of an old acquaintance. It has been announced in its preface, to be the last work which its favoured author shall ever submit to public inspection, and it is but a just tribute to the labour and toil of a professional career, embracing more than half a century, to pronounce this, like all other productions from the pen of Mr. Home, to be based upon practical observation, and is consequently the simple, but honest detail of facts. The candour with which it displays the mode of treatment, and its results, in one of the most baneful maladies to which flesh is heir, will insure for it an attentive perusal from every friend of medical science, and for its author a most earnest prayer that he may enjoy, in the wane of life, that repose which virtuous intent and industrious enterprise cannot fail to secure.

A. L. W.

XIII. *A Treatise on Physiology applied to Pathology.* By F. J. V. BROUSSAIS, M. D. &c. &c. &c. Translated from the French, by JOHN BELL, M. D. &c. &c. and RENE LA ROCHE, M. D. &c. &c. Third American edition, with notes and a copious appendix, 8vo. pp. 666. Philadelphia, Carey & Lea.

It is not our intention, at this late period, to enter into a formal review of the Physiology of the celebrated professor of Val-de-Grace. The fact that three editions of the American translation have been called for within the short space of five years, very fully evinces the estimate in which the work is held by the medical public of this country. A patient study of his *Treatise on Physiology applied to Pathology*, is indeed indispensable to all who may desire to form a correct estimate of the value of the doctrines in relation to the nature and cure of diseases, advocated by M. Broussais; doctrines which have within a few years exerted so powerful, and in the estimation of many, beneficial an influence upon medical opinions and practice.

That the treatise before us is destitute of error either in matter of fact or in doctrine, we pretend not to assert. The contrary must necessarily be the case, as well from the nature of the subjects of which it treats, as from the peculiar circumstances under which the work was composed. With the exception of Bichat, in his *Treatise on General Anatomy*, no one had attempted before Broussais, the task of collecting the various facts known in relation to the healthy functions of the human system, and comparing them carefully with the state of the same functions during disease; of determining accurately the relative influence of the different organs upon each other, and the modifications which the morbid conditions of one set impress upon the actions of another, and of arranging the materials thus obtained into a systematic form. Had perfection crowned this difficult task, we should have considered its author as something more than mortal. Physiology as a science is yet in its infancy; every year new discoveries are made in relation to the vital functions, by which previous opinions are either confirmed or subverted; this added to the rapid accumulation of pathological facts, renders each new labourer in the field, with only a moiety of the talents and industry of Broussais, capable of detecting errors in his system, and of filling up and improving the general plan, the outlines of which he has so ably sketched. It is not for the invariable correctness of his opinions upon the subject of physiological pathology, although the