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Erectile Tumours
and
Their Treatment.

(By Offley Bohun Shore)
Gentlemen,

The following Thesis which I have the honor to bring before you this Summer was read before the Royal Medical Society last year. It was prepared in consequence of a Case in W. Spence's Ward, a few years ago. The Notes of which however, I did not obtain: I do not pretend to the least originality on the Subject for my time has been too much occupied in becoming acquainted with the authorised opinion of the day, without entering into any speculative views. That is for the Future. I lay it before you simply as a Compilation, so as such it will I trust meet with your approbation...
I have not entered widely into the subject, as that would be impossible; but treated it generally, it shall first then make some general remarks on "Erectile Tumours" & afterwards some observations upon their treatment. The Erectile or Vascular Tumours include principally those well known forms of morbid texture as are described by Authors under the title of Aneurism, by Anastomotic & Vascular Navi. The name "Erectile" which was given to them on account of their resemblance to the Erectile or Gouvernous Tissue, has been objected to, in that they present no imitation of the Erectile Tissue in the power of filling themselves with blood, as if by some internal forces; but since this occurrence in the True Erectile Tissue depends as much upon the accessory structures of nerves & muscles as on the Tissue itself, we may fairly apply the term "Erectile" to these Tumours remembering only for this, as for other structures occurring in Tumours, that the imitation of the Natural Tissue is imperfect or partial.

Erectile Tumours are
Generally divided into Arterial, Venous, and Capillary. The most frequent forms of sub-cutaneous Nervi, or the more frequent superficial Nervi which are like them in structure though different in position, appear to consist mainly of closely arranged minute blood vessels, of which some are as small and as simple as medium sized Capillaries while other of various size appear as dilated Capillaries, or, as small arterics & veins closely clustered but in just proportions to one another. These are such as may be called “Capillary.” In some cases however the enlargement of the arteries far exceeds that of the veins; the swellings pulsate, and are florid & very warm if injured. They are Arterial blood. These constitute the arterial form, or the Angiome by anastomosis. On the other hand, Tumours are formed of dilated sacculated Veins, which constitute the Venous kind of Erectile Tumours. That which is common to all Erectile or Vascular Tumours is an over extension of blood vessels, or blood spaces within a circumscribed area. Their chief varieties depend upon first,
the kind of vessels affected, & secondly, on the
nature of the tissue in which they reside, i.e.
In all other tumours as in all abnormal
products, the formation of bloodvessels appears to
be a consequent and subordinate process; as in
the natural development of parts, so in what
is morbid, organization to a certain point precedes
vascularity, & the formation of bloodvessels follows
on that of the growths into which they pass.
But here, the case seems reversed: the calibre
of the bloodvessels increases, if the solid Tissue
between them diminish. All the growths of an
Erectile tumour is an enlargement of bloodvessels,
with diminution of the Tissue in which they increase,
or rather, it is often an enlargement not of
bloodvessels, but of blood-spaces. For this in the first
Stage of the disease, the blood of the Vessel may
grow & elongate, so that the ball become tortuous;
yet, after a time, the ball bauce, rather than grow;
aperture seem to form through mutually opposed
bloodvessels, & at length while the blood within the
tumour increase, the bloodvessels containing it
diminish, together with the parts in which they
remain; hence, at last, in place of branching
anastomosing, there is only a network formed.
of the remains of their walls. This is an increase of blood-vessel spaces, rather than blood vessels, so far as solid tissue is concerned, we might call it a cavity rather than a growth, no new material seems to be added, but step by step the blood vessels are dilated, the intervening spaces clear away leaving room for more and more blood.

Such a fact constitutes a great difference, a contrast between these and any other tumours.

As I have hitherto had to view the subcutaneous leuca, so I shall now in describing some general character of the disease, refer to them alone for examples. Even of these it is difficult to give a general account, since we can only make an artificial distinction between those which bear this name, and those extended dilatation of cutaneous vessels, which, with little or no swelling, form the cutaneous leucosis.

These are evidently the same disease, they are simply differently situated; they have no real difference of nature, they are very often associated.

If we include only such as are for the most part, or wholly subcutaneous. Then it may be said that they are generally round or oval shaped, or spheroidal, but often ill-defined; the moist state
of the blood vessels, of which they consist, gradually merging into the healthy state of those beyond them. Sometimes it, especially in those of most venous character, of longest duration, the mark is circumscripted by fibro-cellular tissue, which forms a kind of capsule, it penetrated by the blood-vessels, passing to it from the tumour, it is very intimately connected both with the surrounding parts and with the tumour. The Vascular tumours are remarkable for their frequent commencement before birth, or their especially quick growth in early childhood. They are the most common of congenital tumours, but they may begin, or accelerate their growth at any period of life. I have seen, say, W. Paper, one in which no trace existed until the patient was 25 years old; another in which rapid growth began, for the first time when the patient was past 50.

Dr. Wattson mentions a case of Erectile pulsating tumour about the angles of the eye, the forehead, which began in a girl of 17 years old. Their origin is generally unknown, but they may commence as the result of injury, or rather a tumour may originate in injury, it in this tumour a progressive formation of blood-vessels may ensue. Their growth
in uncertain, for they seem at rest for many weeks after birth, and then grow quickly. Sometimes they stop their growth, having attained a certain size, may remain limited, or may decrease, or disappear. The vessels in whose enlargement the growth consisted regaining their natural calibre or becoming obliterated. Their power of retaining life is not strong; they are much more apt to slough after an injury than the natural tissues, in general disturbance of the health, they may disappear altogether by a process of interstitial absorption. Mr. Paget related a case in which a large subcutaneous haemorrhage in a child, forehead sloughed, while another, on its back, of much less size had in the process of sloughing after the application of nitric acid. Such haemorrhages are most probably to be attributed to the slowness of blood through the tumours; for although they are full of blood, they transmit it very slowly. Venous tumours often contain clot of blood, such probably as would only form, where the circulation is slowest, both in the arterial tumours the full pulsation seems to indicate a retarded stream. Two of the chief difficulties of the vascular tumours are very interesting — namely, the formation of Cysts, & that of
Malignant structures in their substance.

There have been few opportunities of observing the change, but the principal fact is, that next to erectile tumours those that are composed of clusters of serous or sanguinolent cysts, appear to be the most common congenital form; that in some cases the two forms appear in one mass. Sometimes the cysts appear in the interior of the enlarged vessel; in other cases no erectile or cutaneous structure can be found, but the communication existing between one or more among a cluster of cysts, some large blood vessels make it probable they had the same origin. Thus Mr. Cooke traced a vein as large as the radial vein, opening into the cavity of a cyst, which formed one of a large cluster removed by Mr. Lawrence from a boy, side. The intubation of the formation of these cysts, seems to be difficult. Mr. Hawking thinks that cysts are formed in these, as in many other tumours, by that gradually, by the absorption produced by mutual pressure they are opened into communication with one or more of the veins, or of the sacs, connected with the veins. Again, Mr. Cooke infers it may be that certain of the dilatations of the vessels are gradually shut off from the stream of blood, so as to form that sacs
and that after that, their contained blood it stored to replace by serous fluid. The last disease is that of Cancer in the tissue of Erectile tumours. It seems to be generally regarded as a frequent event, if these tumours are commonly believed to be the most frequent instances of malignant growth, insinuating on such as were previously innocent. In one case recorded by W. Philippe, the transition seems to have been clearly traced. A gentleman had a simple Erectile tumour on the tuberosity of the Pubis, which was constantly irritated by his clothes; it increased in size, became ulcerated, its the seat of a constantly recurring considerable Hæmorrhage. The tumour was removed by the knife, the wound had nearly cicatrised, when a fungous projection had developed in the corner; it soon became as large as the former. Citric acid, & some other Escharotic, were applied to it, but its progress was not arrested. The leg was removed, but as the Stump began to cicatrize a tumour was manifested there, from the effect of which the Patient died. The tumour which had removed in the first instance was very carefully examined; it contained nothing but a large ves. of blood vesels; the one which was examined upon
The amputated limb contained a large depopulation of cerebriform matter, as did the tumour which was developed upon the stump. Mr. Pepet thinks that in many of the cases which have gained for Excitile Tumours their ill-repute, a cleaner examination would have proved that they were, from the beginning, very vascular medullary Cancer, or else medullary Cancer in which blood cysts were abundantly formed. This is a subject, however, on which I am deficient of further information, if it be in the power of some of my fellow members to afford it.

Some of the principal differences between the medullary fungus and Excitile Tumours are first, that the latter are usually congenital, the former perhaps never; compression which had no effect upon the former, considerably diminished the volume of the latter; in the latter we generally find pulsation or trembling, it is enlarged at the approach of menstruation; these never occur in the former; the latter usually has its seat in the skin or subcutaneous cellular tissue; the former attacks all tissue, the latter viscera; the former consists of a pulpy cerebriform matter, the latter is composed of blood vessels and cells, constituting an entire local disease, the entire extirpation of which effects a cure.
The former very soon after its deposition, becomes a constitutional disease, which if we can remove from the exterior we shall soon be advertized of its presence in the interior of the body, where it will defy the power of art. There are still two remarkable circumstances which may serve to give us a knowledge of the organic alteration which constitutes Erectile Tumour, as well as their character: the former is the consistence of the tumour which it forms; it is granulated, soft, reducible on prolonged pressure, so much so, that we thus reduce the affected part to a volume much less than that which is natural to it.

We may even obtain this result by changing the attitude of the member on which it is placed; thus on the one side, the soft unequal consistence of the tumour, its susceptibility to be reduced by prolonged pressure or change of attitude, whatever may be its form or extent, are characteristic of this disease; on the other hand when we can discover this characteristic softness or produce a sudden lessening of the tumour, we may be assured that the organic alteration I have described Erectile Tumour exists. It is true that we may possibly find a difficulty, in spite of
These data: we may have an erectile tumour within a central cellular cavity; in this case, compression will not force back the blood into the vessels, so this case is the more serious, as the pulsation which we can distinguish may give reason to suspect the presence of "aneurism.

Mr. Philipp says "There is one circumstance connected with these tumours which I confess conveys to me no power to state, looking at the tumour or the patient, whether it proceed from a local irritation confined to a given point; or, whether there be a general disposition in the circulatory system to the development of these tumours." Then congenital we cannot decide unless we see them in various parts of the body; but then accidently produced, if we cannot refer them to a local irritation such as a puncture, contusion, or some irritation, we may fairly presume upon the existence of a general tendency in the system to produce this particular disease: in either case, our cause is the same: remove the tumour by those means best adapted to the particular case.

I shall now proceed, in the second place, to give some general remarks upon their treatment.
operation is resorted to, before the tumour has been irritated, to become malignant, the disease will be easiely & effectually removed. Caustics, compression of are often applied, but whatever is used, be it compression, Caustic, deto, Ligature or the knife, provided the whole be removed, the result will be the same. The cure of this disease can only be effected by the entire destruction of the diseased tissue; this is frequently no easy task, so great difficulty will be occasionally experienced in determining with exactitude its extent. When this is ascertained, it may be impossible to remove the whole. The irritation which is excited by an operation in any part of the tumour which may be permitted to remain most frequently hinders the exterior progress of the disease. Examples are not wanting where repeated dilatation, successive amputation have been rendered necessary, yet perfectly useless, in consequence either of negligence, or the impossibility of knowing & finding out the exact extent of the disease, & it is upon this circumstance, that are particularly dependent, the difficulty by which a prognosis of this disease is surrounded. In the several modes of treatment which have been employed in the case...
of this disease, our object is, either to lessen materially the quantity of blood passing into the tumour, in accordance with the principle that all accidental productions are endowed with less vitality, or at least with less tenacity in retaining life than is the case with the natural productions of the body; whether this depends upon a less perfect organization is not certain. This would appear to be the Mode Operandi of Tonic, & Astringents, & Ligature placed upon Arterial Trunks at a distance from the disease, it perhaps occasionally with compression : to produce inflammation & obliteration of the vascular network which is the end proposed by "Acupuncture, Vaccination, or other - to destroy the continuity of the Vascular communication in isolating the tumour by means of a circular incision, including the Whole of the tumour. To remove entirely the Whole of the Morbid tissue, either by the application of the actual or other caustic - by surrounding it with a ligature or excising it with a knife. The question comes to be, which is the most preferable? Each has succeeded - all have failed. The Mode of treating these tumours by Tonic, or
of use.

Astringent application, is seldom if ever, scarcely succeed. Application of any kind are rarely made use of unless they show a disposition to increase. The application of astringents, supposing it to succeed at all, must necessarily require a considerable time for the accomplishment of its object, during which time the tumour may acquire a rapid development, and shall have lost time which might have been employed in removing the disease by other agents.

In the hands of a6, this method seems to have succeeded; but the case was that of an 
Erectile Tumour in the orbit, and some months were required for the purpose: this is one of the 
very few cases in which this mode of treating the disease has succeeded. The operation of 
placing a ligature around the arterial trunks by which the tumour is presumed to be supplied is another uncertain mode of curing tumours.

The principle upon which we resolve, in the employment of this mode of treatment is, as I 
have already stated, to lessen the quantity of 
blood which is ordinarily carried to the tumour.

Wherever the tumour be situated, however near to the disease we can apply the ligature.
we cannot entirely cut off the supply of blood — to complete it. The anastomosis, I reflect, over the whole of the body. Mr. Syrme seems to think that the ligature is the best — most preferable remedy in some cases, so he gives us the following: "The papillary excrescence, which are just below the inner side of the verge of the hand hold a middle place between "aneurisms by anastomosis" and laceri. They throw out a jet of arterial blood when injured, but their hemorrhagic disposition is not nearly so strong as that of the former of these diseases. Their situation precludes excision, and the ligature ought always to be chosen as the best means for removing them." Pelham appears to have been the first who applied the ligature in the way I have spoken of for Erectile Tumors: he tied the external carotid for a "fungous disease" occupying the temple of the external ear but without success. Indeed, when tumours of this kind affect the head, there is much difficulty in determining upon the best mode of treatment; when they affect the orbit, ligature of the common carotid seems to be effected.

The Case of Trevor, Dalrymple & Coxx are
authentic. When the tumour is seated in, or posterior to the Temporal Joffa, the same operation will not cure it. This is well marked in the case of Roux: the tumour occupied the orbit extended to the Temporal Joffa: he tied the Common Carotid; the disease of the orbit had cured while that of the Temporal Joffa remained.

He had also cured a similar tumour on the cheek by tying the Lateral & infra-orbital arteries. Lallemant had tied the Femoral artery with success, in a case where the tuberosity of the Tibia was similarly affected. Opposed to these cases are those performed by Mr. Warden for similar tumours on the Cheek; by Dupuytren for one on the ear, & another on the Tibia: by Mr. Strogon for one on the Thumb, in which he tied the Radial & Ulnar arteries: by Mr. Lawrence, in which the ring finger was affected, in which he also tied the Radial & Ulnar arteries. It is worthy of remark, that the ligature of the Carotid for Excitable tumours in the Temporal Joffa has never succeeded when tried by Pettet, Buckley, de Barre, & de la Mosquera: there should therefore be a good deal of deliberation exercised in this mode of treatment & its success, to facility, seem pretty equally balanced.
In the Case of Extrinsic Tumours in the Orbit we may tie the Carotid, as it has proved successful, but in a case where the Tumour is in the temporal Sphynx we are not justified in performing the operation, as the whole supply of Blood is not cut off from the tumour.

With regard to the next mode of treating these Tumours by "Compression" opinion are as various — it had frequently succeeded; amongst others, in the practice of Randolph, Howy, Aternity, Sir J. Porter & Rogers. Mr. Bateman differs from these great Authorities upon Surgery, he says "Pressure made upon these tumours, supposing that we have no point of resistance, will have a tendency to cause an activity in the Tumour to a Subcutaneous extension; even where we have a resisting point the same thing frequently takes place".

It has been recommended that where "Compression" is preferred in the treatment of this disease, it should be made by means of an instrument large enough to fairly surround the tumour and hollowed in the centre to admit it within the circle. In this way we should have no pressure on the diseased structure to excite in it a fatal activity, or to produce a circumferential
Distention of the disease, we should cut off
the vascular communication by which the
existence of the tumour is preserved.

The principle upon which "Acupuncture" act,
is to excite inflammation in the vascular piaeties,
which is immediately followed by a deposition
of coagulable lymph, of obliteration of the Canal.
If this be the Mode of operation of this agent, it
is certain that much time must be spent in
accomplishing a cure by this mean, for we must
cause the Obliteration of the Whole of the
diseased vascular tibular before we cure the
disease. A simple puncture of an Artery,
will not under ordinary circumstances occasion
in it the Development of inflammation; it is
necessary that the irritation occasioned by the
introduction of the Needle should be frequently
repeated before we can calculate with any
Certainty on having produce the action
required to ensure success. Cures have been
effected by this mean under the direction
of Dr. Marshall Hall, by whom the operation
was invented; but it is to be remembered that
we are perhaps occasioning an irritation which
may do harm instead of good, so that we are
perhaps permitting the tumour to enlarge, does to throw more difficulty in the way of removing it with the knife, or by ligature; but lastly it can only be applied when the tumour is either cutaneous, or immediately subcutaneous.

With respect to "Vaccination" which has been recommended by Dr. Sumner or Dr. Young, the principle is to effect the obliteration of the vesicle, by promoting in the skin adjacent to them a supplicative inflammation: to produce this effect it is necessary that the tumour be not deep-seated or no good effect can attend this mode of treatment; and if the child has been previously vaccinated the chance of success by this method is lessened. Then immediately subcutaneous, Mr. Philippi thinks this mode quite as likely, under ordinary circumstances, to succeed as the method by Acupuncture.

With respect to the Section, the principle is the same as in "Acupuncture"; destruction by the actual, or other Century, provided that no portion of the tumour be left, would succeed — but it is a dangerous mode of treatment — the inflammation which it invariably develops gives to the tumour an activity which may occasion a rapid
development. The throwing of the Etcher is occasionally followed by a profuse haemorrhage, which is not easily checked. Here it however a much more serious apprehension which should never be lost sight of. This irritation may, and evidently goes to show, that it has excited the generation of Medullary fungus; it this would seem to be a very sufficient reason why, while we have any other mode of treatment against which there are not these objection, we should abandon Cauterization. The modes of Cauterization which have usually been applied, are emplastic echaroncy, by Wardrop &c. Nitric acid by Peares & others: Nitrate of Silver by Sudried; the actual Cauter by Manoir, Torey &c. Three modes of treating this disease still remain to be described—Inunction proposed by Dr. Churich is performed by making an incision around the tumour, so as to cut off the supply of blood allowing the tumour to slough off: Ligature of the tumour performed either by passing two or more needles under it, so that they intersect each other, & placing the ligature around it under the needles, as proposed by Keat, it performed by Keal Brodie, Sir A. Cooper, & Lawrence; or by passing under
it a needle with two threads, one of which encloses either hemisphere as proposed by White, performed by Lawrence, Guthrie, Lynn & Carlisle, it finally extirpation with the knife. In certain situations, where we can with certainty intubate the tumour, 'Exulation' may succeed. In the Calvarium, for instance, but even here, if the tumour be attached to the pericranium, it may fail, for the supply of blood may be derived through the medium of the bone; the tumour must also be sufficiently circumscribed to make it certain that the portion of the tissue extends beyond our incision.

This operation does not merit adoption; it possesses no advantage over the ligature, or extirpation; and it has the following disadvantage, the tumour must slough off; this effect is more readily produced than when it is strangulated by ligature; it is compared with the knife it has these drawbacks: it leaves a suppurating sore; whilst after extirpation with the knife, you may have union by the first intention.

With the remaining mode of operating, the argument is reduced to a narrow compass. With the ligature you are not certain of removing the whole of the tumour, if you have a suppurating...
surface followed not unfrequently by an untightly
existence. With the knife you have a momentary
hemorrhage, and that is the only source of apprehen-
sion of all counter-balancing considerations, you may
frequently get union before bleeding has
occurred in the operation by ligature.

Another and most important advantage attending
the operation of excision: by the knife is the
power it gives you of examining the wound for
the purpose of assuring yourself that you have
not suffered any of the diseased tissue to remain.

The success of the ligature is entirely dependent
upon the possibility of causing it to embrace a
portion of healthy tissue, or at the least, the whole
of the morbid formation. If this we can seldom
be certain we have done, we must not confide
in the suppuration which follows being sufficient
to remove any remaining portion of the erectile
tissue. With regard to the parts of the body
in which it has been necessary successfully
attempted, I believe the head and face is the only
part in which it has, at a rule been always
successful. The only serious drawback to the
hemorrhage, if the stump be too small, or too
numerous to be secured by ligature, is the

Remember to be secured by ligature. Compassion
must be resorted to. In the ophthalmia, the same
success does not attend this operation for ablation
of accidental tumour affecting the member, has
always failed; indeed it is rarely that they do
not soon re-appear, even though the operation
have
may been followed by a plentiful application of
the actual or other Cautery, amputation of the
member upon which the disease is situated
at a sufficient distance from the disease, is
here too frequently the only remedy.

This variation in the effects may thus I think
be easily accounted for. When the disease affects
the head or face it is usually congenital; and
when congenital whatever may be its seat, this
disease is much less serious than when accidentally
produced. This is true when accidentally
produced or developed, will frequently resist the
employment of those means apparently the best
adapted for its cure; if this is especially the case
when it affects the extremities or the long bones; for
although we may amputate the member upon
which it is situated even 4 or 5 inches from
the tumour, the disease will frequently re-appear
upon the stump, as I related in a case above.

If then the tumour be merely a slight
Deformity, or only a little painful, without any disposition to Ulceration, let it alone; if it occasion hemorrhage which endanger the life of the Patient remove it—although a Cure may not be effected, still the life of the Patient will be preserved, & I think, that as the great aim of Medicine & Surgery is to prolong life as much as possible, you would be justified in doing so.

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