

A THESIS ON

Fibromata,

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By

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Fibromata

According to Boyer, a tumor being any
preternatural eminence developed
on part of the body, any such emi-
nence composed of more or less fi-
brous matter must be wholly or
partially a fibroid tumor. Such
deviations from the normal con-
dition, cannot be other than abnormal
deposits from defective nutrition, an
excess of morbid matter, in or modifi-
cation of nutrition to the part.
Some suppose tumors generally to be
due to an accidental, local irritation
and limited to certain parts of
the system, among the supporters
of this view are Trichow, Rindfleisch

and C. Weber; but that there are largely inherited tendencies, and innate predisposition to the development of many such growths, clinical experience, and the views of able writers bear ample testimony. That there is local irritation manifested by more, or less inflammatory action or disturbance there can be no doubt, yet since this may occur wherever found, and such growths may be found anywhere throughout the system, it follows that some other than mere local irritation must be necessary to create them, and attend their growth. Either some special irritants may form in the fluids of the body, and so directly act upon one or other tissue or any previously existing

inflammation may promote their growth in those predisposed, according to Billroth. In either case we can conceive of a tendency to development upon the least provocation as an essential cause, but it seems probable the apparent, local, specific peculiarities are due to the intimate relations of the entire organism.

It was not until the close of the 18th Century that the true nature of fibroids was understood. Dr Wm Hunter then wrote upon them, but to others belongs the credit of additional light. As late as 1844 Dr Ashwell regarded them essentially the same as cancerous growths. Laget wrote con-

concerning them, "there can be no doubt
 that, in general they are completely
 innocent," and added "occasionally
 tumours are found in which both
 general, and microscopic characters ex-
 actly resemble" he believed the ordi-
 nary fibrous tumour, differing from
 them, in that "they recur once or more
 after removal, and form not only
 in their first locality but in inter-
 nal parts remote from it." To these
 "till their characters are more per-
 fectly known", he gave the name
 "Malignant Fibrous Tumours".
 These yield gelatine on boiling, and
 their chemical composition was
 found to be in all respects like that
 of the ordinary fibroid yet closely

resembling cancers in their recurrent growth, and tendency to sloughing or ulceration. That they are not the carcinoma fibrosum described by Müller, and others was proven by the fact that they contained no cancer cells, and that the fibrous tissue in such carcinoma has a peculiar hardness, and stiffness unlike that of normal fibrous tissue, and its imitation in the fibrous tumors. Later writers say their non-malignancy is now fully established. Recurring fibroid tumor the same writer describes as having capsule, and elongated corpuscles as if developing into fibres, and also prone to return after removal, while his so-called

Malignant have partitions of fibro-cellular
 tissue, and the several lobes are intersected
 with obscure opaque white fibres.
 A few shrunken nuclei also appear among
 the fibres, but no cells are found.
 One author calls the Recurring fibroids
 "albuminous sarcoma" believing them
 to be transitional to cancer, and Paget
 regards not only their aptness to recur
 but tendency to graver characters, indica-
 tive of their close relation to malign-
 ant disease. The variety
 of opinions touching the structure, ap-
 pearance, and situation of fibroids has
 led to a variety of names. Baillie called
 them "hard tubercles", Cooper "sub-carti-
 laginous", Paget, and others fibrous now
 more commonly fibroid or fibroma.

Some prefer myoma, and fibro-myoma regarding them more correct terms, whilst Broca because of their similarity to the structure of uterine tissue, prefers the term "Mystruma". The terms fibro-muscular, fibro-elastic, and fibro-cartilaginous are generally used to indicate a modification or imitation of the tissue in or near which they are severally found. Cruvelhier observed that the formation of polypi or outgrowths consisted in hypertrophy of the tissue of the uterus, but did not observe the similarity of structure of the fibrous tumour with that of the muscular wall of the uterus in which it takes its origin. This was reserved for Vogel. Cruvelhier recognized both a

growth, and an outgrowth - fibrous
 polypi, and fibrous tumours - the
 one he called "corps fibreux implantés,"
 the other "corps fibreux non-implantés."
 Coque's identity seems to justify a
 more general use of the term myo-
 fibroma, and not simply as restric-
 ted by those who apply it alone to
 such tumours of the uterus, or exclude
 the prefix "myo" when the modification
 heretofore alluded to seems to necessi-
 tate such affixes as "elastic" "cartilagi-
 nous" and the like. In these cases
 there seems no reason why both
 prefix, and affix might not be retained
 thus: myo-fiber-cartilaginous etc.,
 and an important portion of the struc-
 ture thus kept prominent.

The typical appearance of a fibroid tumor is that of a hard, dense, resisting mass usually round or oval, and when cut presents a greyish basis substance intersected with white fibrous lines resembling fibrous cartilage, a creaking is also perceptible under the knife. The arrangement of the lines is not always the same nor the color of the substance. On the hardest, and least vascular a concentric arrangement is seen, in others curves or waves, and in others as those in or on the jaw bone the fibrous structure is scarcely to be discerned with the naked eye. Usually a complete capsule envelopes the tumor. Occasionally elastic fibres, plates or spicules of bone, and cartilage may be found

interrupted with the fibrous tissue.
 The vascularity of these tumors is in
 proportion to the partitions formed
 by the cellular tissue, since the
 blood vessels ramify it; thus afford-
 ing various degrees of vascularity
 as well as of lobular arrangement.
 Fibro-cystic, and fibro-calcareous vari-
 eties are considered the result of disease
 and degeneration, the former due to
 a softening or liquefaction while in
 the latter there is a deposit of calca-
 reous, and other salts which expelled
 per vaginam has been described
 by some a disease, termed "uterine
 calculus." The formation of
 cysts in fibrous tumors is not rare
 from liquefaction or effusion but

when of small size, and smooth, and
 polished internal surface. Paget
 believes it more probable that their
 production depends upon a pro-
 cess of cyst formation corresponding
 with that traced in the cystic disease
 of the breast, and other organs.
 The hydatid testis described by Sir
 Astley Cooper he regards an example
 of this kind. Tumors of this charac-
 ter are found but rarely in the
 uterus it is said, the fibro-cystic
 "chiefly" found there according to some
 being probably due to local softening.
 Sometimes one large cyst is mistaken
 for an ovarian, and accordingly tap-
 ped. In one case "fifteen pints of
 fluid" were thus drawn from the

uterus. With regard to the fibro-calcareous the deposit of chalky or bone-like substance may be wholly external or distributed through the whole tumour, these deposits made in place of the fibrous tissue the tumour is henceforth inactive. Most writers deem the uterus the most frequent seat of fibroids.

"If Bayle's estimate be true," says Paget "that they are to be found in twenty per cent. of the women who die after thirty-five years of age, we may hold that fibrous uterine tumours are the most frequent of all innocent tumours". McClinton says "without question the most frequent organic disease of the uterus

if we except inflammation, and its effects is fibrous tumor. Cruveilhier also called attention to the remarkable affinity of the uterus for these bodies, and Paget regards those as occurring near the uterus limited to such parts as contain an extension of fibrous, and muscular tissue peculiar to the uterus, as the utero-rectal, and utero-vesical folds, and the broad ligaments. Some say that fibroid tumors of the neck are most common especially of the parotid glands, and the structure of these they deem the most typical form.

Fibroids of the nerves are also numerous the neuromata furnishing innumerable illustrations, existing

Sometimes in every nerve of the body and amounting to twelve hundred or more in the same person.

Bilroth says "most neuromata are fibromata or fibres-sarcomata in the nerve trunks." The subcutaneous fibrous tumors according to some authors are so modified in their formation that they might as readily be termed fibro-cellular, but they are not infrequently found bearing all the features of a true fibroid and on the removal of one it was found to weigh twelve pounds.

Microscopically such tumors are regarded of low development, containing elastic tissue, and formative elements not unlike new tendons;

such are found in the neighborhood
 of joints. Dr Warren says they may
 be produced by rheumatism & syphilis
 but more commonly in consequence of
 excessive muscular effort. He nar-
 rates the case of one who after per-
 forming some wonderful muscu-
 lar feat developed such a tumor,
 and was destined to life-long suf-
 fering. But eighteen months of
 confinement, and solitude, and strict
 compliance, with his orders, result-
 ed in a cure which Dr W. firmly
 believes could not have been other-
 wise effected, and adds "its slow
 progress, and slower cure, and effect
 on the muscular action of the limbs
 agree with the pathology of no other

texture than the fibrous."

Fibromata of the periosteum are not infrequent especially about the jaws. Gilchrist says, "the Bones of the skull, and face are particularly liable to this disease especially the inferior turbinated bone, and from this point fibromata project into the nasal cavities, and fauces as polypous growths; by pressure they may cause reabsorption of the bone and grow into the cranium or antrum Highmorei; they are particularly vascular." In structure he considers them "almost always fibrosarcomata." He also mentions fibromata on the tibia, and clavicle, and in the bone itself as in the

upper maxilla, which "were strange combinations of chondroma, and fibroma". Paget regards fibrous tumors of the periosteum rare on any other bone than that of the jaw, but that "these to both touch, and sight may present the characteristics of the ordinary fibrous tumors". When divided the majority of them he thinks more uniform than the fibrous tumors of other parts. Within them are to be found the minute spicula of bone heretofore referred to. These tumors may grow within the jaw separate, and distinct and so distend its sides or they may be out-growths of the surrounding tissue or bone itself. Paget believes

Mr Hawkins quite right in his view
 concerning fibrous "epulis", that it is
 a tumour growing like most of the
 other tumours from the bone, and
 periosteum, and continuous with
 them, and adds that it is prominent
 and lobed because it grows into
 the open cavity of the mouth, and
 it resembles gum only because it
 carries with it or invokes the
 natural substance of the gum.
 When fibrous tumours are found
 about the scrotum, and labium
 they are usually fibro-cellular,
 and may be mistaken for elephantiasis,
 but may be recognized in that they
 are limited, and circumscribed masses
 and not mere outgrowths.

They will sometimes appear to grow rapidly when there is simply an increase of the fluid, and no new formation of solid tissue. As they are innocent Erichson says, "they may be removed without hesitation." Those on the lobules of the ear occurring after piercing, and tending to recur are regarded by many as having the aspect of distinct fibrous tumours, yet Paget thinks there may be some doubt whether the growth be a proper tumour or a chylous growth of the cicatrix tissue, formed in the track of the wound." For one case which he cites both lobules were cut off with the tumours, another formed shortly after which was excised, and during the ten years previous to the

narration there was no return.

Occasionally fibroids are found in the breast. On the 18th of October, 1877 during the surgical clinic at the Woman's Hospital, Dr. Wilson removed a small tumor from the breast of a white girl aged seventeen.

He found it to be a strictly fibroid growth. The cyst was also removed, and a small portion of the mammary structure, considering it safer should it in future give any evidence of malignancy. Interrupted sutures were then introduced, a compress applied to obliterate the cavity made by the tumor, and if possible prevent any action which would hinder the healing of the wound by first intention.

The dressing was then made secure with adhesive plasters, and the desired result obtained. Tincture of the Chloride of Iron was given to prevent erysipelatous inflammation.

Fibroids are usually solitary except in the uterus and ovaries, where they have been found in large numbers. They are rarely found in the uterus, and other parts at the same time.

According to some their development is usually through "mucated blastema." Though usually slow of growth, and painless, yet they enlarge it is thought in proportion to the resistance offered by the more or less yielding parts around.

They range in size from a pea to

a pumpkin or remaining stationary, as it were may exhaust the patient by discharges, and "a low grade of constitutional irritation often attended by hectic fever". Klot divides fibroids of the uterus, into two classes simple, and compound each presenting three varieties, sub-mucous under the mucous membrane projecting into the uterus, sub-serous (when under the peritoneum), and interstitial if in the wall of the uterus. One of the usually admitted predisposing causes of fibroids is Race, the African being peculiarly liable it is said, but no statistics at our command throw any light upon this subject nor are any reasons offered to account for this statement.

Age is another those between thirty, and forty-five years being most often attacked, also sterility, and menstrual disorders of long standing. Thomas says, that "fifty-seven years of research have thrown no light upon its etiology". The sub-mucous variety or polypus, is most efficient, in promoting the complications, and exciting the disorders which so frequently accompany these tumors.

Among the diseases which may be confounded with fibroid tumors, maybe mentioned Pelvic Hematocoele, but its ingress being both sudden, and painful, and the tumor, immovable thus entirely differing from fibroids, its differentiation is thereby rendered

easy. Cellulitis too differs in every respect from fibroids though it may sometimes be confounded with them. In addition to the points of difference in common with those of "hematocle," it is accompanied by fever, and fixes the uterus, fibroids show no such symptoms." Displacements of the uterus with which they may sometimes be confounded may be recognized by the probe, and differentiated by "conjoined manipulation and rectal touch." Solid ovarian tumours are most apt to be confounded with fibroids particularly when firmly attached to the uterus. But with fibroids there is usually menorrhagia, leucorrhœa and displacement, whilst with ovarian

tumors there is no leucorrhoea, no menorrhage as a rule, and the uterus not so much displaced as with fibroids. The tumors when fibroid are often multiple in the uterus, the sound indicates the organ enlarged, and if made to move the uterus the hand over the abdomen may appreciate movement of the tumor also.

When ovarian there is usually but one, the uterus is not enlarged and may be moved without moving the tumor. By digital examination per vaginam, an irregular mass may be felt continuous with the uterus if fibroid, whilst the ovarian tumor so examined is smooth, and not continuous with the uterus. Ovarian fluctuation will aid in determining its type, it being fluid, or solid if strictly fibroid, it will be hard.

and if fibrocystic here and there a soft spot may be found intermingled with the hard. With regard to the fatality of fibroids authors differ. Thomas says "Death from them is not so infrequent as to warrant an entirely favorable prognosis." Klot says, "at the climacteric period it is such that undoubtedly forty per cent. of the uteri of females who die after the fiftieth year, contain fibroid tumours." Sometimes they attain a moderate size, and remain so, at others their growth seems to be continuous weighing as much as fifty, and seventy pounds, and the hemorrhage occasioned by them most exhausting. At the approach of the menopause however their growth seems impaired, a certain degree of atrophy ensues

and fatty, and calcareous degeneration are likely to occur; or attachments may be severed, and the foreign body expelled. But such expulsion, is likely to be attended with serious consequences if following labor or even independent of labor; "Metritis, and pyæmia may follow attended with excessive hemorrhage", and Barnes considers that the process may simulate abortion so closely as to be mistaken for this event. If not expelled after labor any failure in contraction of the uterus may be due to its retention. Barnes would at once resort to styptics the perchloride of Iron being preferred. He would remove the polypus with the wire crescent without delay, and if there was hemorrhage from

the pedicle he would check it by compressing
 and the above named styptic. Sometimes
 inflammation is set up followed by
 sloughing, and gangrene. In this and va-
 rious ways nature not infrequently
 effects a cure. Though as a general
 rule these tumours recede at the climac-
 tere, Barnes observes that "the constitu-
 tional ferment which frequently attends
 this critical period of life seems to deter-
 mine in the temporary exacerbation
 of any form of uterine disease existing
 at the time, and thus they not infre-
 quently acquire an enormous size".
 For the discharges which attend these
 growths, and cause so much suffering
 rest, is invaluable during the menstrual period.
 Thomas advises such antidiarrhoeics as Chloro-

Titriol, Tincture of Cannabis Indica, etc.
 Barnes regards the perchloride of Iron
 invaluable. The course, and dura-
 tion of fibroids being closely allied to
 the changes peculiar to the uterus both
 impregnated, and unimpregnated it follows
 that because prone to increase prior to
 menstruation, and decrease thereafter the ap-
 parent decrease on the application of cer-
 tain remedies cannot be wholly attributed
 thereto. The further treatment of these tu-
 mors, as of others must vary according to
 their cause, situation, and condition of the
 patient, but chiefly according to the a-
 mount of discomfort they occasion.
 As harmless as is often the case they may
 be let alone, and nature allowed to take its
 course. Ante flexion, and retroversion may

be corrected by the use of pessaries, but or otherwise as the case is more or less obstinate. Pressure on surrounding organs or parts may be relieved by the pessary or it may be only by the removal of the obstruction. The bowels should be kept regular, and all the secretions freely promoted. Pelaton Brown, and McAntrick were the first to make section of the neck of the cervix to limit hemorrhage due to congestion, from the presence of fibroids, but Thomas thinks more powerful effect gained by cutting directly through the coat of the tumour so as to cut its capsule, superficial layer of fibres, and blood-vessels. But these are only palliative measures, their removal by surgical means being oftentimes a necessity when the

disease, is rendering the patient most uncomfortable or endangering her life.

Among medicinal remedies Ergot, Codine, and Musiate of Ammonia have been frequently used to aid their removal, and with good results especially the first. In 1845 Dr. Athie introduced the use of ergot for this purpose, and has since employed it. He says, "it acts in two ways, first on the muscular tissue of the uterus, and second on the capillary circulation of the tumor itself by contracting its smaller vessels." He has never seen a fibroid quietly disappear under its sole influence, and while in many the size has been diminished, in others no effect has been produced. It has been used hypodermically with quite extraordinary success, but Dr. A. doubts whether its

increased action is sufficient compensation for certain inconveniences to patients, as well as greater pay upon the medical attendant. In his admirable paper on the treatment of fibroid tumors of the uterus, (read before the International Medical Congress of 1876), Dr. Atlee divides them into two great classes: tumors with hemorrhage, and tumors without hemorrhage. Under the former he first mentions, fibroids expelled from the cavity of the uterus or in the vaginal canal which he would remove by torsion. When sufficiently large to fill the cavity of the uterus as the head of a child, he would administer an anæsthetic, and extract with small forceps, being careful to make a due amount of pressure above

the pubis, thus gradually forcing the tumor through the os externum, and out.

Of the three methods by which fibroids may be detached the écraseur, knife, and enucleation Dr. A. prefers the latter, the after treatment with haemostatics, and antiseptics being most essential. He deems enucleation the safest plan to avoid inversion of the uterus, from the fact that tumors, and pedicles are usually sessile when found in the cavity of the uterus, and demanding immediate attention. Interstitial, sub-mucous fibroids he considers favorably situated for the amenable action of ergot, and would not employ surgical means unless the cervix were involved; in which case he would fully dilate os, and cervix, administer

ergot freely, and "carefully introduce a sharp
 pointed bistoury, burying the knife well
 in the fibrous mass, and carrying it down-
 wards till it makes its exit at the lower
 border of the tumor." This method has
 been found to stop the hemorrhage when
 nothing else would. Here too he thinks
 emulsion should be attempted if the tumor
 is not too large. Septicæmia may re-
 sult if not removed at once therefore
 ergot, and antiseptics should be given
 "by mouth, lungs, and vagina, and pa-
 tient sustained till the tumor is re-
 moved by the surgeon or is discharged
 in a softened mass resembling wet
 tow." Interstitial proso, or intra-umeral
 he would endeavor to remove by the hy-
 podermic use of ergot & covering the sites

or pressure should first be removed from the tumor before it can be absorbed; and the administration of the muriate of ammonia continuously or some alterative or cathartic, attempting emaciation as a last resort. A very interesting case is related by Dr. A., of a patient having a tumor in the lateral part of the fundus uteri not over two inches in diameter, and found to be intra-ligamentous. Its existence was not suspected until after the death of the patient, and because she was so fat, Dr. A. doubts whether the operation would not have been impracticable as well as very difficult. In another such case he would feel it his duty to remove the diseased organ.

Ovarian operations were performed by him
 upon one patient, between the years
 1860, and 1867 for the removal of what
 he terms "Recurrent fibroids." She
 remained in good health, without any
 return of the growths two or three years
 after which she was lost sight of.
 For another case, "a rough, irregular,
 tumour-like mass presented in the va-
 gina upon what seemed an inverted
 uterus," it was removed, and found to
 be the body of the uterus. Whereupon
 the following query suggested itself to
 Dr. A. "Though an error of diagnosis,
 will not the amputation of the body or
 entire removal of such a diseased organ
 be the best mode of treatment, keeping
 in view the comfort, and life of the

patient? We can conceive of circumstances which would seem to warrant even such heroic treatment as this, suggested, and favored by Dr. A. Interstitial, sub-peritoneal fibroids being unattended with hemorrhage, and the use of the knife unsafe because of their situation, (after administering opium to change the locality of the tumor, if an operation must be performed) Caesarean would here seem in place, taking the necessary precautions to guard against septicemia, and fatal consequences which might ensue. The pedunculated, peritoneal which is also unattended with hemorrhage, and not within the reach of uterine contraction, he would treat with serbifacients,

such as the Muriate of Ammonia, and if necessary would resort to Gastrotomy here also, but the larger the tumor the more dangerous the operation, the size would therefore determine the practicality. For interstitial, and cervical fibroids, another of the second class, "a simple incision" may answer at times, treated afterwards with some escharotic or "enucleated by the finger" after being duly severed from its attachments. Myomatous degeneration of the uterus indicates entire extirpation of the organ, but this depending upon the following circumstances: "a pueris free from morbid deposits, vagina long, and extensible, and cervix normal," Dr A. would then regard

The chances of life equal to ovariectomy.
 Fibrocysts originating from the wall
 of the uterus, just where the cervix, and
 body unite, and usually pedunculated
 are likewise out of the reach of ergot.
 Galvanism it is thought might be
 effectual in such a case.

A tumor of this kind was explored with
 trocar, and cannula, cells were broken
 up with the sound, and gallons of
 fluid removed. Once acetic acid
 was injected, and muriate of Ammo-
 nia administered internally, the com-
 bined treatment proved beneficial.
 "Twenty months after the patient
 was in good health, the size was
 much diminished, though the tumor
 was still there."

Dr. A. believes the Muriate of Ammonia acts through its alterative, resolvent, and sorbefacient properties as well as alkaline, and is therefore of great value. Though believing extirpation the only radical cure for this kind of tumor, he adds, "an apron of silk oil-cloth next to the skin sometimes causes their entire disappearance".

To promote the absorption of fibroids the Iodide, and Bromide of Potassium have been used with good results, in doses of from five to ten grains, three times a day, also waters of Mineral Springs. *Factus in utero* sometimes causes absorption, and tents of sponge or sea-tangle are recommended by Thomas, to accomplish the same.

purpose. The use of the
 eraser is not only attended with
 less hemorrhage, but inflammation
 it is said is less likely to occur
 than after other operations. But
 as this operation can only be performed
 where there is a neck to which to
 attach the chain, some other measure
 has been found expedient.

Because of the layer of loose, and
 cellular tissue by which sub-mucous
 and even interstitial neoplasms are surround-
 ed, the idea of enucleating fibroids was
 first suggested to the mind of Telford
 in 1840. Amussat put the theory into
 practice, and Dr. Allee is said to
 have been among the most success-
 ful in its use. The operation

is somewhat as follows: After making a straight or crucial incision over the surface of the tumor, and through its capsule, the fingers or a blunt instrument are swept around the mass thus severing its attachments, and turning it out of its bed, at the same time lifting it from below upwards. On the 10th of January, '78, at the Roman Hospital, a fibroid was thus removed by Dr. Packard, from the posterior portion of the forearm just below the elbow. The patient was a white man aged twenty-seven. After its removal the part was thoroughly cleansed with dilute carbolic acid, and water; interrupted sutures were then introduced, and the wound dressed with compress and bandage.

dage. Opium is thought requisite after this operation, but was not indicated in this case though no anæsthetic was taken.

With regard to Gastrotomy Thomas says, "if the steady decandence of the patients strength make it certain a fatal issue must ensue, the operation in the case of a sub-peritoneal tumor would become a matter of duty, and not remain one of choice". Barnes says, "in cases of formidable obstacle (to labor) from cancerous or fibrous growth, recourse to the ultima ratio - the Cæsarian section may be indicated". But such are the fatal sequela that the profession is largely divided upon this point.

Thomas thinks Gastrotomy much less promising for fibro-cystic or uterine than ovarian tumours, yet "if pedunculated fibroids proper not much more dangerous than the ordinary operation of Ovariectomy."

The Phil^a Medical Times of November, '76, mentions the extirpation of large fibro-myomata of the uterus by Laparotomy, "particularly by supra-vaginal amputation of the uterus."

Two such operations were successfully performed by Keper it is said, one situated upon the surface of the organ, the other intra-parietal. Thus we have found that nature sometimes effects a cure of fibroids in various ways, that the me-

dicinal treatment is largely palliative, but that extirpation of said tumours has been proved a necessity by the results, and the successful performance thereof entitles surgical operations upon such growths to greater favor, and consideration.