

ORIGINAL ARTICLES

PEYRONIE'S DISEASE OR FIBROUS
CAVERNOSITIS:
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DEFINITION.—Peyronie's disease, fibrous cavernositis or plastic induration of the penis, connotes an abnormal fibrous thickening or fibroma elaboration limited to the tissues over the dorsum of the penis. The septum or sheaths of the corpora cavernosa are involved with extension in an asymmetric manner into the tunica albuginea. The unique character and unequal distribution of this fibrous change ultimately makes for painful angulation or deformity in the erect penis, so that coitus is difficult or impossible.

Purpose of This Article.

This article has a very modest and simple objective. It seeks to focus the attention of the general practitioner (since all urologists have been initiated) upon that morbid entity captioned "fibrous cavernositis," to the end of a better understanding for the sufferer and his symptom complex. Contrary to custom in treating of fibrous cavernositis, this article shall attempt no diligent abstract of the exhaustive bibliography; it shall constitute no *vade mecum* nor syllabus of authoritative quotations; it shall venture no new descriptive synonym; it shall recount no unusual histological discovery; it shall compile no grad-grind table of statistics, and it shall undertake no blitzkrieg on the disease by reason of an infallible or personalized remedy. In fine, this paper expressly concerns itself with the more practical aspects of fibrous cavernositis, and hopes to foster thereby wider recognition of the malady and a more sympathetic treatment withal.

Need for Recognition of Fibrous Cavernositis.

The need for more universal recognition and fuller comprehension anent fibrous cavernositis is self-evident to any urologist of experience. Moreover, there exists currently an exiguity of scientific literature treating of the subject, save in highly specialized journals with a narrow circulation. Almost twenty years of urological observation, plus close professional rapprochement with a host of general practitioners during this interval, have sponsored certain tenets with regard to the malady. These might be tabulated somewhat as follows:

1. Perhaps no *obvious lesion* (leastwise not in the urological realm) constitutes a greater stumbling-block for the general practitioner, and certainly none is more often muffed by him. It is astounding the number of men who have never even heard of fibrous cavernositis. Others quite innocently inaugurate treatment for chordee, stricture, "enlarged lymph gland," dorsal thrombophlebitis,

lymphangitis, or cancer. To substantiate this contention, a series of twelve referred cases will directly be examined, eleven of which were either erroneously diagnosed or not diagnosed at all. At the behest of accuracy and for comparative purposes, this series is arbitrarily limited to patients under observation and treatment for at least nine months. (Seven additional cases are not included because they failed to tarry the prerequisite time and with characteristic impetuosity did a "fade out"—never to return.)

2. Few diseases have a greater psychic complexity and in none is the mental anguish more genuine. Mindful of the basic nature of the sexual impulse and its relation to the personality ensemble, the effect of copulative frustration, either by reason of pain or physical distortion, or both, is an item of first magnitude. The corresponding reaction depends somewhat upon the age, temperament, and actual degree of contravention.

3. The victim is usually afflicted, likewise, with a wanderlust that thwarts prolonged observation and defeats rational treatment. With all the zeal of a Sir Galahad, he organizes a quest for cure. In vacillatory crescendo he "makes the rounds" and often ricochets into the charlatan's office. Time, money, and effort are vainly expended, so that eventually the patient becomes despondent, uncoöperative and disgruntled, or "sours" on the profession generally. Suicide may close the picture.

4. Since no form of therapy is currently entirely satisfactory (as attested by the number and diversity of remedial expedients), it still becomes necessary to invoke the art of practice as in the days of yore. The modern physician is long on science, but short on art.

To justify these tenets and to expedite the objective, it seems logical, first, to examine the clinical material and then to stress some of the highlights of this morbid entity.

FIBROUS CAVERNOSITIS

Synonyms.—This morbid entity was first described by that celebrated French surgeon, Francisca de la Peyronie (1678-1747). The many contributors since his time have added but little to his original exposé, save an imposing array of formidable synonyms and fantastic etiological theories. A few of the commoner synonyms are, to wit: Peyronie's disease, Van Buren's disease, plastic induration of the penis, fibrosclerotic plaque, indurated plaque, enchondroma, fibrosclerosis, nodes, ganglia, plastic concretions, and fibrous tumor of the corpora cavernosa.

Occurrence.

Peyronie's disease is no respecter of persons, but attacks with equal facility men in all walks of life. The commonest age of visitation is from fifty to sixty, but not without some rivalry in the ensuing decade. Occasionally, much younger men are harassed similarly.

Judgment based solely upon reported cases (presently some 630) would seem to indicate the rarity of this malady. Conclusions of this sort

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CLINICAL MATERIAL										
INITIAL	AGE	COMPLAINT	DURATION (RELATIVE)	TYPE OF LESION	DIAGNOSIS (REFERRED)	GONORRHEA (PREVIOUSLY)	SYPHILIS (MISSESMAN)	TREATMENT	OBSERVATION PERIOD (RELATIVE)	RESULT
I. R. P.	34	Pain—bending to right side	18 months	Nodes—right and behind gland	Enlarged lymph gland	No	Yes	Antibiotic Operation	20 months	Improved 6 months scar recurred
2. L. S.	61	Pain—bending to right side	?	Nodes—midline and right corpora	Chordee	Yes	No	K I Operation	9 1/2 mos.	Improved
3. C. H.	53	Pain—bending to left side and upwards	3-4 years Progressive	Midline—left corpora and base	Lymphangitis	Yes	No	K I Operation	14 months	Improved initially scar recurred
4. Y. C.	57	Pain—bending upwards	3 years Progressive	Nodules at base and midline	Chordee	No	No	X-ray K. I.	2 years	Fair
5. M. H.	58	Pain—slight bending to left side	3 months	Midline—left side	Chordee	Yes	No	X-ray K. I.	10 months	Improved
6. M. V.	63	Pain—some bending upwards	2 years Progressive	Midline and base	Stricture	Yes	No	X-ray K. I.	14 months	Slightly Improved
7. J. H.	59	Pain—no angulation Flaccidity (Partial)	6 years Progressive	Midline and both sides equally	Dorsal thrombophlebitis	?	No	X-ray Au No-thiosulfate	12 months	Improved
8. B. D.	55	Pain—slight bending to left side	3 months	Midline—left side	None	Yes	No	Radium element K. I.	9 months	Questionable
9. H. Z.	56	Slight pain little angulation	6 months	Midline	Chordee	Yes	Yes	Radium element Antitoxic	7 years	Definitely improved
10. W. L.	51	Pain—right angulation	10 months ?	Midline—right side	"Fibro-sclerosis"	?	Yes	Antitoxic Diathermy Au No-thiosulfate	5 years	No change
11. W. W.	57	Pain—no angulation	3 years Progressive	Midline—symmetrical	Cancer ?	No	No	K I Diathermy Au No-thiosulfate	18 months	Slightly Improved
12. J. B.	53	Pain—right angulation	1 year	Midline—right corpora	?	Yes	No	K I Au No-thiosulfate	16 months	Slightly improved ?

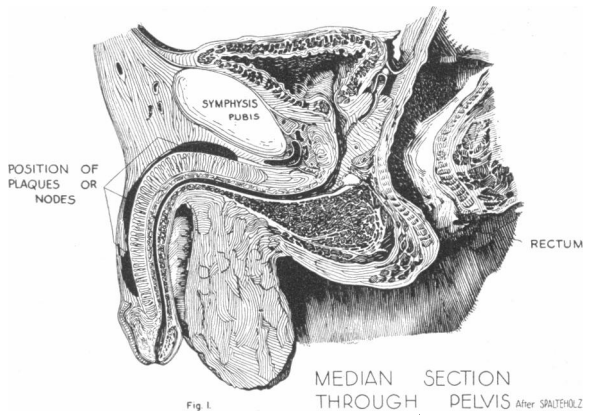


Fig. 1. MEDIAN SECTION THROUGH PELVIS After SAUTHERZ

are likely erroneous, because most of the afflicted are seen by the general practitioner and seldom reported. Reticence or embarrassment (his manhood being challenged) may interdict consultation. Manifestations may be slight and punctuated by long periods of quiescence. Modest anatomic change, especially if attended by more equable or fairly uniform distribution, provokes little inconvenience. Homogeneous and adjacent or axisymmetric nodes facilitate counterpoise in the erect organ and thereby tend to offset or negate distortional influences. Moreover, since these symptoms are prone to occur in an era of shifted sexual values (elimination now holds the greater psychological interest) adequate compensatory adjustment may be forthcoming without medical advice.

Clinical Factors.

Symptoms are rather consonant to the degree, extent, and type of morbid deviation. Invariably, some shade of copulative difficulty brings the patient to the physician. Pain, which is experienced only when the phallus is turgid, may discourage or actually preclude coitus. The erect organ may bend upward (when maximum involvement is at the base) or be angulated to one side (always in the direction of the greatest pathologic change because of resultant segmental inelasticity) in such a manner as to hinder or technically prevent intromission. A combination of both pain and deformity may accrue with accent on either.

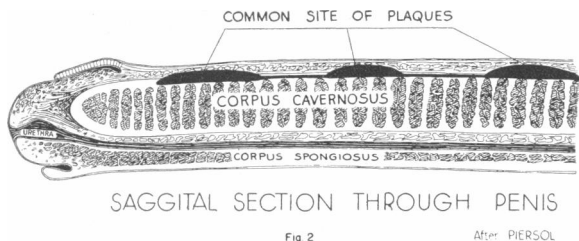
Examination of the penis discloses a palpable thickening limited usually to the dorsum. This thickening may be most conspicuous in the midline along the septum and advance in a linear manner over the sagittal plane of the phallus, only to spread laterally in an unequal fashion across the sheaths of the corpora. One, or a series of plaques or nodes, often bosselated in character, with distinct edges, either in the midline or sweeping laterally toward but not involving the caput or glans, are plainly felt. These nodes (which sometimes are hyperesthetic to touch, but more often

responsive only to firm compression or vehement squeezing) are never attached to the skin above nor do they invade the bodies of the corpora cavernosa beneath. The corpus spongiosum is never affected (Figs. 1, 2, 3). These plaques have usually a rubbery or cartilaginous consistency, but may be dense, unyielding, or even bonelike in substance. For a graphic picture, one might conceive the phallus bedecked with a miniature western-type saddle, the saddle to be equipped with a pelican horn, or horns, and either being somewhat askew in position or having an abbreviated skirt and fender on one side. In our brief series, the "horns" were oftenest in the midline or behind the caput, rather than at the base of the penis.

The clinical course of Peyronie's disease is both whimsical and quite unpredictable. No definite pattern is followed. That this disease is both insidious in onset and slow in development is manifested by the years which often lapse between the prodromal symptoms and the time when the physician is first consulted. Moreover, clinical observation has proved that this disease may lie dormant for long periods without progress. Improvement may occur spontaneously with or without treatment. Spontaneous cures have been reported, but are equivocal. Any change, whether benevolent or sinister, is apt to be subtle and dilatory in character. Prognostic forecasts should, therefore, be guarded and cognizance taken of this bizarre demeanor.

MORBID ANATOMY

The findings in our three operative cases were nearly identical with variance only as to distribution. In each instance, a pearl-gray, glistening scar-like tissue of unbelievable density was moulded heterogeneously and almost inseparably over the septum and dorsal aspects of the tunica albuginea. At divers points, this tissue, with rather a striated appearance, was concentrated into mounds, heaps, or nodules. Extirpation was difficult, and the knife blade rasped harshly over the cut surface. Histologic sections revealed a cellular architecture not unlike hard fibroma, *i. e.*, compact bundles of connective tissue with a paucity of cellular elements. Here and there coarse collagenous fibers arranged in close parallel formation were apparent. No inflammatory change nor round-cell infiltration was evident. No calcific deposition nor osseous metaplasia was discernible.



ETIOLOGY

The causative factor is unknown. Trauma appears more plausible than factual. From a practical standpoint, actual trauma—worthy of etiologic note—must be vouched for and accompanied by congruent physical evidence. The rôle of lues, gonorrhœa, diabetes, gout or arthritis is unproved. Moreover, effective treatment of these coexistent disorders is rarely productive, and antisypilitic therapy (if the Wassermann is positive) seldom avails herein. The age incidence suggests a degenerative or retrograde change bound up with the problem of senescence.

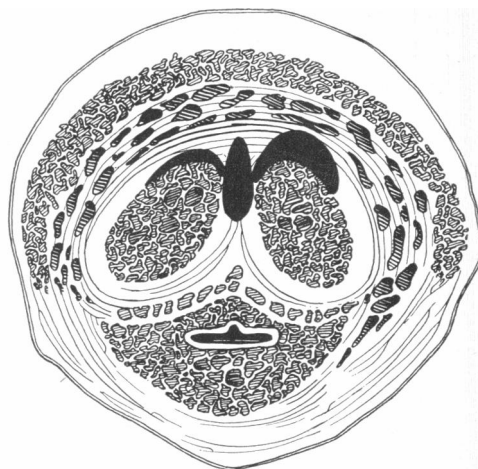
This fibroma, or keloid-like formation, may eventually undergo metaplasia, with transformation into cartilage or osteoid tissue. That such a distinctive pathological entity could be a phylogenetic throwback, or even remotely related to the os penis or os priapi, an anatomic and physiologic structure normally present in certain lower animals, seems fatuous. Pohl,¹ who has done much work on the male copulatory organs of mammals, points out that certain mammal groups have a terminal corpus cavernosum on the pars intrapreputialis, forming a caput penis which frequently presents a bony structure in the "corpus fibrosum." This bone, which is replete with true osseous elements, has a characteristic shape and form for each species and lies in the glans or caput. Anatomically this bone is situated dorsal to the urethra, which it often partly surrounds and in close proximity to the corpus spongiosum. Figure 4, a sagittal reproduction of the seal's penis (which is fairly representative) graphically illustrates how dissimilar in size, position, and form is the anatomic os priapi to those morbid lesions commonly encountered in Peyronie's disease.

The undaunted proponent of atavism may find support in the study of the "tail" of certain primitive amphibia, although phallic evolution really begins with the disappearance of the cloaca. The presence therein of certain peculiar acellular or sesamoid-like bones—the Nobelian bones²—more recently studied by de Villiers³ in the *Ascapus* may have some etiologic import in plastic induration.

DIFFERENTIAL DIAGNOSIS

The subjective and objective symptoms should signalize Peyronie's disease.

Plastic induration, because of the penile angulation, is often confused with chordee. Chordee is always contingent upon lusty urethral inflammation (usually gonorrhœa, heroic therapy or stricture formation), with secondary implication of the subjacent corpus spongiosum. Since the inelastic seg-



BLACKED AREAS INDICATE ANATOMICAL POSITION OF NODES OR PLAQUES

CROSS SECTION THROUGH PENIS — After PIERSON

Fig. 3.

ment is beneath the urethra, the turgid penis bends down (instead of to the side or upward, as in Peyronie's disease) with painful manifestations, dependent upon the inflammatory reaction.

The inflammatory nature of acute cavernositis and dorsal thrombophlebitis distinguishes these entities. Traumatic sclerosis following injuries, wounds or fractures of the cavernous bodies, is readily differentiated from plastic induration.

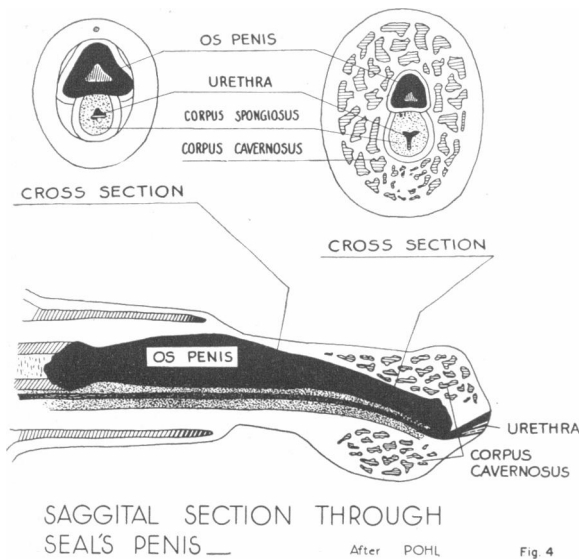
Rare instances of massive bone deposition in the penis, roentgenologically apparent but both regionally and etiologically obscure, should not be confounded with Peyronie's disease.

Syphilitic gummata or cavernositis is uncommon and involves the spongy tissue rather than the tunica albuginea. Hence, there is no angulation and the lesion is tractable to antiluetic therapy.

Carcinoma usually begins in the glans or about the urethra. It is destructive in character, painful by nature, and often ulcerates early. A biopsy confirms the diagnosis.

TREATMENT

The management of this disease tries the soul of the conscientious physician (not to mention the patient's) and makes him wish for proximity to Mimir's well. Any possible choice from his armamentarium is apt to shoot wide of the mark, whether he selects the more conservative fibrolytic bullet, either medicinal (such as potassium iodid, fibrolysin, or more recently and quite empirically, sodium gold thiosulfate) or physical (such as diathermy, radium element and x-ray), or whether he fires the more radical bullet of extirpation. Most of these fibrolytic bullets are poorly designed or pack charges quite inadequate for the task at hand, so that the finest clinical spotting scope is often unable to discover a "hit" (*i. e.*, detect a com-



measurable gross change in the morbid lesion), and achievement must be predicated solely upon the patient's asseveration. With the high velocity bullet of extirpation, the initial relief is usually propitious and striking, but the end-result is often conditioned by subsequent recurrence of the scar tissue.

Obviously, there is no specific for fibrous cavernositis, and more apt therapy necessarily awaits upon etiological enlightenment. Moreover, there are too many imponderables bound up with the personal equation, and the vagaries of this disease to set forth any therapeutic regime for universal application. Treatment must, therefore, be suited to the individual in every instance—first, last, and always.

Consideration of Therapy.—No exact evaluation of the various modalities used herein is possible because of: (1) the meager clinical material studied, (2) the personal equation (inclusive of the morbid change and the particular shade of sexual incompatibility), (3) the enigmatic course of the malady, and (4) the relative and intangible character of the end-results, as reported by those under treatment. We must, therefore, content ourselves with impressions and a brief discussion of the different therapeutic vehicles utilized.

Medicinal Treatment.—We have seen no tangible or physical evidence of benefit from either sodium gold thiosulfate or potassium iodid, although cures have been reported following the use of the latter.

Medical Diathermy.—While the action and usefulness of this vehicle may be questioned somatically, it has demonstrable merit psychically and especially with the more intelligent patient. Treatments may be given in the office or, better, as advocated by Wesson,⁴ a telatherm or small diathermy machine (so adjusted that no burn or harm can occur and equipped with a special penile electrode) may be given the patient for use *ad libitum* in his home. Wesson reports two cases so treated, and under observation for over seven years, as clinically "cured."

Radium and X-ray.—Radium element, properly screened, was used for an average of 180 mgh. The exact dosage, the number of applications, and the region treated was conditioned by the pathologic change at hand. X-ray therapy was similarly regulated, and exposure (standard 200,000 volt apparatus) usually equaled one-third of an erythema dose for five treatments at five-day intervals. This therapy was under the supervision of Dr. O. S. Cook, radiologist at the Mercy Hospital. Both these potentialities have value, but end-results appear a stand-off. They should be given a fair trial, individually or in combination, in the more urgent case before resorting to surgery.

Operation.—This procedure should be reserved for the more adamant and difficult case. It is interesting to note that two of our operative cases were undertaken because of importunities of the wives concerned. The patient should be apprised of possible sequelae. Plastic concepts should be closely followed, and the incision made accordion-pleated rather than linear, to obviate recurrent scar formation. For the same reason, adroit handling of the tunica albuginea is expedient. Results depend, in no small measure, upon the skill of the surgeon and his knowledge of plastic technique.

CONCLUSION

1. Neither cause nor cure for Peyronie's disease is presently discernible.
2. This disease, which is insidious in onset, has greatest incidence after fifty, and the nodes, which are seldom tender, eventually betray their presence by deflected erections with concomitant pain.
3. The diagnosis is frequently missed because of a cursory examination.
4. Psychic trends are often conspicuously associated with Peyronie's disease.
5. An indurated plaque with distinct edges and tightly adherent to Buck's fascia is pathognomonic.
6. These plaques, which involve only the septum or the tunica albuginea, or both, initially comprise dense fibrous tissue, but may later undergo cartilaginous, osteochondrous or osseous metaplasia.
7. Since spontaneous regressions are common in this disease, the last remedy used may be falsely credited with cure and mistakenly extolled.
8. Surgical results are conditioned by the plastic skill of the operator and his ability to prevent recurrence of scar tissue.

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REFERENCES

1. Pohl, L.: Zur Morphologie der männlichen Kopulationsorgane der Säugetiere; insbesondere der Versuch einer vergleichend-anatomischen Studie über den Penis der Primaten, einschliesslich des Menschen, Ztschr. f. d. ges. Anat. (Abt. 1), 86:71-119 (June 14), 1928.
2. Noble, G. K.: The Phylogeny of the Salientia, 1922. 1. The Osteology and the Thigh Musculature: Their Bearing on Classification and Phylogeny, Bull. Amer. Mus. Nat. Hist., Vol. 46, Part 1, pp. 33-35, plates 6 and 7; The Biology of the Amphibia, p. 487, p. 283. New York: McGraw-Hill, 1931.
3. Villiers, C. G. S.: Morphology of the Epipubis, Nobelian Bones and Phallic Organs of *Ascapus Truei* Stejneger, Anat. Anz. 78:23-47 (11 illustrations), 1934.
4. Personal communication.