

half an hour before the injection is employed consisting of

R Ext. belladonnæ gr. $\frac{1}{8}$ ad $\frac{1}{2}$
 Ext. opii aq. gr. $\frac{1}{4}$ ad $\frac{1}{8}$
 Ol. theobromæ gr. x

Misce, et fiat suppositoria j.

or an ointment of conium may be used, as recommended by Mr. Harrison Cripps, ("Diseases of the Rectum and Anus," second edition, London, 1890, p. 189):

R Ext. conii ʒij. 8 |
 Olei ricini fʒij. 24 |
 Ung. lanolinii q. s. ad ʒij. 64 |

A small quantity of this ointment should be smeared on the part five minutes before expecting a motion, and again after the bowels have been moved.

In applying any of the various local remedies to an anal fissure it is necessary first to expose the ulcer to view, which can be done by means of the fingers of the operator or his assistant, and to anesthetize its surface with a 4 per cent. solution of the hydrochlorate of cocain, well brushed in with a camel's hair pencil or with a piece of cotton attached to a probe. The application of the cocain may have to be repeated once or twice at intervals of three or four minutes in order to obtain the desired anesthetic effect. If any ointment has been used about the fissure, the anus should be subjected to a hot water douche before using the cocain, as this drug will not exert its anesthetic influence on a greasy surface, (W. P. Agnew, M.D., "Diagnosis and Treatment of Hemorrhoids," etc., second edition, San Francisco, Cal., 1891, p. 91).

Among the different remedies that have been used in the local treatment of fissure of the anus may be mentioned the following: Nitrate of silver; acid nitrate of mercury; fuming nitric acid; carbolic acid; sulphate of copper; the actual cautery; and chloral hydrate. Of these topical applications the nitrate of silver is the best. Its effects are various: It lessens or entirely calms the nervous irritation which is so important a factor in producing spasmodic contraction of the sphincters; it coats and shields the raw and exposed mucous surface by forming an insoluble albuminate of silver; it destroys the hard and callous edges of the ulcer, and tends to remove the diseased and morbid action of the parts. The form in which I usually employ this salt is in solution (from 10 to 30 grains to the ounce). The stick caustic may be also used.

To accomplish the best results, the solution should be used once in twenty-four or forty-eight hours, according to circumstances. It may be applied by means of cotton attached to a silver probe or to a piece of wood.

The application is made by separating the margins of the anal orifice with the thumb and the index finger of the left hand, and introducing into the anus the probe charged with the solution. The argentic nitrate is to be applied to the fissure only; a few drops are all that is required. If thorough local anesthesia has been induced by the use of cocain, the application of the silver salt produces little (if any) suffering, for by the time the anesthetic has lost its effect the otherwise acute pain of the nitrate of silver will have passed away.

After each application the part should be smeared well with an ointment of iodoform (30 grains to the ounce). The odor of that drug may be disguised by the addition of a few drops of attar of roses. Iodol may be used instead and in the same way, but I prefer the iodoform, owing to its anesthetic qualities.

After the ulcer has been touched once or twice with the silver solution the effect will be, in the cases that are benefited by this treatment, a considerable mitigation of the pain from which the patient suffered when at the closet and afterward, and the sore will present a healthy granulating appearance, and will slowly contract in size.

Unless the fissure be complicated with some other affection in children and in young persons, anal fissure is almost always curable by adopting the mode of treatment laid down.

Some authorities speak highly of the use of the acid nitrate of mercury, fuming nitric acid, carbolic acid, the actual cautery, etc., but in my opinion their employment is attended with more suffering than follows the use of the nitrate of silver. Furthermore, the application of these remedies is not so certain to effect a cure, so that I rarely resort to their use.

The daily introduction of a full sized bougie, made of wax or tallow, will sometimes act beneficially in cases of fissure by stretching the sphincter and producing such an amount of irritation as will set up a healing process in the ulcer. An application of cocain or of belladonna ointment should be made to the part previously to their employment.

In the treatment of anal fissure, Allingham strongly advocates the local use of the following ointment:

R Hydrarg. subchlor. iv grains. 24
 Pulv. opii ij " 12
 Ext. belladonnæ ij " 12
 Ung. sambuci ʒj " 4

M
 Sig. To be applied frequently.

He states that he has had many cures with this ointment alone. Another excellent ointment recommended by this same authority, is:

R Plumb. acetatis gr. x. 60
 Zinci oxidi gr. x. 60
 Pulv. calaminæ gr. xx. 1 20
 Adipis benzoinat ʒss. 16

M

An ointment of the oxid of mercury, 30 grains (gm. 1.80) to the ounce, has cured many cases.

In conclusion, I would emphasize the fact that in many cases anal fissure, when uncomplicated with some other rectal affection, is curable by means of non-operative methods of treatment.

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A PLEA FOR THE PROPER TEACHING OF ANATOMY.

Read in the Section on Surgery and Anatomy at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894.

BY GEORGE FRANKLIN SHIELS, M.D., F.R.C.S.E.

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The tripod upon which the whole superstructure of medical science stands is made up of anatomy, physiology and pathology. As it is well known to the student of natural philosophy that when one leg of a tripod is weak or is taken away, the mass which it helps to support either totters, or falling outside of its center of gravity topples and falls, so it is well known to the student of our science that when a knowledge of one of these important subjects is weak or lacking, the whole grasp of general medicine and surgery, no matter how acquired, is either insecure and shaky, or in the face of some slight emergency

trembles, totters and finally falls, carrying with it the reputation of the individual, who when he is dragged out from amidst the ruin is often held up as a laughing stock to his colleagues. If one leg of this tripod be more important than another it is assuredly anatomy, for without it no advance can be made in the study of its fellows. Hence I may state that to each and all of us a knowledge of anatomy is not only of the greatest importance, but is an absolute necessity.

No matter how a man may brace up his weak and tottering knowledge with props of polysyllabic eloquence, quotations from authors, tact in avoiding exposure of his lack of knowledge, flight to specialties which seem not to necessitate anatomic knowledge or with a laughing acknowledgment of once having known the subject and having forgotten it, on account of its being overshadowed by the more important practical branches of science,—no matter what means he may use, I state without hesitation that the time will come, if he live long enough, when his want of knowledge will make itself known either to himself or others by disastrous consequences to his patients, and a subjective sense of shame. For a superstructure no matter how beautiful, if it have an unsound foundation may indeed be likened to a house built upon sand.

If you agree with me in these views and I feel convinced that you do, then of a surety a plea for the proper teaching of anatomy, is one which will gain your hearty and willing support, and by strengthening my weakness with the expression of your opinions and honoring the subject with a free discussion, we may hope our plea will have an influence, perhaps small, but still an influence in directing the attention of schools toward a correction of existing conditions by awakening in them a desire to escape from the trammels of use and custom, and will lead to improved methods of instruction whereby a better and more useful knowledge of this great subject may be obtained.

Anatomy as taught in the past has been the bugbear of the student, the dreary, dry, uninteresting subject of the curriculum. Ask a student picked haphazard from his fellows: "What subject do you find most uninteresting?" In all probability his answer will be: "Anatomy." Go further; ask him which subject he fears most in his examinations, and he will again answer: "Anatomy." He looks upon it as a subject to be learned after the manner of a proposition of Euclid, and sits down with his Gray, proceeding to memorize the text, word for word, or if ingenious enough invents a means of memorizing by the aid of mnemonics, such as the following: "Sala-sap" for the branches of the axillary artery.

"Timothy doth vex all very nervous pupils," for the structures passing behind the internal lateral ligaments of the ankle joint.

"Oe, eighth pair," thoracic duct found there. Vena azygos by aorta stands. Lymphatic vessels and lymphatic glands," for the contents of the posterior mediastinum. Nerves, arteries, veins, muscles, become to him streaks of yellow, red, blue and brown color, formed into intricate diagrams to be memorized by constant conning over.

He attends lectures to find the same methods in vogue, and only too often does he discover that the teacher following the custom and for want of time, narrows down to a few complicated points of the sub-

ject which he, the student, learns to fear at the time of his examination since they crop up in the abominable form of catch questions.

And what about practical anatomy? It appears in syllabus that a candidate for a degree must have dissected the human body once. Curious, and taken by the novelty, the student buys a set of instruments, an apron, a pair of sleeves, and appears in the dissecting room ready for work; and what will he find? If my experience be correct and it extends to the schools of Germany, Austria, France, England, Scotland and America, he will find that his professor is rarely seen in the dissecting room. There may be a single demonstrator, or more rarely a staff of demonstrators, who are supposed to guide him in his work, and who as a rule confine themselves to demonstrations of special regions, such as the axilla, popliteal space, etc. He dreadingly drills through the necessary and specified single dissection and finally appears for examination stuffed full of answers to catch questions, and if he succeeds in passing the ordeal he thanks God, throws away his dissecting instruments and with a sigh of relief leaves anatomy forever behind. A few years later we find him as a practicing physician and surgeon, clothed in a white apron, his sleeves rolled up above his elbows, surrounded by all the appurtenances of modern aseptic surgery and ready to operate upon some poor unfortunate who like a lamb led to the slaughter little knows that the man in whom he has put his trust is ignorant of the very territory which he is about to invade. The operator follows one of two courses; he makes his primary incision, often based upon an erroneous diagnosis due to lack of knowledge, cuts some important vessel, the blood spurts, he is attacked by that condition of mind called "surgical delirium," puts a compress upon the wound, bandages it up and trusts that a clot may form by the time of the first dressing. Or what is worse he damns the mishap and proceeds on the cut-and-tie principle, the result of which is disastrous to the patient and the reward of which comes sooner or later to the operator, especially if he be possessed of a conscience.

Or mayhap our young graduate having an eye to business and seeing that the general profession is over-stocked, chooses what he believes to be a lucrative specialty, for example, the nose and throat. He buys the latest works on the subject, reads them assiduously and grows to believe that all the ills of mankind are centered in the organs, the diseases of which he supposes himself to know so well. A child comes to the office with enlarged tonsils, a guillotine is introduced, the tonsil is removed, but something else has occurred. The blood wells up from the wound by the teacupful, the child's face becomes blanched for the ascending pharyngeal or the internal carotid artery has been wounded. A surgeon is hurriedly sent for while the terrified and ignorant specialist stands by and watches his victim bleed to death. Had he known his anatomy how easy to have avoided this accident, or had it occurred, to have tied the common carotid artery and saved a life. I will not multiply examples—they are numerous and are known to you all. I plead for a proper teaching of anatomy—for a knowledge gained by training and not by cramming. Naturally I expect to be asked what I consider to be a proper method of teaching this subject, and by your courtesy I shall venture to briefly lay before you my ideas.

The teaching of anatomy must be systematic, must be begun at the commencement of the medical studies and continued until their end. The student must begin by learning the anatomy of the cell, and must be able to follow it through all its changes up to the formation of the most intricate tissues. To accomplish this it will be necessary to institute a distinct course of microscopic anatomy in which he will learn the beautiful wonders of the growth of tissue from that simplest anatomic element, the primeval cell. Next he should be taught development from the moment of impregnation to the time of birth. If these two branches of anatomy were carefully and systematically taught, the student would indeed be dull who did not have an active desire to pursue his studies further. Next he should attend a regular course of didactic lectures in which his teacher should aim to use the cadaver and actual preparations as much as possible, as by so doing he would teach the student to recognize the actual structures and not pictorial likenesses thereof. *Pari passu*, with this didactic course he should be taught practical anatomy, but before he is allowed to dissect he should be carefully taken over the bones of the skeleton, having each and every one of them thoroughly demonstrated to him, both from a mechanical and from a physiologic point of view, and in this way be able to understandingly view the skeleton, both in its integral parts and as a whole. He is now ready to enter the dissecting room where he should be made to dissect the body at least three times. His first dissection should be a topographical one, in which he should learn not only the individual parts, but the parts in relation to each other.

His second dissection should be a repetition of the first, with the addition that the teacher should constantly draw the student's attention to the importance of the various structures in their relation to the practice of surgery and medicine.

His third dissection should be one confined to medical and surgical anatomy, when he should perform all the surgical operations and learn to recognize all the tissues concerned therein, and during which he should be further taught the surface markings of all the important viscera. By such a course as this, I believe that the subject could be thoroughly mastered.

I would further suggest that the method of examination should be changed and that a series of examinations should be held, arranged in such a way that the teacher could be sure that his pupil had mastered what he had already gone over before he was allowed to proceed further. This would do away with cramming, would stimulate systematic work and would insure sound knowledge.

It is true that such a course as that which I have laid out would take time, but what of that? The day has passed when the intelligent teacher believes in the remotest degree that a two or a three years' course can be sufficient for a medical education, and the four years' curriculum is being rapidly introduced, while there are still many who like myself, believe that six years should be the minimum time of study for a medical degree.

In closing, let me affirm that no man who will follow out the course which I have here laid down will ever have reason to regret it.

If a surgeon, he will have that *sans froid* and confidence which is begotten of knowledge, that knowl-

edge which is not to be obtained from books and lectures alone or in preponderance, but which is only acquired by long work in the dissecting room. He will not only know the position and relation of parts, but he will have the *tactus eruditus* which carries to the mind an appreciation of tissues and which Treves, so well names, "the anatomy of the individual." His dissections will have further trained him for his future operative work, for surgery is largely a handicraft. He will be self-possessed, cool, ready in any emergency, will know what he wants to do and will never suffer from "surgical panic," for he knows, and knowing fears not.

STRICTURE OF THE MALE URETHRA.

Read in the Section on Surgery and Anatomy, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894.

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Stricture is that condition where there is an abnormal diminution of the caliber of the canal, induced by pathologic changes in the mucous or submucous muscular walls of the urethra.

Strictures may be divided into inflammatory, true or organic stricture and false or spasmodic stricture, and divided according to their form into linear, annular, indurated, irregular or tortuous strictures. Some surgical authorities make another division according to the condition that exists; for instance when the stricture bleeds easily by use of instruments or becomes inflamed it is called an irritable stricture. Then again they may be divided into small caliber, which will admit only of the smallest size sounds, less in circumference than fifteen millimeters, and of a large caliber, or strictures that will take instruments from that size upward.

A spasmodic stricture is that condition where there is muscular spasm and the normal caliber of the urethra is diminished.

It is a question which all surgical authorities have not fully agreed upon, whether spasm of the urethra takes place without the presence of some organic constriction of prior existence. Sir B. Brodie says: "That a spasmodic stricture may exist independently of any actual organic disease. At the same time it must be acknowledged that the existence of a purely spasmodic stricture is of rare occurrence."

John Hunter states: "There are often spasmodic contractions of these muscular fibers in different parts of the canal, shutting up the passage and obstructing the course of the canal, and often not allowing a drop to pass."

I think it has been proved beyond a doubt that the whole urethra has contractile action, and with a sphincteric muscle which acts especially on one part of it may cause temporary constriction. I will briefly mention the chief causes of spasmodic stricture. Where an organic stricture already exists, this spasmodic constriction may be caused by extreme acidity and irritating effects of the urine. Turpentine, cantharides, spices have the same effects. Hemorrhoids, rectal fistulæ and operations about the anus are frequently followed by retention from spasmodic contractions of the muscle. Strong mental emotions will interfere sometimes with micturition.