MEDICO-SURGICAL SUGGESTIONS

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MEDICO-SURGICAL SUGGESTIONS

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MEDICO-SURGICAL SUGGESTIONS

VOL. V SEPTEMBER 1936 NO. 9

Original Articles

CONSTITUTIONAL PECULARITIES

BY DR. N. RAMA RAO, L.M.P.,

Gollapalli, Kistna Dt.

We know that two nations are different from each other in respect of their manners and customs and as well as in their mode of living and articles of diet used, and so also two persons of the same nation and even of the same community do some times differ. An Englishman may find it difficult to get on with Indian diet and *vice versa*. A Northern Indian or a Panjabee may differ in several respects from a Southern, and an Andhra from a Tamilian. We have to presume that the common and the probable factor underlying these variations is the climate which plays an important part. But one will be rather surprised why and how an Englishman lives on things that are said to be cold inspite of their cold climate and an Indian on things that are known to be hot in our hot country.

No two bodies of creation look similar and diversity is one of the wonders of nature. Two persons may look similar and resemble each other for all outward appearances and still they differ from each other in some other minute point such as physiological structure, moods, habit and constitution. Why should all the members of a particular family be born plumpy and develop obesity and those of another distinctly lean and as though suffering from undernourishment? Why should the disease diabetes haunt after every member of the same family and hæmophilia in another family? Still peculiarly, one notices that sometimes all the four children of the same parents differ one from the other in every respect *i.e.*, in complexion, features, stature, temperaments and health. Two patients of the same age suffering from the same disease of the same severity under exactly the same line of treatment and diet and under all the similar conditions do in all probability differ from one another in respect of symptoms manifested, in respect of their response to treatment, the period of convulascence covered by them, and above all one puts on an extra amount of fat and the other has put on only

a surface gloss. If one observes what happens if four persons of the same age are exposed to the same morning chill at one and the same time, one may see that one has caught a mere cold, the other suffers from rheumatic fever, the third from bronchitis and cough rapidly developing into serious lung disease and the fourth is perfectly alright and unaffected. Why is that? A particular remedy supposed to be a specific for a disease is able to cure one and utterly fails in another. Why again, that some when exposed to infective diseases readily fall victim to the infection while others similarly placed escape altogether. These differences are evidently due to certain constitutional variations which we clinically call "Diathesis" and the lay public call "The temperament". But some differenciate between the two terms by applying the former to those constitutional defects implying a pathological condition and the latter to those involving a physiological condition.

Now, coming to some articles of diet, constitution differ in their individual capacities to digest, for instance, fish upset digestion in one while another digests it well. Milk causes diarrhoea and nausea in one and peculiarly constipates another. One of my patients used to say that whenever he happened to take milk, he used to suffer from nausea, retching, and felt indisposed through out the day. Another patient of dyspepsia, dated back the onset on his complaint ever since he was put on milk diet by another practitioner for some fever or so. Fruits such as mangoes, plantains etc. very nicely agree with many, but with a few, they disagree and are liable to produce some digestive trouble. One patient, I well remember attributed the credit of being cured of a chronic intestinal colic that troubled him for a few decades, to the use of plantains in addition to his usual diet and now any day he is without them means, he is sure of getting an attack.

In some districts people are accustomed to the use of oil either gingely or groundnut, rather freely, even in the place of ghee. Those that are not in the habit of using oil, suffer a good deal when they happen to use on rare occasions, from a high coloured urine, burning in eyes, nausea, vomitting and feeling of heat all over the body. Let me make mention of a peculiar instance in this connection. One lady aged 60 years, a chronic patient of bronchial asthma some how got accustomed to the use of gingely oil and she claims relief of her disease on that account. One occasion I had to prescribe to her some ayurvedic medicines for which she had to stop the use of oil for a few days, when peculiarly she suffered from a terrible attack of asthma and consequently the medicine was stopped and she began to use oil as usual and she was relieved. Purposely I tried a second and a third time without any medicine by asking her to stop the oil and once again she got the same attack.

One boy was declared hopeless of his infantile biliary cirrhosis with distinct enlarged liver existing from his second year, after having tried several treatment. Later on, the boy began to eat raw groundnut seeds without the knowledge of his parents, which was detected some months after. The parents could not stop the boy from eating them, peculiarly after the boy began to eat them, he was feeling better in his health and the liver enlargement too gradually came down. This instance was some 6 years ago and the boy now aged ten is hale and healthy.

Yet another peculiar, instance. A lady was prescribed pounded rice for her food on account of her beriberic condition, to be used through out her life. Now her constitution took such a turn, that even if she is offered cooked milled rice; she at once vomits out whatever she has taken in, and her relatives say she stands a nice test to detect milled rice from pounded rice.

A lady patient suffering from an old long standing fistula-in-ano, now devoloped sugar in her urine and consequently ordered wheat diet. After persistently testing several times she says wheat did not suit her constitution because it always aggravated her fistula and she would rather prefer to suffer from diabetes than the terrible fistula and it exacerbated inflamation.

Ayurvedic science deals with these individual variations as an important subject. It classifies the members of the whole universe belonging to one or more of the three classical conditions, namely, Vatham, Pitham and Kapam *i.e.*, Wind, Bile and Phlegm. They classify all the diseases into these three kinds and also our food materials. In their prescription of diet, they say, a patient of bronchitis, should stop the use of certain vegetables such as lady fingers which are supposed to increase phlegm and make it tenacious. Rheumatism is attributed to belonging to the class of "Vatham" as also gout. Meat that is supposed to enhance 'Vatham' is condemned for rheumatic and gouty patients. I have just given one or two examples to show that the individual constitutional variations are dealt in ayurvedic science rather than our Allopathy. So, one should know that individuals are liabel to manifest signs for agreeability or disagreeability to diets, climates, and to certain drugs, the last of which we are now more particularly concerned at present. You may also from your past experiences, that one person may sustain even the lethal dose of a poisonous drug while in another, the therapeutic dose of a non-poisonous drug may produce some out of the way and dangerous phenomena.

Quinine:—We know the average quantity of quinine that is liable to produce 'Quininism', but I have noticed in one individual ingestion of 30—40 grains a day for any number of days are not able to produce any bad affects. Another patient of mine has several times tolerated the drug intravenously and intramuscularly, but a small

does given orally, as even the little dose contained in Easton Syrup has produced nausea, realing of the head anorexia and a little more of it produced even incoherent speech. One girl of ten years under the care of another doctor was receiving 20 grs. of quinine a day for fever for about ten days and the after effects of the drug were manifested by onset of partial paraplegia, tremors of hands and legs and body, with staggering gait for several months.

2. *The combined castor-oil—Quinine-pitutrin* treatment which is an effective measure as an abortificient was tried by me in a multipara with a contracted pelvis at her third or fourth month, and it did not have the desired result even though cinchonism and very severe labour pains were produced.

3. *Purgatives*:—On some, just one or two grains of calomel move the bowels quite satisfactorily and with others castor oil suits, while in some others neither of these separately acts, except when given in combination. Few people get vomiting, nausea and even mercurial poisoning soon after administering calomel in any dose. In some any amount of castor oil will not produce even one motion so also with mag. Sulph. Many mothers have complained to me that their child lie very idle, feverish whenever they administered castor oil to their children, in addition to having no motion at all, and children suffer from gripping pain for a couple of days. Many of you remember that some people demand a particular drug for purgative saying sometime what you have prescribed never acted in them.

4. *Mercurosol*:—(P. D. & Co.) One lady received a course of half a dozen injections in one year and during the next year I wanted to give her another course like that, but unfortunately the very first injection produced very severe stomatitis which kept her bedridden for about 3 weaks.

5. *Bellodona*:—In 1929 I was treating a dyspeptic patient with severe stomatitis and I had to add 4 minims of Tr. Belladona in the mixture 3 times daily, and hardly a week or ten days have passed before he began to develop poisoning symptoms with dilated pupil, incoherent speech etc. which gradually became worse and one particular day the temperature was getting subnormal with low muttering delerium and about to collapse and fortunately he is alright, after prompt treatment.

6. *Atebrin and plasmoquin*:—These are drugs discovered no doubt for certain types of malaria in which quinine alone is ineffective. Some individuals have exhibited symptoms of intolerance. One doctor reports of a boy of seven years that developed hæmaturia and hæmoglobinuria with cyanosis even after two tablets of plasmoquin and one of atebrin daily for two days at a stretch. The boy, it appears also passed reddish stools and developed a temperature ranging from 99·5 102 degrees and urine on examination revealed R. B. C., pus cells and phosphate crystals.

7. *Oleum chinapodium and carbon tetrachloride*:—These are indispensible in our daily practice. One has to exercise great deal of care in watching the patient for any after affects and whether they have produced the desired effect. In one patient very terrible and persistent vomiting was produced after administering ole chinapodii and the patient was exhausted to the extent of collapse. In another patient a male aged 30 years who received carbon tetrachloride mixture, œdema of the whole body and face developed after the 3rd or the 4th day and in all probability the kidneys were effected as evidenced by scanty high coloured and even reddish urine and the patient was placed under the care of a quack and he died subsequently after a couple of weeks.

8. *Scorpion poison*:—The common scorpion sting produces sometimes markedly dangerous symptoms of varying degrees, according to individual constitution. One patient I know was stung by a scorpion 4 or 5 times and on all these occasions he used to develop a severe agonishing shooting pain in the cardiac region. Another used to lie comatose with intermittent attacks of convulsive fits for about 24 hours and a third complained of severe burning sensation all over the body which is releived only by frequent and constant cold water bath till the symptoms abate.

9. *Neosalvarsan and other arsenical derivatives*:—These are daily and commonly used in our practice. Still they demand every care in selecting patients fit for the administration, such as examination of urine, heart etc. Individuals vary in their response to these compounds and are liable to develop arsenical poisoning. Females are relatively more susceptible than males to salvarsan intoxication and pregnant females rather more severely than non-pregnant women. Hence it is advisable to give a preliminary test dose of ·15 gram. only for each female patient to watch for symptoms of any idioscyncracy. The common contra-indication for a pregnant lady are any severe organic disease of the heart or kidney, advanced tubercle, or the appearance of a very severe head ache, hyperpyrexia with rigors and other vasoneurotic symptoms with the test dose, Use glucose sol 10 per cent to 25 per cent as a solvent instead of distilled water for all the lady patients and for those males that are physically weak and debilitated withthe least suspecion of intolerance Sodium Thiosulphate to combat any bad symptoms. With regard to the course of treatment of a case of syphilis, there has been much discussion as to how often the injections had better be given and what is the total amount of medicine required to effect a cure, some believe and advise injections at less frequent intervals of the usual one week or ten days thereby preventing the treponema pallidum from resuscitating during the usual intervals. One writer says that, while the late untoward symptoms of salvarsan are exfoliative dermatities and jaundice and maniacal symptoms, those of early and immediate results are syncope and

death. Another author has published a pamphlet on ' ocular troubles due to arseno-benzols' and says therein that some patients are likely to develop early and toxic results with hypeæmia of conjunctiva, perikeratic injection, iritis, iridocyclitis and occulo-sympathetic syndrome and even retinal hæmorrhages; while others say these injections produce late results of insiduous nature ending permanantly in optic atrophy. Hence it is highly essential, he says, that the patients should be examined before hand for any serious lesions of the cornea, eye or its nervous apparatus. Few of the undue instances of arsenical intoxication that I came across in my experience are mentioned below :—A lady aged 35, a nullipara received 3 injections of '45 grms. of neosalvarsan for a primary sore at intervals of 10 days and to my utter surprise developed arsenical dermatitis, manifested by scratching and an urticarial rash and that too three weeks after the last injection. She was kept out of my notice for some time till the rash took a secondary infection with the horrible and ghastly appearance due to pustular dermatitis and intermittent fever and rigors and chills when I was taken for consultation and a few injections of sodium thiosulphate prevented her from a fatal result.

Another a male aged 40 received 6 neosalvarsan in glucose sol and developed exfoliative dermatitis even on the 4th day. I had to give him Iodine, and sodium thiosulphate. A third patient began to complain of his old vertigo very badly aggravated after the 1st dose of 45 grms. of neosalvarsan to such an extant that I could not push in any further arsenic into him. I know few instances under the hands of some practitioners that have died either very soon after an intravenous injection or a couple of hours after. One patient it appears actually found dead before the doctor with drew the needle from the vein.These are very surprising instances indeed and are sure to tell against the future prospects of a practitioner. Could they be due to fatal syncope that is possible with intravenous arsenic medication, as I have already mentioned or could it be that such a syncope is brought forth by any unscrupulous technique such as, very rapidly pushing the piston lest the needle should miss the vein, which is some times the bad habit of some young inexperienced practitioners. The sudden appearnce of severe head'ache, vertigo, excitation and rapidly developing coma relegates this patient, they say the group of cases of haemorrhagic encaphalitis. At necropsy multiple haemorrhages into the brain and other viscera were detected. Microscopical examination revealed typical fat embolism. Very recently in one of my patients, it so happened that, very soon after giving an injection of sulfarsonal within a couple of minutes, he developed an urticarial rash scattered here and there and disappeared after an hour, peculiarly the same thing recurred after each of the 3 subsequent similar injections but luckily he did not develop any more untoward symptoms.

10. *Cocaine* :—Idioscyncrasy to this drug seems to be rather rare but is possible and hence one has to be a little bit careful. One patient, under the hands of an E.N.T. specialist, was prepared for nasal operation developed idioscyncratic symptoms very soon after painting the nose with cocaine solution and ultimately died. No doubt the drug belongs to the toxic group and the average fatal dose seems to be from 1/20 to 1/10 gr. per kilo of body weight. But it is the susceptibility to its toxicity that plays an important part in such fatal accidents. Doses as high as 15 grains have been given subcutaneously without any bad effects. Whilst as little as 1-2 grain has caused death. One authority gives 8 drops of a 4 per cent solution as the smallest fatal dose recorded in his experience and others have suggested that the amount of cocaine to man at one time by injection should not exceed 1/3 grain. Susceptibility to cocaine is said to be enhanced by haemorrhage; alcohol by mouth before injection lessens its toxicity. When combined with adrenaline seems to delay the absorption and lessens toxicity, but if given intravenously it enhances the same to a remarkable extent.

11. *Acid hydrochlor* :—This is now being given intravenously in a dilution of 1 in. 1000 or 1 in. 1500 in a variety of diseases such as asthma, epilepsy, migrine, skin diseases etc., and I know many of my friends have been giving this therapy a fair trial and I am one for the last 3 years. But there have been no bad untoward effects reported so far. Recently one medical officer in Government service has given only two injections of 5 cc. in a case of eczema of a boy aged 20 years. The patient tolerated the first injection well and the eczema began to fade. But after the second injection, he developed acute nephritis and the urine was fully loaded with albumin and it caused much anxiety on the part of the medical officer for about three weeks.

12. *Iodine.*—Very small percentage of patients are susceptible even when applied as a tincture externally. I have seen intravenous injections of prepared iodine solution have produced marked bad effects such as burning sensation all over the body, neuralgic pain along the course of the vein selected for the injection.

(Read before a meeting of the Kistna District Medical Association.)

Selected Articles

VALUE OF PROCTOLOGY IN GENERAL MEDICINE

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Few doctors have more than the most casual interest in proctology and the field is slighted, often to the detriment of both the patient and the doctor. The majority of pathologic conditions about

the rectum respond well to treatment, and there is nothing very complicated about them, but because of our neglect the field has been exploited by the advertising physician. Many surgeons are capable of performing satisfactory operations on the rectum, and many internists are proficient in the treatment of chronic ulcerative colitis and amebic dysentery, but there are few of either who are proficient in the use of the proctoscope. About 20 per cent of patients with carcinoma of the rectum have been operated for hemorrhoids, or treated symptomatically for intestinal irregularity without a diagnosis having been made. Ninety per cent of carcinomas of the rectum can be palpated by digital examination.

Any complaint which indicates departure from normal intestinal function is sufficient reason for rectal examination. These symptoms are persistent pain in the region of the rectum or anus, pain associated with bowel movement, anal discharge, which may be bloody, mucous or purulent, constipation, diarrhea, bleeding, itching, burning, protrusion, or irregularities about the anal margin. Many rectal diseases manifest themselves by referred symptoms, such as backache, sciatica, arthralgia, anemia, frequency or urgency of urination, restlessness, loss of weight, and nervousness.

The purpose of this paper is to give the technic used in making proctoscopic examination, to call attention to some of the most common pathologic conditions, and to describe the treatment.

There should be a definite order in procedure in examining a patient with an intestinal disorder. A proctoscopic examination is made twenty-four hours before roentgenograms of the colon except in diarrhea, when examination of the stools is made first. Ordinarily a proctoscopic examination can be made satisfactorily within an hour after a normal bowel movement. It is often necessary, however, to give a warm water enema until the water returns clear an hour before the examination. Usually no anesthetic is required, but if there is extreme tenderness associated with spasm of the anal sphincter, and ulceration, swabbing with 10 per cent cocain solution may relieve the spasm. If this produces sufficient anesthesia, 3 grains of sodium amytal may be given two hours before examination, and 30 c.c. of 2 per cent novocain injected into the sacral hiatus. Anesthesia should be complete in about ten minutes. Occasionally it may be necessary to inject 2 c.c. more into each of the second, third, and fourth sacral foramina. Sacral or parasacral anesthesia is satisfactory in all rectal operations, as it produces relaxation of the anal sphincter.

The patient is placed upon a proctoscopic table if one is available. If not, the knee chest position is used, or the patient is placed in an inverted position by lowering him over the edge of the bed with his elbows resting on pillows on the floor. First the tissues about the anal margin are inspected, then with a finger cot and a

water soluble jelly a digital examination is made. Next the proctoscope with the obturator in place is inserted into the anal aperture in line with the anal canal until it passes the internal sphincter. This is best done by following the anterior wall of the rectum. The obturator is then removed, and the remainder of the examination is made under the direction of the eye. It is generally not necessary to use the inflation bulb, but if used, the head should be removed as soon as possible to allow the air to escape. The examination is made with less discomfort to the patient and more satisfaction to the doctor if the patient is asked not to strain but to breathe easily through the mouth. Most of the examination is made by removing the proctoscope. The proctoscope allows us to examine twelve inches of the large bowel.

Congenital Anomalies: The rectum and anal canal develop from different embryonic layers, the rectum from the mesoblast and hypoblast, and the anal canal from the epiblast, so that the rectum and anus are from three different sources, the upper rectum from the hind gut, the lower rectum from the cloaca, and the anal canal from the proctodeum.

In the different congenital anomalies that may involve this region, one of three faults is apt to have occurred: The proctodeum may not have joined properly with the rectum. The post-allantois portion of the rectum may be absent or abnormal openings may persist between the rectum and the genito-urinary tract. There may be complete absence of the anus or congenital narrowing of the anal canal. The little finger of an adult should enter the anal canal of an infant without difficulty. The post-allantois portion of the rectum may be lacking with or without a normal anus. When this occurs, an opening is usually found leading into the bladder or urethra of the male, or into the vagina or uterus of the female. These openings are generally inadequate for normal bowel function. The symptoms in these congenital anomalies are constipation, intestinal obstruction, or defecation through abnormal openings.

Injuries: The essential thing about wounds of the rectum is the integrity of the peritoneum. When the latter is opened, immediate exploration of the abdominal cavity is essential. Bladder injuries increase the danger of infection. Delayed hemorrhage and infection are grave complications. The mucosa may be injured by hard stools, fecal impactions, foreign bodies, improper use of enema tips, hot water enemas, enteroliths, etc.

Prolapse: By prolapse is meant the descent of one portion of the rectal canal into a lower part. Prolapsus ani and prolapsus recti are used to describe different degrees. Rectal prolapse can be diagnosed by the annular disposition of the mucosal folds of the tumor. Manual reduction is usually possible; if not, the excess

tissue should be removed down to the muscularis and an anastamosis done. Recurrences require similar treatment.

Hemorrhoids: Hemorrhoids may be classified into external and internal. Each type may become thrombosed, edematous, ulcerated, strangulated, necrotic, or gangrenous. External hemorrhoids involve tributaries of the inferior hemorrhoidal veins beneath the skin around the anal margin. Thrombosed external hemorrhoids appear as small tumors beneath the skin. Sometimes they are bluish, and sometimes the skin over them does not change color. They vary from 3 mm. to 3 cm. in diameter. They develop suddenly, usually following straining at stool from diarrhea or constipation and the onset is attended with severe pain which generally subsides within two or three days. Sometimes they rupture with immediate cessation of pain. Hot wet packs or hot sitz baths generally relieve the pain and hasten absorption. They may be excised with an eliptical incision, the clot expressed, and the skin edges approximated with sutures. The incision should extend around the tumor from the anal canal outward. External hemorrhoids may become edematous as the result of trauma or irritation. Ulceration, sloughing, and strangulation may develop. Pain and discomfort follow. Acute inflammation or thrombosis of external hemorrhoids results in healing with scar tissue formation leaving a deformity around the anal margin composed of cutaneous tissue with a connective tissue stroma.

The mixed types of hemorrhoids consist of the internal and external varieties. They are covered by both mucous membrane and mucocutaneous tissue and are composed of varicosities which arise from both the internal and external veins. The upper portion is dark red, and the lower is pink. Capillary hemorrhoids occur as small tumors which are "raspberry-like" in appearance, and which lie close beneath the mucous membrane. They rupture easily and bleed freely.

Internal hemorrhoids arise from the middle and superior hemorrhoidal veins and extend from the pectinate line upwards for 3 or 4 cm. They are always covered with mucous membrane. They may protrude or prolapse. They may become thrombosed but cause little pain because of the absence of sensory nerve endings above the dentate margin.

Hemorrhoids may be treated successfully surgically or by the injection method. When found together with fissure, fistulae, enlarged papillae, or infected crypts, or when large external or thrombosed hemorrhoids exist they should be treated surgically.

Uncomplicated internal hemorrhoids of moderate degree with only mild protrusion respond best to non-surgical treatment. The latter may be an office procedure. The patient is given a sedative, such as sodium amytal, two hours before the treatment and is asked

to take a tap water enema one-half hour before. The anoscope is inserted, and the internal hemorrhoidal tissue posteriorly brought into view. Five per cent quinine and urea hydrochloride solution with 2 per cent procain is injected about 1 cm. beneath the surface in the middle of the hemorrhoidal tissue with a special needle and syringe until swelling is visible The mucosa should not become tight and glistening. The left half of the anal canal is injected, using 2 to 4 c.c. of the solution. The patient is instructed to take hot sitz baths for discomfort and to report daily to the office, at which time an inspection is made with the anoscope and the anal canal irrigated with warm witch hazel. After three to five days the right side is similarly injected. The treatment is ambulatory and very satisfactory. Occasionally there is a recurrence which may be treated in the same manner.

Surgery: A sedative is given two hours before operation. A warm tap water enema is given until the water returns clear. Caudal or parasacral anesthesia is used. The patient is prone on the table with the kidney elevator underneath the hips. The anoscope is inserted, the obturator removed, and gauze inserted in a large roll. The anoscope is removed and the gauze left in to be withdrawn slowly to show the size and position of the pathologic conditions present. The anus is now carefully and slowly dilated to about 4 cm. The mass of internal hemorrhoidal tissue is grasped with a Pennington clamp, and with a curved scissors an incision is made external to the dentate margin, dissecting out the vessels to the external sphincter and extending through the dentate margin. A hemorrhoidal clamp is next applied at sufficient depth to remove all hemorrhoidal tissue which is cut away distal to the clamp. With plain catgut one ligature is tied above the clamp and two around it, the clamp is removed and the sutures drawn tight and tied. It is not necessary to suture the skin, but the line of the dentate margin should be kept intact. The remainder of the hemorrhoidal tissue should be removed and a gauze and rubber drain is inserted.

The patient is kept on his side for twenty-four hours and hot wet dressings of witch hazel are applied at from 110 to 130 degrees F. for four to six hours and repeated when necessary for pain. Morphin sulphate is also given if necessary. A soft diet may be taken the evening of the first day, and a regular diet thereafter. Catheterization should be done if necessary. Sitz baths are given daily after the second day. On the morning of the third day the drain is removed. The anal canal is irrigated with witch hazel and an antiseptic is applied. On the evening of the third day a laxative is given. After a bowel movement the anal canal is cleansed. The patient is allowed up after two or three days and dismissed from the hospital between the fourth and sixth day. A small piece

of clean cotton is kept in the anal canal and replaced every two or three hours. The wound is dressed and irrigated daily until healed.

Fistula in ano: Fistulas begin as infected crypts which extend into and through the wall of the anal canal, generally between the external and internal sphincter, then into the ischiorectal space forming an abscess. These abscesses should be drained with an incision from the lateral limits of the abscess to the anus, and if possible directly through the crypt originally involved. The overhanging edges should be removed, allowing the wound to granulate in from beneath. The wound should be dressed daily until healed. If these abscesses are opened without opening the original crypt, a fistula will result with its tract extending from this crypt to a sinus usually where the abscess had been opened. Such a sinus may heal, but periodically it will open and discharge pus. It can usually be palpated as an indurated cord extending from the external opening to the crypt where it originated. When such sinuses are located anterior to a line drawn transversely through the anal canal, the internal opening is generally adjacent and the tract straight; when posterior to this line, the tract is generally curved with its convexity posteriorly and the internal opening in the midline behind.

Fistulas should be treated surgically. The internal opening should be located by probing the crypt suspected with a blunt probe, the probe should be passed through the tract connecting the external and internal openings, and this tunnel converted into a groove by opening the roof its entire length. The overhanging edges should be removed and the wound allowed to granulate in from the sides over a flat surface. Daily dressings and inspection are essential.

Pilonidal sinus: These are congenital. One or more sinuses in the midline posteriorly may indicate a pilonidal sinus. These are lined with skin, and often have one or more hairs protruding from the openings. They have no connection with the rectum or anal canal. The treatment is surgical. The entire tract should be widely removed, and if attached to the periosteum of the sacrum or coccyx, the periosteum should be removed. The wound should heal from the sides over a flat surface.

Fissure: A fissure is a narrow ulcer beginning at the anal margin and extending upwards a short distance into the anal canal. It is generally located at the posterior commissure. The characteristic spmptom is pain which is all out of proportion to the size of the lesion. The pain is associated with bowel movement. On inspection a linear ulcer is seen occupying a narrow surface of the anal mucosa. Edema of an adjoining papilla often causes it to enlarge, and this enlarged papilla is called a "sentinel pile."

The treatment of fissures is surgical. The ulcer is excised together with an oval area of skin external to it for about 3 or 4 cm.

and of a depth to the external sphincter. The mucous membrane should be restored to the line of the dentate margin. The wound should granulate in from the sides over a flat surface leaving a scar which will not become inflamed when traumatized.

Pruritis ani: This is a symptom characterized by itching. The cause usually is not known. There is an acute form which seems to be self-limited. In the chronic from the onset is insidious and there are often periods of remission. The condition is progressive and becomes more severe as skin changes take place. Temporary relief may be obtained by keeping the parts dry with cotton changed every two hours, application of 2 per cent aqueous mercurochrome, anesthetic powder dusted over the parts, bismuth formic iodide, anesthetic ointments, and hot wet soda packs. After all methods of treatment ordinarily used have failed, and no relief is obtainable, subcutaneous injections of 40 per cent ethyl alcohol of the area involved gives complete relief in a large percentage of cases. Twenty to 30 c.c. of alcohol is generally sufficient. It should be injected superficial to the external sphincter. The treatment is very drastic and in about half the cases sloughing takes place. The wounds require daily dressing until healed.

Chancroids may occur around the perianal region. Ulceration is characteristic. Ducrey's bacilli are present in the smears. The treatment is the same as for chancroids elsewhere.

Amebic ulceration of the colon: In amebic ulceration of the colon, hemorrhagic spots (ulcers) are seen about 5 mm. in diameter dotted about in the mucous membrane. These ulcers are covered with a gray exudate which when removed leaves a depression with overhanging edges. The mucous membrane between the ulcers is normal in appearance. Smears taken directly from the ulcers show the presence of ameba histolytica. Treatment is medical, using emetine hydrochloride, patren, treparsol, stovarsol, or any of the arsenical preparations. The most common symptom is diarrhea, but this may not be present. Often there is tenesmus with tenderness over the colon. Liver abscess may be a complication.

Tuberculosis: Tuberculosis around the anal margin is practically always secondary, and is characterized by ulceration. Tuberculosis in the rectum generally causes ulceration of the mucous membrane which is characterized by variations in size and shape of the lesions, overhanging edges, and the lack of induration in the base and edges of the lesions.

Chronic ulcerative colitis: In this condition the bowel wall involved is red and granular, and bleeds readily when swabbed lightly with a cotton applicator. Bargen's bacillis may be isolated from swabs taken directly from the lesions. The symptoms are generally diarrhea, weight loss, tenesmus, abdominal pains and

tenderness over the colon. There may be periods of remission. The condition is chronic.

Syphilis: Primary and secondary lesions are rare. Tertiary lesions may be present in the anal canal causing stricture. Antiluetic treatment is of little benefit and it is possible that these lesions may be from other causes in a luetic patient.

Polypi are outgrowths from the rectal mucosa. They are single or multiple. They are known to undergo malignant changes, especially when multiple. If the colon is diffusely studded with them, resection is indicated. If they are single and accessible, they should be fulgurated.

Diverticulosis: The appendices epiploaca of the sigmoid and colon may have openings connecting them with the lumen of the bowel. These openings are occasionally seen through the proctoscope. Inflammatory reactions in these structures cause diverticulitis. The treatment is usually medical.

Stricture: By stricture of the rectum is meant any abnormal narrowing of the lumen of the anorectal portion of the intestinal tract. Strictures may be annular, tubular, partial or complete. They may be congenital, traumatic, malignant, leutic, tuberculous, inflammatory, or spasmodic. Amebic ulceration and chronic ulcerative colitis may cause stricture. The symptoms are constipation alternating with diarrhea, a discharge of mucus or pus with occasional bleeding. Later symptoms of obstruction may develop. A biopsy should always be taken to determine the nature of the tissue causing the obstruction.

Carcinoma of the rectum comprises from 3 to 7 per cent of all carcinomas. About 50 per cent of them are operable when the diagnosis is made. Adenocarcinoma begins as an elevated mass growing from the side of the rectum. It ultimately forms a large elevation on a broad base and produces obstruction. Fibrocarcinoma generally appears as an annular stricture. Medullary carcinoma outgrows its blood supply early, causing degeneration and sloughing. Cancer in the anal canal is epithelial and either squamous or basal cell. The former begins as a warty growth, later becoming ulcerated and infiltrating. Basal cell epithelioma occur as rodent ulcers. They grow slowly and rarely metastasize. The symptoms are pain and hemorrhage, diarrhea, constipation and discharge. There is usually difficulty in evaculating. Emaciation, weakness, anemia, ascites, palpable lymph nodes in the groin, and weight loss are late symptoms. In any suspected malignancy a biopsy should always be taken. The treatment of malignant lesions here is surgical.

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THE DIAGNOSTIC VALUE OF THE X-RAY IN DISEASES OF THE CHEST

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The question of the relative diagnostic value of the x-ray has been the subject of debate since its very introduction. The many who rate it 'Alpha," are offset by those who insist upon "Omega," and so it might be well to consider just where in the diagnostic alphabet this mechanical adjunct rightfully belongs. We shall confine ourselves to a consideration of the part it plays in the diagnosis of diseases of the chest. Any such study, if it includes the infectious diseases, must yield the first place of importance to pulmonary tuberculosis and so we shall begin with that disease and its complications.

The diagnosis of active pulmonary tuberculosis in any of its stages, but particularly in its minimal form, still offers very concrete and perplexing problems not only to the rank and file of the profession, but also to those of us who have selected this restricted portion of the human body for our special study. As clinicians confronted with minimal active pulmonary tuberculosis, we attempt to arrive at a conclusion through the following individual steps and in the following chronological order: First comes the story of the individual, past and present. As a working basis, let us construct a typical example of early lung activity.

The *past story*, then, will attest to an inherited disposition (anlage) towards diseases of the respiratory tract, to wit, frequent colds, bronchitises, pneumonias or even pleurisies.

The *familial history* may admit active pulmonary tuberculosis in father, mother or other close contact in early life.

The story of the present illness may admit any of the following symptoms:

1. Local:
   a. Cough
   b. Dyspnea
   c. Pectoral pain
   d. Hemorrhage
2. Constitutional:
   a. Weight loss
   b. Afternoon fatigue
   c. Afternoon temperature
   d. Night sweats

The *physical findings* will consist essentially of any or all of the following:

1. Lagging of the affected side
2. Impaired percussion note
3. Altered breath sounds
   a. Harsh breath sounds
   b. Distant breath sounds
   c. Prolongation and elevation of expiratory note
4. Increased transmission of spoken and wishpered voice.
5. Rales, localized, not dispersed by coughing and present for one week or longer.

A carefully kept temperature chart will show an afternoon rise. The sputum may show tubercle bacilli. The blood may show a leukopenia and a relative lymphocytosis.

This you will agree, constitutes a simple and elementary clinical picture of early lung tuberculosis so true to form that we rarely encounter it in such complete detail. And yet even in such an instance, can the x-ray be of further help? You will agree to an affirmative answer. Carefully made pictures will reveal the extent of the lesion; will differentiate the fresh from the old; suggest the degree of activity; bring out in bold relief the areas of softening, and oftentimes indicate cavitation so minute as to escape detection by physical methods. However, it is in atypical minimal active pulmonary tuberculosis with meager symptoms and masked or entirely absent physical signs that we ask for and receive from the x-ray moral support for the diagnosis of activity. In moderately and far advanced lesions, the x-ray may hardly be needed for confirmation. However, here too, it serves a very valuable function in that it draws a fairly sharp line of demarcation between healthy and diseased lung areas. It offers also a therapeutic guide in revealing the presence or absence of pleural adhesions and thereby influences surgical possibilities. In the complications of pulmonary tuberculosis, the x-ray is invaluable. Thus the clinical confusion between thickened pleura and effusions of mild degree is readily solved. Or again, the nature of an effusion can be determined. Possibly miliary tuberculosis should be suspected or diagnosed clinically without great difficulty and yet the x-ray paints so graphic and dramatic a picture that it has proven indispensable. There remains one more important tuberculous situation with chest manifestations and a clinical course so frequently atypical and obscure that it demands x-ray help almost in every instance—juvenile tuberculous adenitis. It is not within the province of this paper to discuss, even in a haphazard fashion, this condition. Suffice it to say that, denied confirmation by the x-ray, the accuracy of the diagnosis would suffer irreparably.

Leaving the subject of pulmonary tuberculosis, we will consider next neoplasms of the lung and pleura. Benign growths are relatively rare. It might be well, therefore, to consider them first in inverse ratio to their importance. As a matter of fact, because of the essential brevity of this paper. I should like to touch on only one before passing on to the malignancies, and that is actinomycosis. This particular tumor, while certainly not of frequent occurrence, is encountered just often enough to prove disconcerting. I know of no chest situation more readily confused with active pulmonary tuberculosis. The local and constitutional symptoms are frequently identical and consist of pectoral pain, cough, dyspnea and bloody sputum. The physical findings depend upon the type, of which there are three. First, the bronchitic, in which the physical signs, particularly breath sound changes and rales, while they follow the bronchial trees, not too seldom extended into the apices and the periphery. Second, the miliary type in which the clinical picture in its entirety—symptoms, signs and progress—is indistinguishable from miliary tuberculosis. Third, the bronchiectatic type which in many respects simulates a far advanced active pulmonary tuberculosis. This disease, irrespective of type, has certain distinguishing features which, if present are very helpful but they are all too often not in evidence, Thus, for example, it has a peculiar tendency to suppurate through bony tissue, ribs and sternum, whereas tuberculosis, selecting a course of lesser resistance, destroys soft tissues. Again, the organism, a streptothrix fungus, is sometimes found in the secretions. However, the x-ray supplies invaluable aid in the differential diagnosis.

Before passing to the malignancies, we might mention pulmonary syphilis. Here again the situation may be very obscure and demand a very perfect set of pictures to arrive at the correct conclusion. Syphilis of the lung is certainly not rare. It occurs in one of two varieties: the indurative, which is the most common, and the gumma. In the diagnosis of either type the history is all important because the exclusion of tuberculosis the story and the inclusion of syphilis plays a before big part. Or again a positive Wassermann or evidence of syphilis elsewhere in the body are suggestive. The symptomatology may mimic tuberculosis very closely although, as a rule, the symptomatology is milder than seems consistent with the abnormal physical signs. The bases of the lung and the hila are the usual seat of invasion, which is helpful. However a gumma affects base and apex with equal frequency and the physical signs of a brokendown softened apical gumma cannot be distinguished from apical pulmonary tuberculosis. Tuberculins are notoriously of negligible diagnostic value in adults and so in this situation the x-ray is again called upon for help.

We come, then, to the malignancies of the lung, carcinomata and

sarcomata, both primary and metastatic. That the former, the primary types, are increasing in frequency at an alarming rate will not be denied. The explanation of this increase like that of cancer itself, is not forthcoming. Explanations there are by the score, illogical and untenable most of them, unproven all of them. The one fact remains—primary malignancy of the lung is today of common occurrence. In metastatic malignancies the primary tumor site in matter of frequency is probably about as follows: Breast, thyroid, bone, prostate, pancreas, suprarenal and the gastrointestinal tract. The clinical picture of malignancy of the lung of either type, but more especially the primary, occurring early in the fourth or fifth decade of life, can be baffling, and its differentiation from lung tuberculosis anything but elementary. The symptoms, as in moderately and far advanced active pulmonary tuberculosis, are essentially:

1. Local symptoms—cough, dyspnea, pain and bloody sputum. This latter symptom is usually an early and a constant one due, naturally, to the erosion, of a vessel. If this be a through and through erosion, the bleeding is usually a harmless seepage, whereas if it be the result of a lateral wall of so-called window erosion, the result is fatal.

2. Constitutional symptoms, except for the absence of the typical tuberclous temperature curve, are identical; to wit, loss of weight, fatigue, cachexia, sweating, gastrointestinal upsets, etc.

The physical signs, depending upon the size and site of the tumor, are identical with those encountered in far advanced active pulmonary tuberculosis. In all fairness I must admit that even the x-ray has failed me more frequently in the differential diagnosis of lung malignancies than in any other situation. On the other hand, it has time after time clearly and definitely shown me such a malignancy where I had merely suspected it as a possibility.

We come next to the matter of pneumonia—pneumonia in its various forms,—lobar, bronchial and antral. Surely here is a field of tremendous usefulness for the x-ray. Or have we reached the pinnacle of complacency where we feel no need for help in this disease? Granted we arrive at the diagnosis of acute lobar pneumonia quickly and accurately in the average typical instance, yet its confirmation with a portable picture is helpful. It has a wider scope in the broncho-pneumonias where the diagnosis at best is uncertain. And the not too infrequently encountered atypical, so-called central pneumonias, atypical in every respect as to onset, symptoms, signs and progress, they indeed need the x-ray for diagnosis or confirmation.

A few brief words concerning abscess of the lung, a condition which can prove most baffling. The most common causes of abscess of the lung are as follows:

1. Most frequently the result of an unresolved pneumonia.
2. Direct rupture of an abscess into the lung.
3. Aftermath of trauma.
4. Aspiration of a foreign body.
5. Secondary to a carcinoma of the esophagus.

In the diagnosis of an abscess of the lung, the history of a previous recent pneumonia or trauma or aspiration is naturally of prime importance. · Next, the clinical course with its septic temperature is very suggestive. The physical findings are essentially localized dulness, cavernous or amphoric breathing, coarse, bubbling rales, bronchophony and egophony. However, in my experience the history, symptoms and signs, all co-ordinated, are frequently insufficient and demand corroboration by the x-ray.

I wish next to consider the diagnostic value of the x-ray in diseases of the heart and its vessels. I have for the past ten years found it interesting, simple and instructive to study heart disease epochally; that is, I have divided human life arbitrarily into three epochs or eras of twenty-five years each. My first epoch covers the first twenty five years. of life—infancy, childhood and adolescence. The second epoch embraces a man's prime, and the third takes in his senescence. I appreciate that no such hard and fast line can accurately be drawn; that prime often extends into the third epoch and in some instances an individual actually purloins for himself a fourth epoch. However, we are concerned with averages and so my classification is not too bad. Besides, it admits of a very convenient division and study of heart disease. We find, for example, that each epoch has its distinctive major type of heart disorder.

In the first twenty-five years of life, while we encounter the so-called athlete's heart and abnormalities in both rate and rhythm, there is one characteristic outstanding type of heart disease—acute rheumatic endocarditis. This type of heart disease is, in the vast majority of instances, due to acute rheumatic fever. Now acute rheumatic endocarditis, irrespective of the value or values involved, offers, as a rule, no great diagnostic and differential diagnostic problems. However, the x-ray provides important corroborative evidence as follows:

1. In mitral insufficiency the heart shadow is increased in its cross diameter, the right ventricle furnishing the bulk of the hypertrophy. The left auricle remains unaltered.

2. In mitral stenosis, on the other hand, in addition to an hypertrophied right ventricle, we see an enlarged left auricle plus, as a rule, congested lungs and hila.

3. In aortic insufficiency the x-ray reveals an hypertrophied left ventricle and, as a rule, a dilated aorta

4. In pure aortic stenosis we encounter only a moderate hypertrophy of the left ventricle and apparently an aorta of normal width.

5. In combined mitral stenosis and insufficiency the right ventricular hypertrophy frequently reaches such proportions as to displace the right auricle sharply to the right.

6. In combined mitral and aortic valvular disease we encounter not alone an immense left ventricle, but an enlarged left auricle as well.

While, as a rule, we experience no great difficulty in differentiating these valvular lesions clinically, the additional information supplied by the x-ray is very valuable.

The second epoch of life, from twenty-five to fifty years, ushers in a new and very formidable type of heart disease, syphilis of the heart. It follows the chancre, as a rule, fifteen to twenty-five years. It is not infrequent and, while statistics vary widely, it can be conservatively stated that from four to six per cent. of all male adults who die after the age of forty-five reveal evidence of cardiac syphilis.

Unlike acute rheumatic endocarditis, the diagnosis of early syphilitic aortitis is not simple and yet if any progress is to be made in the treatment of this disease, it may be instituted early. After the advent of cardiac complications, the treatment is both hazardous and ineffectual. Clinically, the earliest subjective and objective manifestations of syphilitic heart disease are narrowly limited to the aorta and their detection is by no means an elementary matter. The x-ray, however, reveals quite early concrete evidence of its presence through a widened, dilated aorta, and as the disease progresses and this widening reaches aneurysmal proportions, the orthodiagram or 2 meter plate often suggests rather than corroborates this complication.

The third epoch of life takes in its senescence. We encounter here not a true disease of the heart but rather a heart impaired by the inevitable ravages of time, changes in the heast and its vessels for which we have coined the term "senile ectasy." I like to think of this type of heart impairment, as it affects the myocardium, as chronic myocardial insufficiency, a functional situation, if you will, rather than an organic one, for at autopsy there is little physical evidence of disease.

Accordingly, the x-ray reveals only meager deviations from the normal. The chalky, dilated aorta which through the years has lost its elasticity may show a moderate spreading. The left ventricle too, may reveal a slight or moderate enlargement. We come, finally, to the most important, dramatic and possibly most discouraging type of heart disease in human life, disease of the coronaries. We encounter clinically no great dfficulty in the diagnosis of coronary insufficiency. Nor do we need any help in the differential

diagnosis of the so-called anginal syndrome from acute coronary occlusion. This disease is discouraging, not because of an obscure diagnosis but because of its great frequency, its inevitability, and our utter lack of prophylactic management. We treat it symptomatically *after* its arrival.

We owe the x-ray much for its many and varied diagnostic aids but we are prompted to demand still more. We are urged to ask, "Visualize for us the coronaries. Let us see under the fluoroscope or in the plate the degree of patency or the amount of narrowing of these important vessels."

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CANCER IN CHILDREN.

Cancer as used in its broad meaning of 'any malignant tumor', is usually considered a disease of middle and old age. When it occurs in infants and children it is frequently overlooked or incorrectly diagnosed and treated chiefly on account of the age of the patient. It should be remembered that there is no true "cancer age." We all agree, I believe, that certain forms of cancer are more common at certain ages, and by far the greater number of cases of cancer *do* occur after the age of forty, but one should not lose sight of the fact that infants may be born with the disease well established and that certain forms of cancer are quite frequently seen in children. Space does not permit a discussion or heredity in cancer, but it may be briefly stated that while some forms of cancer are *congenital*, it is not believed that cancer is an actual hereditary disease. In numerous cases of congenital cancer in infants, examination of the parents fails to show any evidence of the disease.

It is impossible in this short space to enumerate all of the various types of tumors met with in children and we must therefore be content to name a few of the more common ones and comment briefly on them.

In some instances it is believed that cancer developes early in those organs which reach their maturity early in the development of the individual. Certain forms of malignant tumors of the kidney such as the embryonal sarcoma or Wilm's tumor, or the neurocytoma of the suprarenal gland with its metastases to the orbit and skull, or other malignant tumors of the genito-urinary tract are not uncommon in infants and young children. Retinocytoma (the so called glioma of the retina) is frequently congenital, involving first one eye and then the other and is practically 100 per cent fatal.

Various tumors of the lymph nodes, especially those of the neck, are quite common and include practically all of the lymphoblastoma group. Practically all children have some enlargement of some of the lymph nodes and therefore the occurrence of malignancy in these nodes makes the differential diagnosis in the early stages quite

difficult. The frequency of tuberculous lymphadenitis and secondary inflammatory conditions of the nodes increase the difficulty in diagnosis. However, every enlargement of the lymph nodes should at least be suspected as being of neoplastic origin until definitely proven otherwise. Lymphoid tumors of the gasstro-intestinal tract occur in children, frequently with symptoms suggestive of appendicits or obstruction, the true condition being discovered only at operation.

One of the most important types of cancer occuring in children is bone sarcoma. With the exception of multiple myeloma which is practically always a disease of middle age, all of the primary malignant tumors of bone, are seen most frequently in children. Occurring as it does during the time of active growth, it is frequently mistaken and treated for rheumatism or is allowed to go on untreated as "growing pains," until the disease is well advanced. This is one type of cancer where pain is usually the initial symptom and therefore, any persistent pain in or about a bone or a joint calls for careful x-ray examination, for such examination will usually reveal the true nature of the disease before other symptoms and evidence develop. Endothelial myeloma, or Ewing's sarcoma, is primarily a tumor of children, many cases occurring in the first decade of life and over half of the cases before the age of twenty. It occurs very frequently in poorly nourished children and the accompanying symptoms of fever, leukocytosis, pain and other evidence of inflammation make the differentiation from osteomyelitis very difficult. Even the x-ray appearence of the lesion is frequently atypical. One should not lose sight of the fact that this disease frequently occurs as a multiple primary tumor.

Numerous other forms of cancer which are common to middle and old age may be seen in young individuals. Cancer of the rectum is by no means unknown in children and cancer of the stomach in young patients is usually overlooked until too late. Melanoma, or the "malignant mole," is by no means uncommon in children and even cancer of the larynx and of the tongue have been reported. Even the common skin cancer of epidermoid carcinoma of the basal cell type which is so common in elderly patients must not be overlooked in patients under twenty.

The diagnosis of cancer in children probably offers more difficulty than in adults. However, the same methods of diagnosis must be employed and the diagnosis must be established by means of clinical, x-ray and biopsy or operative findings. As a general rule, cancer in children is probably more malignant and the course more rapid than in adults, but, of course, there are numerous and marked exceptions. Treatment is the same as a rule, but it should be remembered that many of the malignant tumors of children are of embryonal and anaplastic type, highly malignant and very senstive

to radiation. Different types of tumors in the same location respond differently to radiation therapy. Osteogenic sarcoma is notoriously resistent to any form of radiation while Ewing's sarcoma is one of the most sensitive. In lymph nodes, lymphosarcoma is probably the most sensitive of all malignant tumors, while endothelioma and Hodgkin's disease are distinctly less so. The resistance may increase as the disease progresses or after repeated insufficient treatment. On account of the marked radiosensitivity of many of these tumors in children, this form of therapy is frequently indicated in preference to surgery in dealing with cancer in the young individual, at the same time remembering that the prognosis is grave in spite of any type of treatment.

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THE MEDICAL ASPECT OF GONORRHOEAL RHEUMATISM

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Of all the complications of gonorrhœa, one of the most important is gonorrhœal rheumatism, the treatment of which often taxes all the resources, not only of the venereologist, but also of the orthopædist, the physician and the physio-therapist.

As a rule a discussion on treatment is confined almost entirely to the cure of the disease, but the treatment of gonorrhœal rheumatism is so largely influenced by those factors which cause it.

It is now recognized without doubt that gonorrhœal rheumatism is a metastatic condition, that is, it is caused by the spread into the blood-stream of the organism, which finally settles down in a joint or tendon, etc. Such being the case, it is obvious that the essential factor in the treatment of this condition is what steps one can and must take to prevent the organism from gaining access to the blood-stream. Now it is quite outside my sphere to give a complete detailed discussion on the treatment of gonorrhœal urethritis with a view to preventing the onset of metastatic complications, but I feel sure that a short review of those principles which are now universally employed would be of interest and value.

The first point is the question of the neglect of the so-called mild cases of gonorrhœal urethritis. There has been a tendency to neglect this type of case. Fortunately in our present era, with a wider and much more humane outlook on venereal disease, the gonorrhœal patient now much more frequently seeks mecical aid early in the disease.

In view of the potential danger of gonorrhœal rheumatism, however slight the attack of gonorrhœa, its early treatment has to a considerable extent lessened the incidence of rheumatism.

The second point is the question of exercise. It seems to be generally recognized that strenuous exercise during the acute stage of gonorrhœal urethritis is often responsible for rheumatism.

I think that the subject of exercise has been somewhat over-emphasized. Dr. Gluckman has been kind enough to give me the following figures. Out of 6,000 cases of gonorrhœa treated at the Special Treatment Centre here in Johannesburg during the past five years, only about 30 cases (½ per cent.) developed rheumatism. Now if you bear in mind that the vast majority of these cases were patients of the artisan class, who have often to do very strenuous work in the mines, or cycle long distances to come to the Centre, it is obvious that, in view of the small percentage of patients who developed rheumatism, exercise cannot play such a very prominent part.

Thirdly, trauma is by far the most important predisposing cause of the condition. The passage of instruments, injudicious massage of the prostate, too rigorous treatment and employment of strong chemicals—these are some of the traumatic factors which can prove very harmful. As a well-known writer has said, with proper control of the infected, and an appropriate degree of gentleness in treatment, the incidence of the condition can easily be reduced and probably almost obliterated.

Gonorrhœal rheumatism is rather a vague term, and at this stage I should like to state that it includes, not only arthritic joint conditions, but also tenosynovitis, bursitis, myositis and periostitis. It is impossible for me to deal with the treatment of each one, so I propose to mention merely those principles applicable to all.

It is most unfortunate that in our present state of knowledge no specific cure exists, and so, as always happens, many different remedies have been employed from time to time. If we examine the literature on the subject we find that, not only do the various authorities differ very widely in their treatments, but even hold views diametrically opposed. One author strongly recommends complete fixation in plaster, while another condemns it. Yet another factor which makes it so difficult to assess the true value of any particular treatment is that the disease is so largely dependent upon the patient's own curative responses, and thus we see how enthusiasm may arise for one particular type of treatment, which gives dramatic results in one case, only to register dismal failure in another.

Among a host of remedies the best-known are probably vaccines, agents producing protein shock therapy, diathermy, hydrotherapy, heat, cold, serum therapy and oral medication. Each one in its turn finds its own supporters. About the only things universally agreed on are rest, relief of pain, and such general measures as apply to any patient with an infective condition.

Complete rest is obviously one of the best measures we can employ, but in this condition, in addition to all the difficulties that may attend any patient who is ordered complete rest, another serious problem arises. As long as your gonorrhœal patient remains ambulatory, it is easy for him to guard his secret, but once he is put to

bed or ordered to a nursing home it is a very different matter. Thus often it may be very difficult, or almost impossible, in a particular patient to obtain the necessary rest. The effect of rest is three-fold, not only by giving the affected part the best protection, but very considerably relieving pain and greatly assisting the general condition of the patient, much lowered in these cases.

Relief of Pain.—Pain is the most distressing symptom present. It may be very severe, and sometimes lasts for a considerable period. Complete rest with appropriate immobilization will give almost complete relief in the majority of cases.

The method of immobilization I shall discuss later. Unfortunately, in most of the severer cases, pain can become so acute as to render the use of drugs imperative. I should like to call attention to the importance of using mild drugs as long as possible, because of the danger of the drug habit. Some years ago I had the misfortune to have to treat a practitioner for morphinism, the habit having been acquired during a severe attack of gonorrhœal rheumatism affecting the spine some years previously. It is most unfortunate that sodium salicylate (our great standby for most rheumatic conditions) is of practically no help; it has certainly no effect on the joint condition, and I doubt if it is as efficacious as ordinary aspirin for pain. There are a number of other measures employed successfully in the relief of pain. Heat, applied either in the form of hot fomentations, electric lamps, diathermy or poultices, is often very effective. I have very little faith in the effectiveness of local applications, such as ichthyol, antiphlogistin, etc., but one must not forget that these remedies have their soothing effect, if not on the mind of the patient, at least on the minds of the relatives.

Vaccines.—In the vaccine era, in which we are at present living, it is not to be wondered at that every conceivable type of vaccine has been employed. Most conflicting views are held with regard to the value of vaccines. Given early, it is possible that vaccines may help to abort the disease. At a later stage their value is considerably lessened, and if used injudiciously, may actually prove harmful. Detoxicated vaccines appear to find most favour, in view of the danger of setting up too much reaction. Attempts have recently been made to obtain a vaccine containing as many strains of gonococci as possible. Dr. Ordman, of the Institute, has been doing much work on the subject, and at present a vaccine, made by him at the Institute, is said to contain almost every conceivable strain found locally (from the low grade of the West Rand to the high grade of the East Rand). Sufficient time has not yet elapsed to test accurately the efficacy of this new vaccine, but results at present certainly appear promising. Compligon, a bacterial antigen, has lately come on to the market, and seems to be finding favour in the eyes of several important authorities in Germany and America.

Now, in conjunction with vaccines, many remedies have been employed from time to time to produce protein shock. As you know, protein shock was for many years one of the standard methods of treating ordinary rheumatism, and so it was given a thorough trial in gonorrhœal rheumatism. Intramine, originally introduced by McDonagh, was quite popular at one time, but it produced such a severe reaction that fortunately it has long since been discarded. It was rapidly followed by such remedies as T. A. B. vaccine, milk injections, manganese butyrate, contramine, etc. It has been proved without doubt, that all these drugs producing protein shock are most erratic in their action, but may be useful when employed with some of the measures I have just mentioned, and particularly when vaccines fail.

TREATMENT OF THE LOCAL URETHRAL CONDITION.

One of the most important advances in post-war medicine was the treatment of focal sepsis. In all cases of diseases of infective origin we were told and taught most religiously that the great maxim was to find the focal cause and remove it. Although this idea of treatment had many successes it very often failed because it was impossible to locate the source of infection; unfortunately it also failed in this condition for yet another reason. In gonorrhœal rheumatism, the finding of the source of infection, in a vast majority of cases is not only easy but obvious, and its removal also, not infrequently, a matter of comparative simplicity; but in spite of these two factors, local treatment in this condition has often proved most disappointing. The reason is that in gonorrhœal rheumatism it is not the site of infection which continues to feed the blood-stream (and consequently affected part) with gonococci; if that were so, the local treatment would soon have a dramatic effect. Actually it appears as if an original shower of gonococci gets into the blood-stream and finds its way to the affected part, continuing to do damage until eradicated. At the same time it would be entirely wrong to suggest that no local treatment, is necessary in gonorrhoeal rheumatism. Local treatment provided it is entirely free from traumatic possibilities, should be undertaken in all cases.

The point I particularly wish to make is the great care that should be taken in carrying out local treatment. In chronic resistant cases, where the infection is locked up in the vesicle and prostate, vasotomy, as Dr. Gluckman has pointed out, has at times given excellent results.

Although I have left to the last what I consider two of the most important measures, immobilization and physio-therapy, that must not in any way detract from their enormous value in treatment.

When the gonococcus attacks a joint or tendon, it produces a serous exudate which leads to fibrous tissue formation, and even bony ankylosis has been known to occur. This knowledge is of the

utmost importance, as it establishes beyond a vestige of doubt the necessity of doing everything in our power to avoid adhesions and contracture leading to permanent dysfunction.

The method of immobilization employed varies in individual cases; the principles remains the same. The affected part must be put in such a position as to take off the strain from the wasted muscles. Even more important is the fact that we should bear in mind the possibility of permanent adhesions, and so, if contracture has taken place, fix the part in such a position as to serve of greatest usefulness afterwards.

Now immobilization has its danger as well as its usefulness. If a particular joint is rested too long, we increase the danger of adhesions and contracture. It is impossible to lay down exact rules. Each individual case must be treated on its merits. Naturally the sooner one can start active and passive movements, the better and the less chance of contractures.

Physio-therapy.—Of all measures of treatment I place my greatest faith in physio-therapy. Massage, passive movement, and later active movement, are of infinite help. For chronic cases, diathermy and ionization methods give excellent results.

Summarizing the whole position, the following points stand out clearly:—

(1) There is no specific treatment.
(2) Measures must be taken to relieve pain.
(3) Complete rest must be obtained whenever possible.
(4) Attempts should be made to improve the general condition of the patient.
(5) Immobilization of the affected parts, and, in severe or long-standing cases, the advice and help of the orthopædist.
(6) Vaccines should be given a fair trial, but if they have no success, some of the simpler methods of producing protein shock should be employed.
(7) Employment of physio-therapeutic measures early in the disease.
(8) Most careful judgment in the management of the local urethral condition.
(9) Last, but not least, remember the great predisposing causes—trauma, and too energetic measures of treatment.

S. A. Medical Journal, Vol. X, No 3. Feb. 1936.

INJECTION OF THE LUNG IN PULMONARY TUBERCULOSIS

BY SIR JAMES R. ROBERTS, C.I.E., M.B., M.S., F.R.C.S. (ENG.);
DEWAS, C. INDIA.

For some time back, after seeing the efforts being made in England for the attempted curing of this disease, I had come to the conclusion that the only line of advance was the direct injection into

the lung substance of a suitable solution, which could attack the tubercle bacilli in their position in the lymphatics. After unsuccesful trials, elaborated a technique which has permitted to say that now curing the cases in a short interval of time compared with the prolonged incarceration in a sanatorium or hospital, and even then with a greater certainty. The mistakes made at first were injecting too deeply, using too strong solutions, and injecting too great quantity. I have tried a variety of chemicals, and now have arrived at the following as the most suitable for average cases, and also for use in the hands of a beginner ; *viz* :—

Acid Carbolic,	dr.	½
Glycerini	dr.	1½
Novocaine	gr.	xvi.
Aqua destillata	oz.	iv

A dose of one c.cm. is slowly injected every third day into the affected portion of the lung. The syring is a Record one of 2 c. cm. and the needle No. 12 Krupps Steel 2 Va, length 1¾. The sterilizing of the skin is done by petrol swabs, letting it dry and then putting on a dab of iodine or picric acid. The syringe is boiled, the needle *flamed*, and the solution is sterilized by the carbolic it contains, and is not to be used fresh, before the carbolic has had time to take effect *i.e.*, 24 hours.

There are eight places where the lung can be injected without danger :—

1. Sub-scapulars in front, the needle passing in between the first interspace or the second.
2. Behind, above the upper edge of the scapula. But I do not advocate this as it is covered by muscle, and the needle may not reach the lung. In emaciated women it is, however, suitable.
3. There are three positions between the inner border of the scapula and the spine, provided the arms are folded over the chest and the shoulder blade drawn outwards so as to give room : one inside the upper angle, one inside the midddle point, and one inside the lower angle.
4. The base behind is the next position.
5. The flank the next.
6. The axilla with arms raised, so as to get at the upper lobe.

Thus the positions are :—Sub-clavicular, Supra-scapular, three intra-scapular, infra-scapular or base, parietal, and axillary.

The intention is to inject only into the periphery of a lobe, the movements of respiration and coughing diffusing it through the lobe, and so to affect the bacilli in the lymphatics. Deep injection is dangerous as the needle is likely to enter a large blood vessel and so the solution may go to the heart directly.

The injections are given every third day into different positions. The stethocope gives one a better indication where to inject than an X'ray plate.

A case with both apices affected should be cured after six weeks or twelve injections, a case with both bases affected and apices free about the same, a more advanced case three months. It has often been a marvel, how quickly the physical signs disappear, how quickly the fever subsides. The last to leave is the cough, as the lung is to clear itself.

The techinque is simple in order to make it possible for even dispensaries to employ. Sterilization of the skin, needle and the syringe are simple measures, but strict all the same. While injecting, introduce the needle first in order to watch for any blood. If any appears in the syringe, withdraw the needle and inject into another place nearby. No blood is likely to come as the pressure inside the chest is negative. Care must be taken not to put the tip of the finger over the basal orifice of the needle. Of course, the hands are to be well scrubbed with soap and water and rubbed with antiseptic lotion.

All the fancy intra-muscular and intra-venous injections of gold salts or otherwise are useless, and only cod-liver oil, more for diet deficiency counteraction than anything else. Direct injection of the lung is far in advance of any other attempt at cure. Further experiments along the line of solutions is advocated. Colloids are not to be used as they are not sufficiently diffusible throughout a lobe. To free the sputum in a short time by direct injection is a most useful and notable prophylactic measure, as it stops the spread of infection from the sick to the healthy.

I advocate this procedure to all workers in tuberculosis institutions. I have worked at and elaborated during the last three years, cautiously at first, feeling my way in this—a new method and a new experiment. I have had many disadvantages, especially that of hospital accommodation insufficient to include tubercular patients. I have, therefore, been forced to treat my lung cases as out-patients against the previous rule of keeping sufferers with a temperature in bed, and still they have got well in a most surprising manner, and with a simple solution injected into the lung focus.

(The Grant Medical College Magazine Vol. XXXVII, No. 2.)

Extracts

THE ENEMA AND COLON IRRIGATIONS.

(H. W. SOPER : *Clinical Medicine and Surgery*, January 1936).

The chief crimes against the colon are : (1) the cathartic habit, (2) the habitual employment of water enemas, and (3) colon irrigations. The author opposes purgatives, but favours the occasional use of mild laxatives such as lapactic pills or cascara; he condemns

phenolphthalein which he states is a dangerous drug. The ordinary enema of water or soapsuds is useful in acute conditions, but should not be used habitually. In extreme agony of the colon, repeated enemas may be necessary, and 3 to 5 per cent sodium sulphate is recommended therein. Colonic irrigations are condemned but colonic lavage with a large catheter and funnel is approved. Oil retention enemas of 6 to 8 ounces of mineral oil are approved. Irrigations with chemical solutions in dysenteries are condemned, but insufflations of equal parts of bismuth subcarbonate and calomel by means of a powder blower is praised. Old ulcers are cauterised by a 25 per cent solution of silver nitrate through a proctoscope, and proctitis is treated by direct application of 10 per cent mercurochrome through the proctoscope.

THE EFFECTS OF RADIATION ON THE HUMAN OFFSPRING.

(J. R. MILLER, J. A. CORSCADEN AND J. A. HARRAR: *Am. J. Obst. and Gyn.* March 1936).

It seems advisable to interrupt any pregnancy which has been subjected to therapeutic radiation, for it is generally admitted that serious radiation effects on the offspring will result in a high percentage of cases. These effects are proportional to the amount of radiation and are more serious in early pregnancies, though the fœtus may be seriously injured in any stage of development. It is advisable that the use of radium and X-ray during pregnancy for treatment purposes be restricted to very clear and urgent indications.

The effect of radiation on offspring conceived subsequent to radiation therapy is distinctly another problem. In this group are to be distinguished "early" and "late" conception. By "early" is meant conception in the first few months after the end of the temporary amenorrhœa. It is the common view that injury is possible in the case of "early" conception whereas in "late" conception the ovum will recover completely before it is capable of being fertilized.

CLINICAL EVOLUTION OF BONE GRAFTS.

(A. INCLAN: *Cir. Ortop. Y. Traumatol.* via *J. Oklahoma State Med. Assn.* 1936. xxix. 149).

The fate of a bone graft depends on the biological purposes for which it is used and where it is implanted. When these purposes have been accomplished, the graft as such disappears and is replaced by newly formed bone which varies in structure according to the physiological demands of statics and dynamics. The bone graft must first become united to the bone and must keep its integrity until the changes which result from its presence have been completely accomplished. The author's conclusions are:

1. When a bone graft is employed for fixation of a fracture in a case of delayed union, the graft will disappear after union is complete.

2. When a bone graft is used for fixation of a fracture and in order to fill the gap between the fragments, the graft changes in structure until it attains the size and shape necessary to compensate for the deficiency.

3. If a bone graft is used for extra-articular arthrodesis of the joints, the integrity of the graft is indispensable and should be maintained until the lesion is healed. Regression of the lesion without protection of the bone graft may produce loss of integrity of the graft.

4. When a bone graft is used for stabilising dislocated or relaxed joints, the structure will change according to the role which it is to play. If its purpose is not accomplished, the graft will disappear either partly or entirely.

5. When a bone graft is employed with the object of replacing a large portion of bone, its fixation and osteotrophic action depends upon complete preservation of the graft until the newly formed bone takes on the normal structure; then the bone graft will disappear entirely.

Medical News and Notes

MEDICAL LICENTIATES ASSOCIATION (MADRAS BRANCH). A meeting of the medical practitioners was held under the auspices of the above association at 131 Coral Merchant Street, Madras on the 20th September with Dr. U Rama Rao, the president in the chair. Resolution protesting against the non-inclusion of the licenciates and other diploma holders with in the perview of the Indian Medical Council Act, thus perpetuating the caste system in the medical profession was passed unanimously. The President spoke at length about the grievences of the licenciates, and highly appreciated the idea of observing the 'Anti-medical Council Day' as a protest against the treatment accorded by the Government of India the large body of medical men.

THE KRISHNA DISTRICT RURAL MEDICAL PRACTITIONERS ASSOCIATION. A meeting of the above association was held on the 22nd August '36 at Masulipatam in the D.M.O's office with Lt. Col. K. V. Ramana Rao, I.M.S., District Medical Officer in the chair. Condolence resolution upon the death of Dr. S. Rama Subbu, Secretary of the Provincial Rural Medical Practitioners' Association, from Tetanus was passed. Another resolution, requesting Dr. Rama Kamath; Editor, Medical Practitioner, Madras, to select one Rural Medical Practitioner to fill the gap caused by the death of Dr. Rama Subbu, and the provincial conference be held during the coming X-mas holidays, was passed. There was a discussion upon the subject of Refresher Courses proposed by the Surgeon General to the Rural Practitioners.

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION. PALAMCOTTAH. The monthly meeting of the association and the President's function were held on the 29th August 1936, at the St.Xavier's

College Hall, with Lt. Col. T. S. Shastry, the president in the chair. Seventy nine members including five lady doctors were present. The President was 'At Home' to the members. Resolutions offering congratulations to Major General E.W.C. Bradfield, C.I.E., O.B.E., M.B, M.S., F.R.C.S. (Edin.) I.M.S. on his appointment as Director-General of Indian Medical Service and to Dr. Lakshmanaswami Mudaliar, B.A., M.D., on his election to the Vice-chancellorship of the Madras University, were passed. Dr. P. S. Srinivasan, Government Head Quarters Hospital, demonstrated interesting cases of Aneurysm, left common carotid; Osteo-Sarcoma, pubic bone; Foecal fistula, right inguinal region; and Duodenal Ulcer. The members took part in discussing the above case notes. The same doctor read interesting case notes on a case of 'Acute abdomen' and a case of 'Rupture of the Liver,. Lt. Col. T. S. Shastry, gave an interesting lecture on "Acromegaly" and demonstrated two interesting cases.

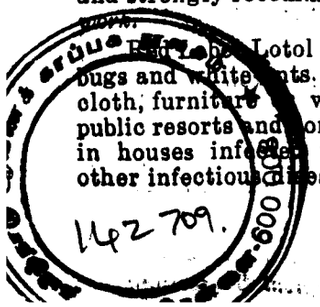
ALL INDIA MEDICAL LICENTIATES' ASSOCIATION. The 28th Annual Conference of the above Association will be held at Agra during the X'mas week. Rai Bahadur Dr. Hari Ram of Delhi has been elected President. All the Scientific exhibits and articles should be sent to T. C. Basu Chowdhury, General Secretary, Reception Committee, Rekabgunj Road, Agra, on or before the 1st December 1936.

U.P. MEDICAL CONFERENCE, ALLAHABAD. The third conference of the above will be held on the 29th and 30th of October 1936. The President-elect of the Conference is Capt S. K. Chowdhury, Chief Medical Officer, Benares Estate. There will be an exhibition of the Medical requisites, etc. manufactured in India and abroad.

MODERN THERAPEUTICS.

Sirop 'Thio-Calcin' prepared by Thio Calcin Co, Madras, contains Pot Sulpho Guaicolate, calcium hypophosphites and lacto phospate and glycerine and lime juice. It is very agreeable to taste and is very useful in early cases of pulmanary tuberculosis, chronic bronchitis and bronchial asthma. In cases of mal-mutrition associated with calcium deficiency it gives good results. This preparation is extensively tried and used by eminent medical men. The preparation is very agreeable with children.

LOTOL a mosquito destroyer and larvaecide prepared in the laboratories of Elliot Brothers, Ltd., Rozelle, are of two varieties. Lotol without poison and the Red Label Lotol. Lotol without poison when sprayed on a stagnant pool or any other mosquitoe breeding place, forms a thin film on the surface and when the larvae comes to the surface to breathe they are destroyed by Lotol. Contamination of water by Lotol do not make it injurious. W. J. Fellberg, City Inspector, City of South Brisbane has extensively tried it on mosquitoes and larvae and is of opinion that it is a *sure and certain insecticide*, and strongly recommends Lotol *a sure fluid larvaecide for mosquitoe*



Red Label Lotol destroys mosquitoes, flies. cockroaches, fleas. bugs and white ants. It evaporates and leaves no stain no smell on cloth, furniture walls. Lotol is indispensable to every house, public resorts and conveyances. Lotol is a good general disinfectant in houses infected with plague, typhoid, cholera, small-pox and other infectious diseases.

What the Doctors say about

Neo-Riodine & Laxanthine Astier.

Dr. P. KRISHNASWAMI,
MADRAS.

I have great pleasure in writing to you that I used your LAXANTHINE ASTIER IN A CASE OF RHEUMATIC ARTHRITIS with remarkable success. The patient is a lady of 30 years, Temperature 102 to 103.5 with swellings of the right knee first and later the left also. I was giving her soda salicylas mixture as well for her pain all over the body.

I was daily giving her one 5 c. c. ampule of Neo-Riodine intravenously. After four injections the patient is completely cured. Swelling disappeared altogether. The temperature came to 100.8 the second day, and touched normal on the fourth day; and she is alright now.

I think I can safely recommend your LAXANTHINE ASTIER & NEO-RIODINE for Rheumatism and other infections.

The Urine was also cloudy and full of sediments which disappeared after three or four day's use of Laxanthine Astier. It became clear and free from Phosphate and other sediments.

Yours Sincerely,
DR. P. KRISHNASWAMI.

Treatment of a case of Elephantiasis.

By Prof. NOCUER MORE.

Chief of the Dermatologic Service.

Hospital de la Senta Cruz.
BARCELONA (Spain.)

Professor Noguer More of Barcelona observed, some time ago, a case of chronic oedema, progressive and localised in the foot of a woman 38 years old, which oedema was neatly and anatomically turning into elephantiasis.

NEO-RIODINE intravenous injections, administrated every two days, (10 to 15 c. c.) got quickly over the elephantiasis process.

The lymphatic vesicules started decreasing, and after them, the oedema and the hypersarcosis-which evolutions allowed the patient to walk normally a few days after.

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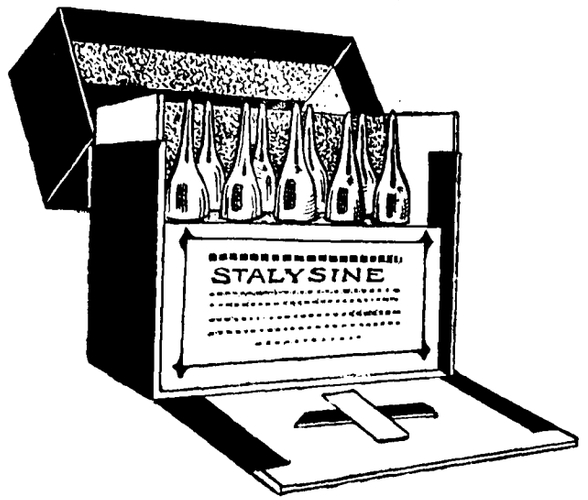

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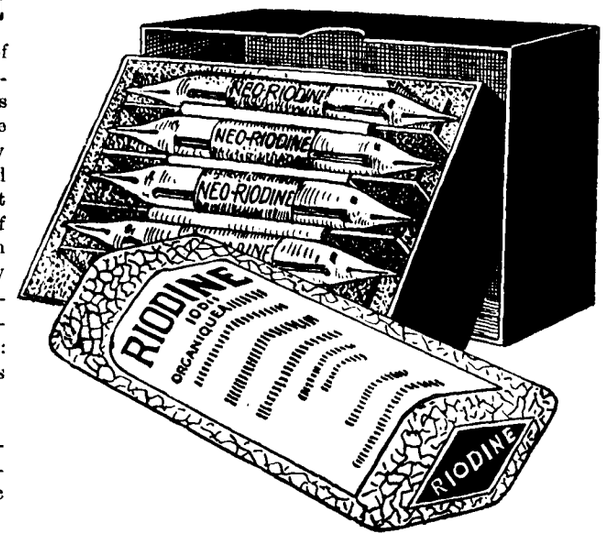

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