

California and as if there might be an advantage in somewhat reconstructing its operations.

Generally speaking, I believe that the principle of reciprocity is right and that any state could well afford, if it happens to be one of the more popular states, to give a little more than it receives in order to maintain the feeling of unity and hospitality which I feel a great profession should encourage—in other words, it is desirable, even at some cost, to assist in building up a real professional morale and esprit de corps.

WALTER A. BAYLEY, M. D., (802 Professional Building, Los Angeles)—I have read Louis E. Mahoney's letter entitled "Abuse of Reciprocity," with considerable interest.

It seems to me that a written examination for all applicants would have a tendency to keep out undesirable medical men. However, this would be a hardship to the capable experienced man who had been practicing for many years in one of the specialties, and who should be entitled to some credit for his experience.

If there are twelve doctors locating in California to one leaving the state under the provision of reciprocity, surely some change in the law should be made whereby this condition could be corrected.

GRANVILLE MACGOWAN, M. D. (Brack Shops Building, Los Angeles)—The presentation of the subject by Doctor Mahoney is quite interesting. I possess the right to practice medicine in four states of the Union, by reason of license—New York, Pennsylvania, Georgia, and California. I do not know how many states I am entitled to practice in, by reciprocity, for I have never given this subject a minute's consideration. I am possessed of the idea, that holding my diploma from a first-class college, I should be entitled to practice medicine, without examination, anywhere within the territorial limits of the United States government.

Under the law, there is no chance for a closed shop in the medical profession in California, because California is the most desirable of all places in the United States to live in, and consequently there must necessarily be more people who would take advantage of the articles and agreements of reciprocity to enter the state than there are, or will be, to use the privilege of reciprocity by moving to another state.

In attempting to inaugurate a change in the present custom, it is very well to consider that the standard of medical practice in California is probably as low as it can well get; that those whom we call "cultists" have the same legal right, in practice, that we have, for it has pleased the voters of the State of California to bring about this condition, after prolonged public discussion of the merits and demerits of the medical systems which have sought an equal recognition with the regular medical profession.

I see no object of value to be gained by compelling those of the regular medical profession, who are entitled by reason of reciprocity, to be licensed to practice in the State of California, and who, either for economic reasons or on account of personal ill health, desire to practice the profession of medicine here, to be obliged to take a written examination, even though they be a "little backward in their medical attainments."

WALTER V. BREM, M. D. (Pacific Mutual Building, Los Angeles)—Doctor Mahoney has discussed a subject in which I have been deeply interested during the three years of my service on the State Board of Medical Examiners, and I find that I am in hearty accord with the views which he expresses.

Recently I had occasion to publish my views in a letter to the Journal of the American Medical Association on June 13, 1925.

It is my opinion that the efforts of the State Board of Medical Examiners to raise the average efficiency and integrity of the medical profession of California are considerably impaired by the reciprocity evil.

As chairman of the reciprocity committee of the State Board of Medical Examiners, I recommended that a bill be introduced at the last session of the legislature, abolishing the reciprocity sections of the Medical Practice Act.

This bill was introduced by Senator Lyons, and it passed the senate by unanimous vote. It was amended,

however, when it reached the house, and finally died in committee, greatly to my disappointment.

DOCTOR MAHONEY (closing)—It has been a genuine pleasure to learn the personal views of the esteemed gentlemen who have discussed this treatise. The essential fact remains, however, that in 1923, for every California licentiate who was granted reciprocity in other commonwealths, twelve individuals were given the right to practice in California. In 1924, for every reciprocity certificate issued by another state, to a California licentiate, twenty licenses were granted on the basis of reciprocity permitting men to practice medicine in California. Were all such applicants of the forward-looking, progressive, scientific type of practitioner, there would be no particular menace in the situation, but it is an unfortunate truth that a great many of these applicants are not of high professional caliber. A written examination, while discouraging incompetents, would work very little hardship on the up-to-date and well trained medical man.

A MESENTERIC CHYLOUS CYST

By CHARLES G. LEVISON* AND MAST WOLFSOHN*
(From *The Surgical Service, Mount Zion Hospital*)

DISCUSSION by John Francis Cowan, San Francisco; Leo Eloesser, San Francisco.

MESENTERIC chyloous cysts are comparatively rare, and the pre-operative diagnosis even rarer. The first diagnosis of these cysts was made in 1842 by Rokitansky at a necropsy. Since then there have been about two hundred cases reported. The cysts are usually found in the mesentery of the small intestine near the ileo-cecal valve, although any part may be the point of origin. The wall may be that of paper thinness to one of several millimeters in thickness; the inner surface is usually smooth and shiny. As a rule there have been no enlarged glands in the adjacent mesentery. The contents have been listed as cholesterin, fat globules and leucocytes. In the vast majority of cases a chemical examination was not made. There are no distinctive symptoms. The size and position of the cyst causing pressure or obstruction to nerves, vessels or viscera may resemble appendicitis, volvulus, cholecystitis, chronic dyspepsia, and many other diseases.

Treatments have included aspiration, incision and drainage and enucleation. Where the bowel has been involved, resection of adjacent bowel with excision of the cyst has been practiced.

The classifications of Moynihan and of Carter are complete and useful. Moynihan classifies them as:

1. Serous cysts—unilocular or multilocular—containing clear serous fluid. Cause: Questionable

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dilatation of lymph channels or hemorrhages between the layers of the mesentery.

2. Chylous cysts—unilocular or multilocular—containing milky fluid. Cause: Questionable obstruction to some of the lacteals. These are the most numerous, being about one-half of the reported cases.

3. Hydatid cysts. Cause: *Taenia echinococcus*.

4. Blood cysts. Cause: Hemorrhage into cysts.

5. Dermoid cysts. Embryonic in origin.

6. Cystic malignant disease. Questionably of embryonic origin.

Carter classifies them as:

1. True mesenteric cysts, divided according to origin, into (a) Embryocystomata; (b) Enterocystomata: Tumors of Meckel's diverticulum and tumors from sequestration from the bowel; (c) Obstructive.

2. Dermoid cysts.

3. Cystic malignant disease.

4. Parasitic.

Report of another chylous cyst:

Mrs. G. Age 47. Married. Admitted to hospital July 8, 1923. Complaint: Loss of appetite and weight with persistent vomiting. F. H. and P. H.: Essentially negative. P. I.: One year ago the patient complained of hunger pains occurring about every two hours. These continued up to six months ago when she began having "bilious spells." There was never any jaundice. About six weeks ago she lost her appetite and since then abdominal distention, aggravated by eating, has been persistent. For the past three weeks the patient has been vomiting after every meal. No clay-colored or tarry stools have been noticed. She has lost about thirty-five pounds during the last year, the greater part being lost the last three months.

Physical examination: Head and neck: Negative. Chest: Lungs normal throughout. Heart normal, B. P.: 130/80. Abdomen: A large smooth, non-tender, non-painful mass extended in the left abdomen from just above the level of the costal margin in the nipple line down to the level of the anterior superior spine of the ileum. It extended medially to the inner border of the left rectus muscle and laterally to the left anterior axillary line. It was freely movable and had the feeling, on palpation, of a large spleen. It was flat to percussion in the middle of the mass. It moved with respiration. Liver: Negative. Spleen: There was a question whether it was felt or was connected with the mass. Left kidney: Question if it was connected with the mass. Right kidney normal. Vaginal and rectal examination: Negative. Extremities: Negative. Reflexes: All normal; pupils round, regular and react to light and accommodation. Laboratory: Urine 1012, alkaline: no albumen, sugar or diacetic acid. Sediment shows many epithelial cells and a few red blood cells. Blood: Hgb. 90 per cent. RBC 4,560,000, WBC 7750, 72 per cent polymorphonuclear neutrophils, 15 per cent small lymphocytes, 8 per cent large mononuclear, 5 per cent transitionals. Wassermann: Not taken. X-rays: G. I. Fluoroscopy: Lung fields clear. Heart and arch, negative. No delay or defects in esophagus. Stomach low, slightly to the right. Peristalsis moderate. No defects. Pylorus smooth. Cap large, smooth in outline, and empties moderately. Duodenum curves to right. No dilatation or delay. No six-hour gastric or duodenal residue. Previous meal in terminal ileum and caecum. Twenty-four-hour examination: Meal into transverse colon. Mass felt independently of the stomach. Barium enema, large dilated sigmoid, narrow, irregular constriction of the distal portion of the transverse colon. Large mass felt in splenic region. Barium enema repeated. No evidence of abnormality in the colon. X-ray diagnosis: Splenic tumor. Cystoscopy and catheterization of ureters give normal urine from bladder and both kidneys. Kidneys injected and x-ray plates taken which showed incomplete injection and the left kidney somewhat enlarged.

Differential diagnosis involved consideration of: (1)

tumor of the spleen (2) tumor of the left kidney (3) mesenteric cyst.

The radiologists supported a diagnosis of a splenic tumor. However, the surgeon (Doctor Levison) considered it a mesenteric cyst and operated upon the patient on July 9, 1923.

Details of operation: The skin and deep subcutaneous tissues were infiltrated with $\frac{1}{2}$ of 1 per cent novocaine and a transverse incision made two inches above the umbilicus extending from the outer border of the right rectus muscle to the left mid-axillary line. At the median end of the incision a vertical incision extending cephalad for two inches was made. When the peritoneum was opened, a large, whitish mass was found in the mesentery, which felt tense, fluctuated on pressure and was obviously cystic. There was some free chylous fluid in the left abdomen. Due to nervousness of the patient gas-oxygen-ether anaesthesia was induced. The cyst proved to be in the root of the mesentery, about the region of the first and second lumbar vertebrae and anterior to the pancreas. Transverse colon was cephalad to the cyst. An attempt was made to dissect out the mass, but the slightest manipulation of the thin multilocular wall caused oozing and, at times, spraying of chylous fluid from many points of the cyst wall. Separation of the cyst from the mesenteric wall seemed to open up large lymph spaces. The mass apparently was one large sac with many small dilated spaces around it, there being no definite boundary line. Dissection was impossible and during manipulation the cyst wall ruptured with the escape of about a quart of chylous fluid. Owing to the difficulty of dissection in the mesentery and the possibility of the blood supply in the adjacent bowel being affected and also the risk of prolonging the anaesthesia, it was deemed inadvisable to continue the operation. The base of the cyst was searched for but not definitely ascertained. It seemed to be near the superior border of the pancreas.

The edges of the sac were marsupialized by stitching them to the edges of the peritoneum. This part of the peritoneum was not closed. A cigarette drain about twelve inches long was carried down to the base of the cyst and stitched there. The abdomen was closed in three layers, three Penrose tube drains were inserted, down to the fascia, and the patient left the table in good condition. Laboratory examination of the fluid showed cholesterol, fat, and fatty acids. No section of the cyst wall was removed for examination.

The patient made an uneventful recovery and the wound healed by first intention. She was put on a general diet the fourth day. She was up in a chair on the seventh day and went home on the fifteenth day. The drain was left in place for one and one-half months, the tube being gradually removed during the last fortnight. There was no drainage aside from a slight amount of serum. The patient is now up and about her daily duties without apparent discomfort. Her appetite is good, she is feeling well and her sinus is closed.

DISCUSSION

JOHN FRANCIS COWAN, M. D. (Stanford University Hospital, San Francisco)—As the authors state, these cysts are rare and present no signs or symptoms which are pathognomonic. The pre-operative diagnosis is therefore all the more creditable.

It is easy to understand the origin of blood, dermoid and hydatid cysts, but chylous and serous cysts are not so easily explained. I have never seen a mesenteric chylous cyst, but I have observed and operated upon patients with two different pathologic conditions which may be mistaken for such cysts. The first was an intra-peritoneal cyst arising in the region of the duodeno-jejunal angle. Intra-peritoneal cysts arise from fossae of the peritoneum, in the ileo-cecal, duodeno-jejunal and inter-sigmoid regions. These fossae may become enlarged and form the seat of a hernia. By inflammatory reaction the opening into the peritoneal cavity may become obliterated, when the sac fills with serous effusion. In my case the lymph nodes in the mesentery near the duodeno-jejunal angle were enlarged and there was evidence of old inflam-

matory reaction in the fibrous thickening and contraction of the mesentery.

The second condition is that of tuberculous abscess in the mesentery of the small bowel. I have had two of these in children, one of which was the size of a large orange, situated in the midline above the symphysis pubis. This was at first considered to be a distended bladder. But catheterization, however, showed a small amount of clear urine and did not in any way influence the size or position of the mass. It was found that when the patient assumed the knee-chest position and the abdominal wall became relaxed, the mass was displaced upward and could easily be moved from side to side. For this reason I thought of a mesenteric cyst.

In the second case the mass was to the left of and on a level with the umbilicus. This, however, was not freely movable. Operation revealed a large tuberculous abscess in the leaves of the mesentery in each case. The first of these was removed en masse, the second incised and drained. Each patient made an excellent recovery.

These differ from encysted tuberculous peritoneal effusions in that the latter are more fixed and even if they appear to be round in shape are usually connected to the anterior abdominal wall. These encysted effusions may occupy the midline of the abdomen.

LEO ELOESSER, M. D. (Butler Building, San Francisco)—Like Doctor Cowan, it has not been my fortune to operate upon a patient for chylous cyst, but I have seen other cysts, difficult to distinguish from them.

Pancreatic cysts are usually less movable, but in 1920 I saw, with Dr. H. P. Hill, an old lady who had a movable tumor of the epigastrium, some 8 cm. in diameter, which pushed the stomach downward and to the left, and which throbbed with the aortic pulse, but was not itself expansile. We thought the cyst most likely to be of the pancreas. The next day it ruptured, so that I hurriedly opened the abdomen and found a moderately tense red cyst, covered by dilated veins, lying between the liver and stomach. The hand could be introduced between the cyst and the liver. There was apparently no connection between them. I marsupialized the cyst, and the patient made an uneventful recovery. I thought I was dealing with a pancreatic cyst, but sections of the wall contained liver cells and the pancreatic ferments were absent in the fluid. The growth was a cystadenoma of the liver.

Encapsulated intra-abdominal abscesses and large movable abdominal tumors from suppurating glands of the mesentery are not so very rare. One such tumor in a girl who was afterwards sent to the San Francisco Hospital was twice the size of the one in the above-mentioned patient. X-ray films of the abdomen taken before the administration of a barium meal, will usually reveal shadows of chalky or cheesy deposits, which permit of a diagnosis even without opening the abdomen. Large ovarian cysts may also present diagnostic difficulties. Echinococcosis wall gives a characteristic complement fixation reaction, but echinococcus infection is as rare in this country as the chylous cysts themselves.

DOCTORS LEVISON AND WOLFSON (closing)—We thank Doctors Cowan and Eloesser for their discussion of this paper and read with interest their cases cited. We will close the discussion with Donoghue's remarks: "In the literature on cysts of the lesser peritoneum one finds few reported, apart from those credited to the pancreas; it is often so difficult or even impossible, to recognize during operation, the precise origin of any individual cyst; there are so many possible sources from which cysts may develop that one is forced to believe that operators and writers have too often assumed their pancreatic origin without sufficient diagnostic data."

A physician should always be willing to call a consultant. This attitude is looked upon with favor by the family. In all severe cases one should have a consultant, not only to cover the patient's illness, but to guard against any legal difficulty that may follow, for example, an attempt to break a will, a claim of unsound mind. In these days of dishonesty, one must be covered at every angle.—Medical Review of Reviews.

EDEMA FOLLOWING THE USE OF INSULIN

By D. M. ERVIN *

The edema of insulin is nothing more than colloids under the influence of two different types of chemicals—one the electrolyte affecting the dispersion, the other the non-electrolyte, only preventing the water from being "pulled in" to the colloid by the dispersion caused by the other.

DISCUSSION by Paul G. Woolley, Los Angeles; T. Henshaw Kelly, San Francisco.

WITH the use of insulin edema has begun to appear in the diabetics, a fertile field for the salt retention followers who have lost no time in putting forth their favorite theory. To the colloid chemist, however, who is able to imitate in a simple manner the entire affair without the use of salts, the salt retention theory is both unnecessary and inadequate.

The clinical observation that the diabetic does not have edema but does die the same cerebral and respiratory death (save convulsions) as the nephritic, is quite common but has received scant attention.

While the diabetic and nephritic comas are fundamentally identical, it is not within the scope of this paper to discuss the applicability of the Gibbs-Donnan law to the physical chemistry of coma. It is intended to discuss only the edema which appears under the use of insulin in the diabetic as a simple and natural conduct of hydrophilic colloids under the influence of two different types of chemicals, electrolytes and non-electrolytes, which both affect the water contents of the colloid.

When colloids of the hydrophilic type are placed in acids swelling takes place. This is because the colloids become under the influence of the acids more dispersed; that is, the colloid particles become smaller. The more the particles become dispersed, the more their internal force permits the water to be drawn in, and as the water is drawn in swelling takes place. It is not due to the swelling that the dispersion takes place; but it is due to the dispersion that water is permitted to be drawn in. Acids produce swelling by increasing the dispersion. Salts decrease swelling by decreasing the dispersion.

The non-electrolyte, while decreasing the swelling, does not do so by affecting the dispersion of the colloid. It is an interface or membrane equilibrium.

The power to hold water by a colloid is decreased by the presence of the sugars as by the presence of the salts, but their action is entirely different. This may be experimentally evidenced by the effect of the salts and the sugars upon the liquefaction point of gelatine under the influence of acids. The liquefaction of gelatine under the influence of acids is a dispersion of such high degree that the colloid particles lose their internal tension and become liquid. Upon this liquefaction point may be tested the effect

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