

become later atrophic. In most of our cases more probably the last explanation was illustrated because of the co-existing atrophy of the other organs.

Any theory in explanation of all the recorded conditions, and especially Loeb's theory, must satisfy the striking peculiarity so well brought out by Councilman last year. His autopsy records showed that in amyloid disease, excepting three cases complicated by arteriosclerosis or chronic interstitial nephritis, no cardiac hypertrophy existed, despite the very decided glomerular involvement. Similar observations are numerous in chronic pyelonephritis with almost complete renal atrophy and cystic degeneration.

In an effort at compensation the patient's nutritional capacity must, I conceive, be the keystone to the successful accomplishment of such an effort. Some individuals of poor nutrition, of deficient recuperative power, perhaps due to heredity or to some acquired fault, possess neither a sufficient resistance to the drains of the renal lesion nor the reacting power to compensate the mischief by a compensatory increased tension and subsequent cardiac hypertrophy. Suggestive analogies in infection are easily adduced. We are all familiar with the progress of syphilis attacking some poorly nourished woman in whom a moderate course of mercury still further reduces her physical condition, while the husband from whom the infection was acquired readily withstands both disease and treatment. Again, Wright has several times called attention to cases of chronic staphylococcus infection with a low staphylococcic-opsonic index, in which no response of the organism can be evoked by any method of vaccination or amount of vaccine, whereas in others vaccination promptly raises the index and the patient gets well.

The only therapeutic indications to be adduced from this presentation are all so evident and so constantly applied that I hesitate to add, in conclusion: We should, of course, first and always, work against the cause, next favor hypertension, or, at least, not combat it early in the disease; then preserve and save the heart by every known method, for example, by limitation of fluids ingested, as von Noorden has so timely urged; and, finally, keep up the patient's nutrition in every way, so that as perfect and permanent a compensation as possible may result.

The importance of this in the dietetic problem of nephritis was sufficiently emphasized last year by Shattuck. It was my good fortune and that of all his pupils for the past fifteen or twenty years to hear him urge time and again the necessity of supporting the nephritic's nutrition.

NOTE: THE DISCUSSION ON THE SYMPOSIUM ON DISEASES OF THE HEART WILL FOLLOW THE TWO OTHER PAPERS IN THE SYMPOSIUM, BY DRs. DAVIS AND ANDERS, NEXT WEEK.

The Automobile's Possibilities.—A satisfactory physician's car can be bought for much less than \$1,000, capable of maintaining an average speed of fifteen miles an hour over all but the very worst roads and powerful enough to climb any hill without difficulty. One such car will easily do the work of three horses for the busy country physician, will double his leisure hours and greatly increase his profits, while during favorable weather the long, tiresome drives behind jaded horses will be delightfully replaced by the rapid motor doing the distances in a fraction of the time, without thought of pity for the motor power or serious loss of time.—Dr. Doolittle in *The Automobile*.

SUCCESS: THE SURGICAL DESIDERATUM.*

A. ERNEST GALLANT, M.D.

NEW YORK CITY.

'Tis not in mortals to command success,
But we'll do more, Sempronius,—
We'll deserve it.—(Addison.)

When the surgeon has completely removed the diseased structures, repaired damaged tissues or replaced dislodged organs or viscera, and the patient has survived the ordeal, has the operator completed his work or should he see to it that the resulting condition in the months and years to come is such as will elicit from the patient words of praise for the operator and operation?

While it would be a matter of great satisfaction if I could give tables of hundreds of operations without a death, or enlarge on the successes which have (and have not) followed my work, I prefer on this occasion to direct attention to certain factors in dealing with individual cases which will aid the abdomino-pelvic surgeon in attaining this desirable ambition—success—in some cases. For convenience and brevity the life history of the surgical patient may be divided into seven stages: 1, Antecedent; 2, precedent; 3, preliminary; 4, immediate; 5, convalescent; 6, subsequent; 7, conclusive.

HEREDITARY AND ACQUIRED DISEASES.

Tuberculous, rheumatic, gonorrhoeal or syphilitic diseases, whether involving the lungs, heart, liver, kidneys, spleen, brain and spinal cord or the gastrointestinal tract, must be taken into consideration before operation, as well as after. This was forcibly brought to my attention after operation on a man for appendicitis. For four years previously he had been treated medicinally for locomotor ataxia, which had been controlled. After operation the wound showed no tendency to heal. The man failed to retain nourishment by mouth or rectum, and died on the tenth day of starvation. The consulting surgeon opposed all my solicitations for energetic anti-syphilitic medication, until the eighth day, at which time the patient was too low to absorb any drugs.¹

An hereditary history of uterine cancer, the grandmother having died at 65 years of "cancer of the womb" and the mother when 49 years old, was considered justification for vaginal hysterectomy in Mrs. K. K., aged 38, mother of 5 living children, who was suffering from menorrhagia, lasting of late from 8 to 10 days. The enlarged uterus was retroverted and adherent in the cul-de-sac. During the past 14 months she has gained in health and strength, and is happy in the assurance that she is practically free from the danger of following in the footsteps of her grandmother and mother.

THE PRECEDENT HISTORY AND EXAMINATION.

The precedent history must always be given due consideration when deciding whether to operate at once or later. Rupture of any viscus, solid or hollow, calls for immediate action; strangulation, twisting, or complete obstruction demands immediate operation; whereas, on the other hand, we avoid operation during the acute invasion of the peritoneum by the gonococcus, and prefer to wait for "a more convenient season" when the Neisserian enemy shall have been starved into inactivity. When confronted by tubercular peritonitis, cysts, fibromata, etc., of slow growth we can more deliberately decide when and how to operate.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. *Amer. Med.*, vol. III, p. 837, 1903.

The precedent examination must enable the surgeon to answer, without bias, the following interrogations: (1) Does the focal condition explain and account for all the symptoms, or are other regions involved? (2) Has the attending physician, who has done his best, done all? (3) Is operation the only means of relief, and will the proposed operation remove all the trouble and relieve all the symptoms? In order to answer these queries intelligently the surgeon must be, first, a diagnostician—theoretical, logical and mechanical; second, a general practitioner, familiar with all that is best other than surgery, and, last, a surgeon who has the moral courage to decide when not to operate.

Extraordinary recoveries without operation do occur and nonplus the surgeon, as in the case of Mrs. C., aged 60, who for three weeks had been suffering with pain and swelling in the right half of the abdomen; eleven years ago she had a similar attack. The urine was scanty; temperature varied from 100 to 103.6 F., pulse from 80 to 100; tongue was deep red and fissured down the middle. There was rapid loss of flesh and strength. Her abdomen was enormously distended and fluctuant. A diagnosis of hydronephrosis was made and operation advised. Recently her son informed me that by the use of ice for ten days the swelling had been scattered, and the old lady had sailed away to her native, sunny Italy.

PRELIMINARY PREPARATION OF PATIENT.

The preliminary preparation of the patient for operation must aim for surgical cleanliness, cleanliness of the

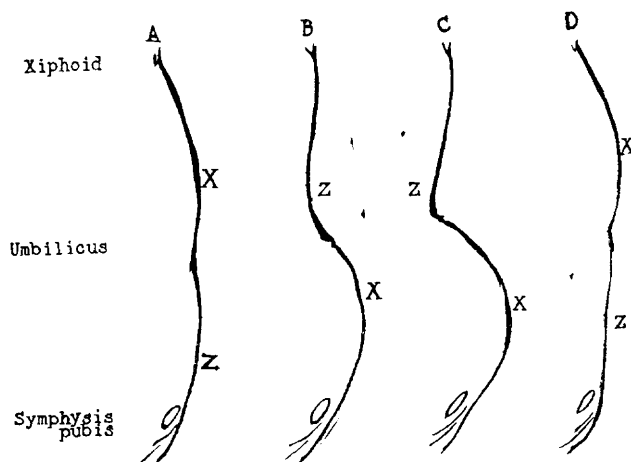


Fig. 1.—Lead tape outline of the anterior abdominal wall in Glenard's disease (visceroptosis). A, normal outline, standing without clothing; B, ptosis outline, standing without clothing; C, ptosis outline standing with waistbands fastened; D, outline same case, when recumbent. X, point of maximum protrusion; Z, point of maximum flattening.

emunctories and mind. In my work this begins two days before operation; liquid diet is given, alternating with water, eight ounces, every hour; the kidneys are washed out, and two laxative pills to clean out the bowels are given the second night before operation. To relieve the patient from undue unrest and to secure restful, good sleep a sedative is given each night. In cleansing the patient the night before operation my plan is as follows: (a) An enema of one quart of soap-suds; (b) a 1 to 2000 permanganate of potash, douche; (c) the hair is clipped close from the mons and vulva; (d) the abdomen and vulva are anointed with tincture of green soap, which is rubbed into the skin until dry, with a second and third coat, one over the other, each rubbed in until dry. In this way the soap penetrates the skin; the patient then goes to the bath tub and the

nurse soaks and scrubs the abdomen and vulva until all the soap is removed, a process which involves more work than would at first seem likely, and secures cleanliness to a degree unobtainable by the soap plaster method. After drying the skin, three more coats of green soap tincture are rubbed on the skin and remain as a protective until the patient is placed on the operating table ready for the final scrub.

THE ANESTHETIC AND OPERATION.

The immediate steps involved are anesthesia, field preparation and operation.

As a stimulant of great value to the patient, a heart sedative and a quieter of respiration we use morphin (1/12 to 1/6 grain, in proportion to weight), placed dry on the tongue, 15 minutes before beginning ether. The shoulders should be level with the table and the head should be raised high enough to bring the chin near the sternum, a frequently overlooked measure for securing comfortable breathing. Ether, about half an ounce, is poured on my modification of the Allis inhaler, which is handed to the patient who holds it on the chest, near the mouth, and administers the anesthetic to herself, without fear of choking or of being suffocated. After a few minutes the patient will ask the anesthetist to take the cone, or her hands will relax and make it necessary to take it from her and to continue the administration, which has been free from the fear and nervousness felt when other methods are practiced. In this way a little ether is wasted, and the time prolonged, but to the patient the method is excellent. My average, per hour, has for years been 100 c.c. Squibb's ether.

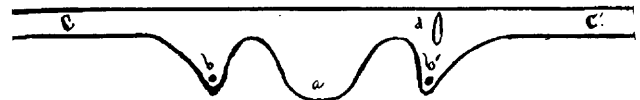


Fig. 2.—Outline of abdominal "stock." Apron "a" is cut the shape of the space bounded by the anterior superior spines above, the groins, laterally, and the symphysis pubis below. The straps "c" and "c'" pass around the body, the end of "c" being drawn through buttonhole "d" and are pinned in front at "a." Perineal straps (not shown) fastened to buttons on tongues "b" and "b'" are pinned in front to "a."

The preparation of the operative field is accomplished by adding more soap, rubbing it in until dry and then scrubbing thoroughly until all the soap has been washed away. The skin is next rubbed with alcohol and then covered with a sterile towel.

The incision is made as short as the size of the fingers will admit, and as long as the size of the tumor necessitates; by preference through the inner edge of the rectus, even for appendicitis, as it affords access to the tubes on either side. Ligatures are applied to individual vessels, suture to broad surfaces, making use of No. 1 or 2 catgut. For facilitating the passage of sutures I have found the ingenious ligature carrier of Kurz very helpful.

As a rule, saline solution is used to wash out pus and blood, but at times I prefer simply to mop out the cavity and to close without drainage. After removal of broad ligament cysts, and after supravaginal hysterectomy, I carry a roll gauze drain into the vagina. A cigarette drain suffices after most appendicectomies.

Cocain, .1 per cent., injected under the epidermis, has served well in rupture of gastric ulcer, ruptured ectopic pregnancy, etc. Unless the patient is in a very bad condition I prefer to employ but one assistant, who must hand instruments, dressing, etc., thus reducing the chances of infection to a minimum. Closure of the

wound is accomplished by carrying a long-handled needle through all the structures; it is then threaded with silkgut and reversed; the fascia is then approximated with two, three or more catgut sutures, and intermediate silkgut to align the skin closely.

If much blood has been lost, the cavity is filled with saline solution, 120 F., or from two to four pints are allowed to run into the rectum while the patient is still on the operating table.

POSTOPERATIVE CARE.

Immediately subsequent to the operation I exercise great care not to expose the patient to a chilling of the surface by well-meant efforts on the part of the nurses to change the blankets and underclothing, preferring to wait until the patient is warm in bed and conscious enough to help.

As soon as the patient is conscious enough to drink she is made to take four ounces of hot (not tepid) water every fifteen minutes until vomiting occurs, as a means of washing out the stomach and ridding it of ether and mucus; then I wait two hours and thereafter give water hourly. If the stomach retains this quantity of water for six hours it is safe to begin giving milk and lime water. Lavage of the stomach while the patient is on the operating table will accomplish the same purpose, and in the few instances in which I have used it it has been very satisfactory.

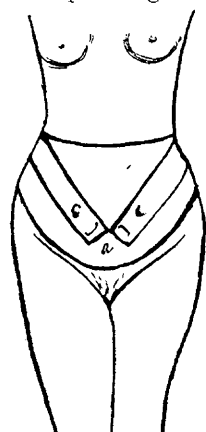


Fig. 3.—Abdominal "stock" adjusted.

For pain and nervousness I make use of bromid, chloral and a small quantity of morphin, on the ground that if sleep and rest be secured the patient will bear the next day's discomfort with greater fortitude. To secure rest these patients must be permitted to assume any position which will afford the least discomfort and I permit them to turn from side to side or lie on the back, as they deem best.

To the "tired, worn and weary" one who has been but a few hours removed from the operating table, nothing is so quieting and refreshing as light, gentle massage over the whole body, as shown by the patient falling to sleep during the process.

Postoperative weakness is largely due to muscular atrophy from disuse while in bed, and it is my custom in order to avoid this effect to have the patient massaged once daily for the first three days, adding passive motions during the fourth, fifth and sixth days and active, resistant movements for the succeeding days in bed. When cared for in this way the patient can walk about the room as soon as she gets out of bed, experiences little, if any, of the feeling of faintness so commonly complained of, and within a few days is strong enough to go out doors. This plan is in line with the views of our Chairman as expressed before this Section in a paper entitled "Massage and Exercise in the Management of the Puerperium,"² and by Howden³ where he advocates postoperative exercises as a means of preventing hernia. My own use of massage and exercises in puerperal women has been most satisfactory, and after the first time the patients "cry for it."⁴

While we agree, in the main, with Bayard Holmes in the desirability and practicability of "the short narcosis, the short incision and the short stay in bed after ideal operations,"⁵ we have lacked the moral courage to get our patient out of bed on the second day after celiotomy, but are firmly convinced that the patient, without elevation of temperature, pulse or respiration, and primary wound union, will derive greater benefit from the operation if the stay in bed is limited to the shortest possible practical time, say seven days or more, as her condition may indicate. Even for a healthy individual, sitting up in bed is a most uncomfortable position and can not be maintained for any length of time, unless the patient can sit cross-legged; I prefer to let her sit up in a rocking chair.

The most distressing complications to patient and surgeon after operation are intestinal distension and acute dilatation of the stomach. Since 1892 I have made use of massage and kneading of the abdomen whenever the accumulation of gas becomes disagreeable, usually within thirty hours after operation, and by this means, after fifteen or twenty minutes, the patient usually expels large quantities of flatus, which relieves the pain and stops the vomiting.⁶ As an adjuvant to the stomach tube in the class of cases so graphically described by Herrick⁷ as "acute dilatation of the stomach" I have derived much good from massage and kneading,

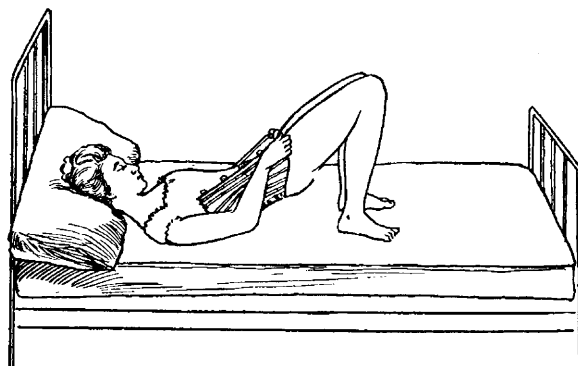


Fig. 4.—The semioplisthotonos posture; patient lying on bed or couch, hips raised, causing viscera to gravitate toward the diaphragm when applying the "abdominal stock" or special corset.

but in spite of all I lost one patient, from this cause, after excision of a small urachal abscess which opened at the umbilicus.

While tympanitic distension is unrelieved I deem it most unwise to add to the discomfort of the patient by administering salts, calomel, etc., by the mouth, preferring to introduce salines or cathartics or soap suds into the rectum to overcome from below the antiperistaltic action of the intestines. At the same time the patients receive only water by mouth until the bowels are relieved. It is often surprising to note how well patients will do on water only.

Enemata are always introduced through a short rectal nozzle, with the patient lying on the *right side*, the hips being raised on a pillow, the vessel or douche bag being slung not more than a foot above the anus. Given in this way, the fluids enter very slowly, cause no irritation, gravitate to the lowest point, the caput coli, and are retained with greater comfort to the patient.

2. THE JOURNAL A. M. A., 1902, vol. xxxi, p. 355.
3. Med. Rec., 1904, vol. lxxv, p. 160.
4. Amer. Med., vol. vii, p. 783, 1904.

5. Amer. Med., 1905, vol. x, p. 1025.
6. Mathews: Med. Quarterly, July, 1896.
7. THE JOURNAL A. M. A., 1903, vol. xlvi, p. 923.

LATENT MALARIA?

Delafield, in his lectures to students, calls attention to the manifold varieties of malarial fever met in New York and vicinity. It has been my worrisome experience to meet several instances in which, immediately after operation, the temperature, pulse and respiration shoot up, remit twice daily and are associated with marked abdominal distension, and a very distressing headache, the one feature which disturbs the patient most, as it does not let up. During the remissions the patient's pulse is of good quality, the face and tongue show no signs of sepsis, though there may be some abdominal tenderness, probably due to the distension. This condition continues for some days, with or without vomiting, even after the bowels move and gas has been freely evacuated; and yet, in spite of all, while the patient is very much distressed, she does not look like one who is seriously ill.

Having studied malarial vagaries in person when living in New Jersey, and later noticing the frequency

CONVALESCENCE.

Now that the patient is ready to get out of bed, the order has been given for a general tonic, and instructions as to daily calisthenic exercises, etc., have we done our whole duty and provided against a relapse, perhaps return of many of the symptoms, which have been in abeyance during the period of rest in bed? From our standpoint, no. In a paper entitled "Waistbands and Corsets in the Genesis and Treatment of Glenard's Disease"⁸ I endeavored to show that the present manner of fastening the clothing and corsets around the waist is the greatest curse to women of the civilized peoples of the world, productive of distension of the lower abdominal wall, distortion of the stomach, displacement of the colon, kidneys, liver, spleen and even the heart in such a large proportion of women as to call for its recognition or exclusion ere we permit any of our patients to resume their ordinary mode of life. This holds good after suture of prolapsed viscera, or pelvic work, especially when the anterior abdominal wall of the

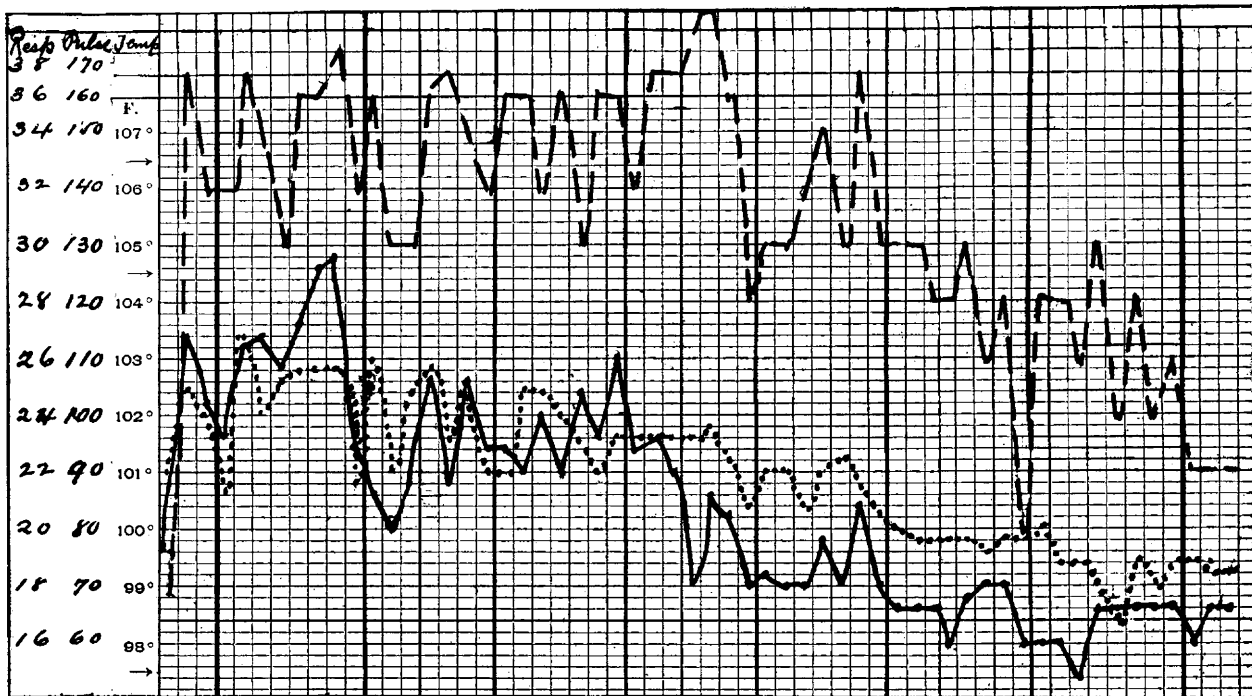


Chart 1.—Respiration ----; Pulse; Temperature ———.

of remittent fever in puerperal patients when at the Sloane maternity and in private obstetric practice, in spite of the absence of demonstrable plasmodia in the blood, and from the clinical fact that the only drug which has given relief is quinin, I look on this post-operative complication as a latent malaria which, owing to the depression following operation, phoenix-like, bursts into a flame, poisons the patient, worries the nurse, makes lunatics of the family, and adds many a gray hair to the surgeon's head.

Following the teaching of my preceptor, Dr. E. S. McClellan, who antedated Koch by twenty-five years, I give 5 or 10 grains, each, of the sulphate of quinin, iron and magnesium with ten minims of sulphuric acid, dilute, in solution, once daily, seven hours before the hour of the highest temperature of the preceding day. The effect is most gratifying to patient and surgeon, as illustrated by the accompanying chart of a patient following laparotomy, for restoration of a retroverted uterus, held down by very thick cord-like bands.

woman standing resembles an inverted interrogation mark—so truly pathognomonic of visceroptosis (Fig. 1). This condition is very apt to be overlooked unless the examiner observes, palpates and percusses the abdomen with the patient undressed, standing, and, in order fully to appreciate her condition when dressed, ties a piece of muslin bandage around the waist to imitate as nearly as possible the waistbands when tied (Fig. 1 B). In this way only can we ascertain the real extent of visceral displacement.⁹

In endeavoring to meet the requirements for the relief of these ptoses I make use of the abdominal stock binder, Rose's plaster and a corset of peculiar design.

The Abdominal Stock.—This is made of 18-inch wide unbleached muslin, two yards long, doubled, and is cut to fit each patient by placing the free edges on a level with the mons and marking with a lead pencil the out-

8. Canadian Jour. Med. and Surg., July 1903.

9. "The Symptomatology and Diagnosis of Glenard's Disease," International Clinics, 1904; Fourteenth series.

line shown in Figure 2. The apron-like center piece corresponds to the suprapubic area and curves outward over the iliac crests, thence down to the gluteal fold to form the tongues, "b" "b," the bands, "c" "c" running out to the full length of the muslin on either side. At "d" a buttonhole, three inches long, is made, through which to slip the end, "c," after it has been carried around the waist (Fig. 3). Perineal straps of tape threaded through quarter-inch rubber tubing are attached by a loop to the buttons on "b" "b" and pinned to "a" on the corresponding sides. The pattern was obtained some years ago from a nurse who was unable to tell who was the original designer.

Some patients can put up with the irritation of the Rose's plaster bandage and wear it for a month without undue discomfort and during that time are fitted for the special corset.¹⁰

Position of Patient.—Before putting on the binder, plaster or corset the patient places herself in the elevated dorsal posture (semiopisthotonos, Fig. 4), rubs the abdominal contents in the direction of the diaphragm, and while in this posture adjusts the garment. When the patient stands up the lax abdominal wall, with the replaced viscera, are supported by the corset and can not prolapse.¹¹

THE ADHERENT DILATED STOMACH.

While conducting some investigations on the position of the kidney at the pathologic department of Columbia University, with the kind co-operation of Dr. B. B. Gallaudet, we ran across instances of dilated stomachs, adherent near the pelvic brim by the omentum, colon, appendix, etc., preventing the stomach from contracting and neutralizing any efforts on the part of the physician to relieve the dilatation. The same condition has since been met at operation and on the autopsy table. The diagnosis can be made by placing the patient in the semiopisthotonos posture or on the hands and knees—if the stomach is non-adherent it will gravitate toward the diaphragm and *vice versa*.

In thin patients the stomach will not ascend, as it should do, during inspiration; the succussion note remains below the umbilicus; and the chronicity of the gastritis and malnutrition, without periods of improvement in general health, is a picture we can not fail to recognize.

The treatment of adherent, dilated or prolapsed stomach can only be surgical—freeing adhesions, plus gastrotomy, gastropexy, or posterior gastroenterostomy. In one instance, adhesion of the stomach to the left pelvic brim had followed appendicitis. I opened above the umbilicus, expecting to do a gastroenterostomy. The greater curve lay just above the pelvic brim. On separating the adhesions, the patient vomited, the stomach contracted so much that it would have been difficult to pull the small contracted stomach through the wound sufficiently to do an anastomosis. Without any further steps the wound was closed, and during the year past the stomach has never extended below the umbilicus. This patient wears a special corset.

CONCLUSION AND SUMMARY.

In conclusion and summary of these, my personal predilections, I would lay especial stress on the following factors, which, when properly applied in appropriate cases, will oft-times bring success and cure the patient:

1. A most careful consideration of antenatal and post-

natal diseases and the chronicity or acuteness of the present condition before deciding to operate or not to operate.

2. The liberal use of water by mouth and rectum before, during and after operation. The free application of tincture of green soap, rubbed into the skin until dry, when preparing the field of operation and the hands of the operator and assistant.

3. Minimum morphin before anesthesia; care that the head is properly elevated, the ether administered by the patient herself in the first stage, and a minimum quantity of ether employed.

4. A reasonably short incision, a reasonably quick operation, a reasonable number of sutures to close the wound, and a reasonable time in bed.

5. After operation the careful prevention of chilling the body; the cautious use of morphin and sedatives; lavage to allay undue vomiting, and colonic massage and kneading for relief of distressing intestinal distension, with continuous rectal irrigation for tympany.

6. To invigorate the tired patient and to prevent muscular atrophy and cardiac weakness, general massage, with passive and active movements daily while in bed and calisthenics when first about.

7. For the prevention of hernia and enteroptosis or support of prolapsed organs apply the abdominal "stock," Rose's plaster bandage, or a special corset, put on while the patient is in the dorsal-inclined posture.

60 West Fifty-sixth street.

DISCUSSION.

DR. M. I. ROSENTHAL, Ft. Wayne, Ind., has made it a practice, when the peritoneum is closed, to have the anesthetist wash out the stomach with normal salt solution while the patient is still under profound anesthesia. The patients so treated vomit less frequently and complain less of thirst.

A PLEA FOR THE SCIENTIFIC ADMINISTRATION OF ANESTHETICS.*

JAMES TAYLOE GWATHMEY, M.D.
NEW YORK CITY.

There is no more reason why we should adhere to the drop method of chloroform or the cone method of ether when a better and more exact method is produced than that we should continue to use the "one horse shay" when the automobile is available. Nor is it sensible to continue the foolish custom of allowing the most inexperienced interne to narcotize instead of having a professional anesthetist in every hospital.

Furthermore, because a man has given an anesthetic many times during his hospital service and irregularly afterward, it is no evidence of his ability to do the same thing several years after, with even a reasonable degree of success. The wonderful advancement in all departments of medicine has come from men devoting their exclusive time to some one branch of it, and especially is this true of anesthetics. We are indebted to England, where the professional anesthetist prevails in hospitals as well as in private practice, for all recent progress in the administration of anesthetics. Here in America, where both nitrous oxid gas and ether were first discovered and used, we seem still content to continue what might be called "frontier" or "border" life with the mortality table the same as when anesthetics were first introduced.

10. International Clinics, 1905, Fifteenth series.

11. Nephropexy, Pro. and Con., N.Y. Med. Jour., April 29, 1905.

* Read in the Section on Laryngology and Otolaryngology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.