

prominent symptom, of course that is to be relieved by the judicious use of opium in some form. We should continue the use of alkalies, and in that way, perhaps, keep the inflammation from increasing. A less quantity of the alkalies will be required to continue the urine alkaline than was required to produce alkalinity in the first place. These are the more salient points in the treatment of this affection.

Rheumatic pericarditis gives us a good ratio of recoveries. The prognosis, if there be no untoward circumstances, is favorable. Renal pericarditis, if we may so distinguish it, is quite otherwise. A very large majority of these cases prove fatal. Pericarditis occurring in connection with pleurisy and pneumonia, increases very much the gravity of those affections, and proves fatal in a considerable proportion of cases, although its presence does not warrant us in forming a fatal prognosis.

In the present case it is only important to keep the urine alkaline, and to prevent the patient from making those exertions which he seems inclined to do, because he feels pretty well and has no local symptoms. — *Phil. Medical and Surgical Reporter.*

RECTAL ALIMENTATION.

Dr. W. Joseph Tyson, F.R.C.S., Folkestone, in a paper on this subject in *British Medical Journal* says :

Before going on to speak of these cases which require rectal feeding, the preparations of food which have been, and those which are used at present, it will be well to say something about the anatomy of the rectum, the theory of absorption, as well as the best mode of administering an enema.

1. *Anatomically*, the rectum is not ill-suited for the purpose of feeding. It is extremely well supplied with blood-vessels, which have a most free anastomosis ; in fact, its mucous membrane is thicker, and more vascular than that of any other part of the large intestine. Lymphatics of a large size are found here ; and Mr. Wadham, late physiological assistant at St. George's Hospital, tells me that he has found several small solitary glands in this part of the bowel. Toward the anus, the secretory apparatus gradually disappears. At the lower part of the rectum, about an inch from the anus, there is a dilatation of the bowel—this dilatation being of considerable use for the lodgment of food ; and, lastly, the anus itself, although it fails in its duty in some cases, yet in very many other acts effectually as a sphincter, much in the same way as the sphincter at the cardiac or the pyloric end of the stomach.

2. With respect to *absorption*, it has been said that substances known as colloids, such as albumen, gelatin, starch, etc., can not pass into the system until they are converted into crystalloids ; and as this change has been supposed not to take place in the rectum, the giving of enemata containing

colloids, such as beef tea, eggs, etc., has little or no nourishing effect upon the body ; and the brandy which is frequently added, only tends more to increase the colloid properties of the aforementioned foods, and therefore to render still more nugatory the use of these enemata. Graham supposes the coats of the stomach to dialyze the food during digestion, absorbing the crystalloids and rejecting the colloids—an action favored by the thick coating of mucus which generally lines the stomach ; but Miller, after having quoted the above paragraph, goes on to say that "this suggestion probably requires some limitation—otherwise starch, gelatine and other colloids, unless previously converted into crystalloids, would be wholly unabsorbed after they had been swallowed." The starch, as far as the stomach is concerned, is converted into crystalloid by the saliva ; and the starch which escapes being made dialyzable in the mouth is made so in the duodenum by the action of the pancreatic juice. This is the reason, probably, why sugar has been recommended to be added to nutrient enemata. Whether the rectum has the power of changing colloids into crystalloids, is perhaps doubtful ; but results which have and do now follow the use of alimentation by the bowel, are too evident to leave any doubt that the rectum possesses properties by which nutrient injections, if not wholly absorbed, are certainly partially so.

It has been suggested that the secreted intestinal juices which descend from above may dissolve a considerable amount of starch and animal fiber ; and lately a theory has been put forward, that the contents of an enema are carried from the rectum to the upper intestinal tract, where digestion and absorption actively takes place ; but as digested meals can now be given to the rectum to a great extent, there will be little need for the rectum, as well as perhaps other portions of the bowel, to act the part of a stomach.

3. *The operation of administering an enema* requires to be carefully and skilfully done. Any one who has given these injections by means of the ordinary ball-syringe, must have felt the inconvenience of this, the usual mode of procedure. If the ball be not quite full, air will probably be injected into the rectum, to the annoyance of the patient ; and, even when the ball is full, great care must be exercised not to spill any of its contents on the bed. The best mode is to take a piece of india-rubber tubing, two or three foot long. At one extremity fix a small piece of bone, resembling that which is attached to an ordinary Higginson's syringe ; to the other end of the tubing attach to funnel. When the injection is to be used, the patient is placed on his side, the bone extremity of the apparatus oiled, and placed into the bowel, the other end raised, and the prepared enema is now poured into the funnel, and runs easily and comfortably into the rectum ; the rate of progress can be increased or diminished according as the funnel is raised or lowered, or the food can be arrested at any time altogether by just nipping the tube