

PRE- AND POST-OPERATIVE PURGATION

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IN listening to discussions in our local society on the subject of purgation both before and after operation, it has struck me that surgeons differ greatly on this very important subject, and for this reason I wish to place the following facts before some of the unbelievers.

During our college and hospital days we were taught as a routine treatment, that all cases got a dose of oil the night before operation; also, as a rule, two to three days later calomel or some other drastic purge was given. We took it for granted that it was essential, just as the castor oil following confinement cases was looked upon as an absolute necessity. Once a routine like this takes hold of the profession, it is hard to shake, but it has been proven conclusively by both physiologists and surgeons that it is not only unnecessary, but in a majority of cases is positively harmful.

Taylor has shown by careful tests that purgation induces definite fatigue in the intestinal muscles and that harm may be done by a strong purge. Gosset has carefully observed the results in patients following the usual dose of oil. The kidneys are deprived of a portion of their excretory function at a time when their assistance is very desirable, and nitrogenous products contributing to shock are liable to be absorbed into the circulation, and an oliguria of from 20 to 70 per cent. frequently follows.

Gillespie and Miller have proved that the fate of bacteria introduced into the gastro-intestinal tract depends entirely on the medium of introduction and on the amount of hydrochloric acid in the gastric secretion. There is a steady decrease in the number of bacteria as digestion proceeds and in proportion to the degree of acidity obtained. If by the exclusion of fluids the ingesta can be delayed for eight to nine hours in the stomach with normal acid secretion, but few bacteria will survive. Such bacteria as are in the intestinal tract find their way into the chyle, lymph and blood streams only through an irritable mucous membrane. Cathartics in general produce their result chiefly by an irritating action on the gastro-intestinal mucous membrane. In a hundred individuals the blood culture before the cathartic was administered showed no culture, while 62 out of 100 taken after a purgative had been given, showed a decided colony of micro-organisms. This bacteraemia endured for about 24 hours.

As another author has pointed out, the small intestine is always empty twelve or more hours after a meal. The colon can be cleared by enemas. Psychic and physical weakness produced by dehydration of the body, disturbance in the salt balance of the system, and loss of sleep occasioned by the frequent bowel movements during the night preceding operations,

are the result of a strong purge. Oliver Wendell Holmes has put it very aptly when he says, "If it were known that a prize fighter were to have a drastic purge before going into the ring, no one will question that it would affect the betting on him unfavourably." If this is true for a powerful man in perfect health, how much more true must it be of a sick man battling for life.

After all, however, the most important and conclusive objection is contained in the statement made by nearly all who write against pre-operative purgation. Every surgeon has noticed that the emergency patient who comes to the hospital in need of immediate operation has a good post-operative recovery and an uneventful convalescence, whether it is a case of acute appendix or a crushed limb requiring immediate amputation. If this be true, and the statistics in favour of it are strong, then routine pre-operative purgatives must be relegated to our professional sins of the past.

Alonzo and Clark on post-operative purging, state that when purgatives succeed, they simply show that peritonitis, if present, was not extensive enough to preclude recovery. If the intoxication is severe enough the bowels will never move and the patient will die no matter what is done. McPherson states that routine purgatives after confinement are not only useless but harmful. Out of 322 women who were not purged 3 only had fever; out of 322 women who were purged, 28 had fever; he concludes by saying that a low grade fever during the puerperium may be due to catharsis.

In an excellent paper by Alvarez, he gives the following summing up: 1.—Some of the purgatives owe their effects to the fact that they are irritant poisons that must be removed quickly from the body. Others act by interference with intestinal absorption and by upsetting the balance of salts. In either case they bring about a pathological condition. The body is weakened and not strengthened.

2.—We know now that the dehydration of the body and upset of the salt balance are particularly harmful before an operation in which there may be haemorrhage or vomiting.

3.—With magnesium sulphate there may be an increased amount of fluid in the bowel to disturb those who want it emptied. In oper-

ations on the colon, liquid contents are harder to control than solid masses.

4.—There is an increased growth of bacteria.

5.—By weakening some parts of the bowel and making others more irritable the even flow from stomach to rectum is impossible.

6.—Whether from disturbance in mobility, in absorption, in the circulation, or in the bacterial condition, there certainly is a tendency to flatulence and distension.

7.—When bowels must move more frequently during the night the loss of sleep is considerable.

8.—If the patient should happen to have some intestinal obstruction, a gangrenous appendix, or a badly diseased Meckel's diverticulum purgation may directly cause death.

9.—Purgation makes the bowel react poorly to drugs and as a consequence there may be great difficulty in meeting a post-operative emergency.

10.—Emptying the bowels by starvation and purging makes the resumption of colonic activity much more difficult. The colon must be filled to a certain extent before it will empty.

I have given this summary in full, as it covers so completely the disadvantages of purgation.

Before my overseas experience I had given up purging, and in my work among the wounded, I was impressed more than ever that the post-operative purging was absolutely unnecessary and in many cases dangerous. Men came into the casualty stations and base hospitals with all varieties of injuries and the majority were greatly shocked. No preparation was possible and in most cases these men needed the replacing of lost fluids rather than any depleting by purgation.

How often does one read reports of cases of sub-acute or acute appendix in which all went well following operation until the third day. Orders in the case show that calomel in divided doses, followed by salts was given. As a result a stormy two days followed; in some cases ileus and death.

Give your patient time and use morphia judiciously and all will come right. If necessary, between the fifth and seventh days give an enema and nature will look after the rest.

Why do we, or did we, purge at all after confinement cases? Try it without and you

will find the puerperium much smoother for the mother and often less anxious for yourself. With a distended abdomen following operation, or in acute abdominal conditions, again and more firmly than before, don't purge. Use stomach lavage freely with water or sodium bicarbonate; then give a dose of morphine with atropine, to be repeated if necessary. Free fluids, glucose or sodium bicarbonate by rec-

tum. Morphine does not produce intestinal paralysis except in toxic doses in a normal abdomen. It has just the opposite effect in paralytic cases and you will find the patient will usually soon pass gas freely. It is well to remember that as C. A. Howard has put it: "Bowels don't die in a flat abdomen, and whipping won't help a functional paralysis of any bowel."