

ELIMINATION OF PERITONEAL INFECTION AND PREVENTION OF SURGICAL PERITONITIS*

FOR the past six years the writer has been interested in the functions and anatomy of the peritoneum. In 1896 he took radical ground against abdominal drainage in many cases in which it was then used. He strongly favored thorough irrigations of the abdominal cavity at the completion of an abdominal operation to remove as far as possible all debris, blood and infectious matter, and then leaving a considerable quantity of salt solution in the peritoneal cavity to disseminate and promote rapid absorption.

Some epoch-making work on the anatomy, physiology and pathology of the peritoneum is reviewed. He next considers in greater detail a most interesting research on the action of streptococci upon the peritoneum, which he uses in sustaining his position concerning the natural peritoneal method of drainage.

He quotes Walgreen at length to show that although there is at first an increase in leucocytes, after six to eight hours they markedly decrease, giving fuller sway to the infection of the peritoneum. Consequently, by distributing the same amount of infection over a large area of peritoneum, the early increase of leucocytes can do greater damage to the infection.

In 1896 the writer advocated leaving a little salt solution in the peritoneal cavity at the completion of the abdominal operation, and then lifting the foot of the patient's bed for twenty-four hours with a view of hastening absorption. Now, five years later, he concludes that the postural position is unnecessary, as absorption is almost as rapid in the prone position, and the churning of the intestines in the saline fluid facilitates the distribution of the debris and enables the intestines and omentum to float out into their normal position.

Without qualification he says that the routine use of normal salt solution in the peritoneal cavity is not only free from danger, but is of the greatest value as a life-saving measure and as a prophylactic against general or local peritonitis.

He and his assistant have carried out a series of experiments to confirm Muscatello's conclusions concerning the transportation of small granules from the peritoneal cavity. For the purpose carmine, india ink, and ultramarine granules were used, and within a very few hours the foreign bodies were found generally distributed throughout the organs of the body in the following order: In the lungs, then in the liver, spleen and gastro-intestinal tract, then in the kidneys, and finally in the bone-marrow, the lymph glands, and dependent parts of the body.

The investigations were conducted with a view of discovering the ultimate distribution of these foreign bodies, for it was believed that the fate of micro-organisms under similar conditions must be analogous.

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