

RELATIONSHIP OF THE ABDOMINAL AND PELVIC VISCERA WITH THE PERITONEUM

Dear Sir,

The peritoneum is the largest serous membrane of the body. It is a completely closed sac in the male and opens to the exterior through the genital tract in the female. It is lined by simple squamous epithelium called mesothelium. It secretes a small quantity of serous fluid, which eases the movement of the movable organs of the abdomen. The abdominal and pelvic organs are classified as extraperitoneal, retroperitoneal and intraperitoneal organs based on their relationship with the peritoneum and peritoneal cavity. According to the classic developmental explanations, the peritoneal cavity is a derivative of the intra-embryonic coelom, and the abdominal and pelvic organs invaginate into it during development. This invagination results in the formation of the peritoneal ligaments and mesenteries.

Generally, all the abdominal and pelvic organs are extraperitoneal, with the exception of the ovary, which is known to be intraperitoneal. All the organs develop outside the peritoneum and later push into the peritoneum, to be covered by it. Some organs are covered by the peritoneum on one side, and such organs are called retroperitoneal organs. Although the peritoneum forms one of the layers (serosa) of the gastrointestinal tract, its epithelium remains as simple squamous epithelium. On the surface of the ovary, the peritoneal epithelium becomes cuboidal (low columnar) and hence, it appears that there is no peritoneal covering beyond the hilum of the ovary. This is why the ovary is said to be attached to the inner aspect of the peritoneal cavity (since the simple squamous epithelium of the peritoneum stops at the anterior border of the ovary).

According to surgical and clinical anatomy textbooks,^(1,2) most of the organs (such as the stomach, spleen and small intestine) that are almost fully covered by the peritoneum are intraperitoneal. This concept of the intra- or extraperitoneal organs may not be of much importance for clinicians or surgeons, but it is of great importance for anatomy teachers and students. Since different books have contradicting views, we must redefine the peritoneal relationships of the organs, and every textbook, whether clinical or surgical, should follow the same definitions. The question of whether the peritoneal cavity has only a small amount of serous fluid or it has all abdominal organs is one that is yet to be answered.

Yours sincerely,

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