

Thesis Title : PERITONEAL REACTION TO RETAINED SURGICAL SPONGE:  
How It Can Migrate Into The Intestinal Lumen.

Name : SOMKIAT WATTANASIRICHAIGOON.

Degree : Master of Science (in Clinical Science).

Thesis Supervisory Committee :

Kijja Sindhvananda, M.D., cert. in Surgery,

Dip. Amer. Board of Surgery

Somphong Sahaphong, M.D., Ph.D.

Subhkij Angsubhakorn, D.V.M., M.S.

Chertsak Dhiraputra, M.D., M.S.

Date of Awarding the Degree : January 21, 1987

#### ABSTRACT

Retained surgical sponge in human peritoneal cavity is not an uncommon phenomenon. The mechanism as to how it can migrate into the intestinal lumen is still questionable. A piece of surgical sponge, 4 x 4 centrimetres in size was placed in each animal. A randomized animal form each subgroup was re-explored at 1, 2, 3 or 4 months and the remaining animals were sacrificed at 6 months after the initial operation. Invasion of the sponge into the intestinal lumen was shown microscopically in 10 out of 36 animals. Paralell statistical analysis by Cutler-Ederer estimate was found to be 0.58 of condition probability at 6

month-period. Peritoneal culture for aerobes and anaerobes in all of these ten cases showed no growth. Pathogenesis of invasion into the intestinal lumen is proposed as evidence of the microscopic and macroscopic pathology. Effects on other organs namely liver, pancreas and diaphragm are also discussed. A pedunculated mass with mucosal covering protruding into the lumen was detected in one animal. This mass was composed of osseous metaplasia.