

## CHROMICIZED CATGUT LIGATURES.

**A**N ideal ligature for vessels should be smooth, pliable, strong, aseptic, and not too readily absorbed, and, among the materials that have been employed for ligating, catgut, silk and tendon rank first. Of these, catgut possesses three of the above qualifications, being smooth, pliable, and aseptic, (for, though in the crude state it is laden with myriads of germs on account of its manufacture consisting, as it does, of decomposition of all the intestinal coats with the exception of the submucus, yet it can, with considerable trouble, be rendered sterile) but it falls short of the ideal ligature in strength and rate of absorption.

Within a short time after introduction, catgut, imbibing the serum of the wound swells and softens, and, if used to ligate large arteries, there is always a possibility of hæmorrhage occurring within a few hours afterwards from the heavy pulsations behind forcing the swollen and softened ligature apart. Again, secondary hæmorrhage may occur should organization of the coagulum not keep pace with the absorption of the catgut, *i. e.* should the ligature be absorbed before nature has had time to thoroughly occlude the vessel. For these reasons, the use of catgut ligatures, especially in the large vessels, is hazardous.

Efforts were directed to remedy these defects by means of hardening agents, chiefly chromic acid, and chromicized catgut has been regarded as almost an ideal ligature—but our experience with this material as reported below satisfies us that chromicized catgut acts rather as an irritant to the tissues.

F. L. Stephen. Smith's amputation at knee joint. Operation under thorough asepsis was performed May 1st. Six days later union was complete and the stitches removed. About two months afterwards a sinus formed and on being freely opened the chromic catgut ligature on popliteal was found to be the cause of the trouble.

J. P. Radical cure hernia. Operation May 15th. Perfect asepsis. Sinuses formed two weeks after apparent union and continued discharging for about four weeks longer until portions of the chromic sutures were withdrawn from them.

W. H. Amputation knee joint, (Stephen Smith's)—on patient weighing 280 lbs. Primary result first-class; but, as in above cases,