Different types of gastrointestinal anastomosis

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The. Experience of bowel surgery until the latter part of nineteenth century was limited to dealing with protruding intestinefollowing abdominal injury usually sustained during wars.As regard healing of intestinal anastomosis it was found to bedependent on fibroblastic response and on the formation of plentifulcollagen in the submucosa around the anastomosis, which all areaffected by many factors includinggeneral, specific and local factors.Satisfactory access and exposure of the site of anastomosis,good blood supply at the suture line and a suture technique whichdepends upon mucosal inversion, choice of proper suture material andaccurate apposition of the serosal covering or the outer surface of thebowel, All are very important principles to be fulfilled duringperformance of anastomosis.Gastrointestinal anastomosis can be performed end-to-end, endto-side or side-to-side and can be sutured (or hand sewn) anastomosis,stapled anastomosis, anastomosis performed by the use ofbiodegradable anastomotic ring (BAR) or laparoscopic assistedanastomosis.Single layer and two-layer anastomosis are the two standardanastomotic techniques. Single layer technique is recommended inesophageal anastomosis due to absent serosal covering and in colonicanastomosis because of incomplete longitudinal muscle layer, in- 143 -Summarycomplete serosal covering, and it does not interfere with its submucosalblood supply. Tow-layer technique is recommended in gastric andsmall bowel anastomosis.The most important feature of the stapled intestinal anastomosisis the fact that the double row of staples in the ”B” configuration allowsblood vessels of substantial size to pass through the staple lines. Alsothe use of stapler reduces the time of operation, gives easier access Atcertain sites of gastrointestinal tract (as in anterior resection of therectum), with a rapid postoperative recovery and with lower incidenceof some postoperative complications.The Valtrac biodegradable anastomotic ring was first described(at 1985) to be used in emergency situations in which the bowel is notwell prepared. It takes the advantage of the speed, simplicity andsuitability for contemporary use by remedying its specificshortcomings.Gastrointestinal anastomosis can be assisted or performed by theuse of different laparoscopic techniques which can serve as a minimal’invasive direct Vision procedure, shorten the time and decrease the riskof operation and provide rapid post operative Recovery. Laparoscopicanastomosis involving its use instead of open surgery as a step ofoperation involving anastomosis (e.g. thoracoscopic esophagectomyinstead of thoracotomy in mobilization of esophagus), or its use inperforming anastomosis either intracorporal or Extracorpora1.Hemorrhage, leakage, stenosis and diverticular formation are

thefour mam complications associated with different anastomotictechniques. Also there are many other complications which includes;local recurrence, perioperative mortality and functional disturbancessuch as; early and late postoperative dumping, afferent and clTcrentloop syndromes, blind loop syndrome, malabsorption, fecalIncontinence, bladder complications, rectovaginal or rectovesical fistulaand sexual complications.