INTRODUCTION

Surgery has become progressively more reliant on technology. The technique of colonic anastomosis utilizing the biofragmentable anastomotic ring (BAR) is one such example The benefits of therapeutic laparoscopy have been applied to the arena of colorectal surgery . A case is presented that combines these two modalities in a patient with colon cancer, laparoscopic mobilization of the large bowel, exteriorized resection, and BAR anastomosis (Sackier et al,1993)

The biofragmentable ring was introduced by Hardy et al, (Hardy et al, 1985) in an attempt to develop an "ideal" anastomosis using the template of the Murphy's button , but eliminating the well-known limitations of that device. The Valtrac ring has overcome most of the problems with the Murphy's button with the introduction of gap widths of 1.5 and 2 mm , an anastomosis can be created without tissue necrosis because the anastomosis is formed by gentle pressure contact. The V-BAR has a bigger central hole which allows early passage of intestinal content. The V-BAR is made of polyglycolic acid and barium sulfate which fragments completely within three weeks thus reducing the presence of foreign bodies in the tissues and decreasing the risk of stenosis (Gullichsen et al, 1992).

The biofragmentable anastomosis ring (BAR),composed of polyglycolic acid and barium sulphate, with the commercial name VALTRAC(davies and geck division, american cyanamid, danburry

,connecticut, USA) has been developed to obtain a sutureless bowel anastomosis. This technique was first described by hardy and colleagues in an experimental study on pigs and the first report of BAR anastomosis in human subjects was presented in 1987. (Hardy et al 1987)

A biofragmentable anastomosis ring has recently been developed and is used in end-to-end intestinal anastomosis. It is composed of 2 circular polyglycolic acid (Dexon) components which are interdigitated to from sutureless anastomosis. (Pappo et al, 1992)

Sutreless intestinal anastomosis can be achieved by compression, where two inverted rings of bowel are compressed by a hollow circular device that subsequently sloughs away and passed anally, compression devices used clinically with success are the Valtrac biofragmentable anastomotic ring (McCue et al, 1991)

The biofragmentable anastomosis ring (BAR) is composed of polyglycolic acid and barium sulfate. When used for intestinal anastomosis, the BAR fragments after the anastomosis is established. The anastomosis using BAR is considered to be a simple, safe, and fast method for performing either colonic or small intestinal anastomosis. (Konishi et al, 1995)

Cusso et al, 2000 reported that "In our experience the V-BAR can be used in upper gastrointestinal surgery (esophagojejunostomy , gastroileostomy , dudenoileostomy , and ileoileal anastomosis) with excellent results."

With these advantages , the Valtrac ring is now used regularly in surgery mostly to create colocolic anastomosis (Volgel et al, 1993). The results of these operations have now been amply described in the literature and are widely accepted (Cristin et al, 1994).

The biofragmentable anastomosis ring (BAR) is a device, which originally has been designed for sutureless large bowel anastomosis. new applications of the anastomosis ring; small bowel anastomosis and cholecystojejunostomies are introduced in clinical trials. (Gullichsen et al, 1993).

The cost of the ring is comparable with that of stapling but is more expensive than manual suture. The "savings" can be evaluated in terms of the reduced number of complications and in the time saved during the operation (Zederfeldt, 1992).

Although sutureless anastomosis by use of the biofragmentable anastomotic ring is now accepted as an (alternative) to conventional manual sutured or stapled methods in elective enterocolic surgery, its applicability to emergency enterocolic surgery has not yet been established(Choi et al, 1998)

To compare the efficacy of the biofragmentable anastomotic ring, with conventional anastomotic techniques Wang et al, (1996) reported for the use of a biofragmentable anastomotic ring that there were no significant differences among these techniques in the return of bowel function, the incidence of surgical complications, including anastomotic

leakage, or the length of hospitalization. BAR anastomosis was more time efficient than conventional techniques. Results confirmed that BAR was an ideal sutureless alternative for anastomosis in colorectal surgery.