Umbilical Hernia Repair With Bioabsorbable Plug Decreases Recurrence Rate

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GORE® BIO-A® Hernia Plug

Background

Adult umbilical hernias are routinely performed as primary repair and thus pose a higher risk for recurrences. We have instituted the first bioresorbable plug study for umbilical, ventral and incisional hernia repair and to evaluate the outcomes over a two year period.

Methods

This is a prospective observational study of our first 122 patients who underwent umbilical, ventral and small incisional hernia repair with the GORE® BIO-A® Hernia Plug (W. L. Gore and Associates, Newark, DE). The intent during this study was to treat all primary hernias less than or equal to 4cm^2 in diameter. The choice of suture, method of closure and the use of onlay mesh were based upon surgeon preference as we intended to identify the best practice for this product.

Results

Of the 122 patients, there were 97 umbilical, 12 incisional, and 13 ventral hernias. Average defect size was 4.4cm^2 (0.16 to 20.25cm^2). All patients were immediately discharged postoperatively. Average operative time was 29.5m (20-35). Average follow up time was 26.1 months in 83 of 122 patients through phone conversation or in office visit. One patient died during the two year follow up period. Minor complications occurred in 22 (18%) patients, these included seroma (5.4%), wound infection (2.4%), and wound dehiscence (1.6%). Two recurrences (1.6%) have been observed over this time period. In both patients, there was obvious weakened fascia (secondary to inadequate collagen) at the time of the repair. It is believed that, in such patients, a permanent mesh should be added to the repair as impaired collagen will be deficient to repair these hernias.

Conclusions

Our initial experience with the GORE® BIO-A® Hernia Plug has been promising with only a 1.6% recurrence rate. The GORE® BIO-A® Hernia Plug offers a biodegradable stabilizing addition to primary closure of small umbilical, incisional and ventral hernias. Continued study will elucidate these early results. Permanent mesh should be added to the repair in patients who exhibit an obvious deficiency in fascia integrity.

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Abstract Presented at AHS Hernia Repair 2010

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