Short-Term Results of a Prospective Observational Study of ULTRA PRO Plug (UPP) Repair for Primary Inguinal Hernias

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Abstract

Objective: The aim of this prospective study was to evaluate the postoperative pain after hernioplasty with an ULTRA PRO Plug (UPP), which is a new light weight/large pore mesh. We compared the pain with that in patients treated with heavy weight mesh using the Prolene Hernia System (PHS) around the same time at a single institution.

Materials & Methods: One hundred and three patients were treated with UPP or PHS. The postoperative pain (at rest/with movement) was assessed by means of a visual analogue scale (VAS) one day, one week, one month, six months and one year after surgery. This study was started in April 2009.

Result: Between April 2009 and November 2010, fifty-two patients underwent hernioplasty with UPP (group U), while fifty-one patients underwent treated with PHS (group P). There were no significant differences in the frequencies of complaints with respect to the postoperative pain, but fewer patients complained of postoperative pain in group U. The early postoperative pain assessed by the VAS was less in group U than group P. There was one case of recurrence in each of the groups.

Conclusion: UPP may be preferable to PHS for hernioplasty. However, larger randomized studies with a longer follow-up are needed to confirm our results.

Key words: ULTRA PRO Plug (UPP), Prolene Hernia System (PHS), light weight mesh, heavy weight mesh, Visual Analogue Scale (VAS)

Introduction

Currently, mesh inguinal hernia repair under a tension-free concept has become the standard surgical procedure worldwide based on a phase III study\textsuperscript{11}. However, chronic pain of the groin after surgery is still a major problem for patients who undergo this operation. We previously evaluated the long-term outcome after treatment using the Prolene Hernia System (PHS), which is a heavyweight mesh (HWM) (\textit{Figure 1 (a)}) after hernia repair using a standardized interview and found that 14.3\% of patients complained of postoperative pain, with a median follow-up of 19.3 months\textsuperscript{2}. To resolve this problem, light weight/large pore or partially absorbable meshes were developed, and many reports have shown their usefulness. There have been several randomized control studies that have compared light weight mesh (LWM) and heavy weight mesh (HWM)\textsuperscript{3-11}, but most of these were reports about the Lichtenstein method, so the utility of shaped-mesh, like the ULTRAPRO Plug (UPP), which is being increasingly used in Japan is unclear.