Gynecol Surg (2015) 12:123–125
DOI 10.1007/s10397-015-0885-5

SHORT COMMUNICATION

The GELPOINT (Applied Medical) port is a suitable instrument for salpingo-oophorectomy with good rates of patient satisfaction, in particular body image

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Received: 4 November 2014 / Accepted: 9 February 2015 / Published online: 25 February 2015

Keywords Salpingo-oophorectomy · Single Incision Laparoscopy · The cosmetic body image score (CBIS)

Background knowledge

Laparoscopic single site surgery(LESS) is well established for a number of gynaecological procedures including salpingo-oophorectomy and hysterectomy. There are a number of ports currently available, and although initial reports of cosmesis were mixed [3], there have been reports of greatly improved cosmesis from a small trial from a university hospital in Korea [4, 6]. The method used for analysis of scar appearance was the cosmetic body image score (CBIS) which is a validated body image questionnaire, and the same authors reported good cosmetic outcomes compared to traditional multi-port surgery [7]. The same unit provided data suggesting that, for their population, the approach was safe, well tolerated by patients and accepted by surgeons [5]. The GELPOINT single incision port has been used for laparoscopic hysterectomy and bilateral salpingo-oophorectomy in the USA. According to one case series, similar established methods carry low complication rates of umbilical hernia (0.9 %), conversion to conventional laparoscopy (3 %) or laparotomy (2 %) in the hands of experienced surgeons [1]. A French team have used GELPOINT for para-aortic lymph node dissection and showed the procedure to be safe and feasible [2]. To date, there has been no formal cosmetic assessment of the GELPOINT scars in a European context. We evaluated this type of single incision port which combines the principles of the ALEXIS retractor (Applied Medical) with a gel-based seal system. The specifics of the design obviate the need for reticulated instruments which are often required with many SILS ports. In addition to the surgical feasibility of this novel port in European gynaecological practice, an assessment of patients' satisfaction with the procedure was included. CBIS was used to evaluate patients post-operatively to determine their satisfaction with their scars (Table 1). In addition, a visual analogue pain score documented their post-operative discomfort. Operative parameters including length of incision, duration of surgery, blood loss and need for addition ports were recorded. Postoperatively, length of stay, blood transfusion and complications (up 6 weeks) were noted.

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New knowledge

A case series of eight salpingo-oophorectomies conducted by experienced operators (subspeciality trained

Table 1 CBIS questionnaire results

Cosmesis and body image questionnaire consisting of a body image score and a cosmetic score.

	Question	Mean score	Range	Median
1	Are you less satisfied with your body since the operation? 1=not at all 2=a little bit 3=quite a bit 4=yes, extremely	1.43	1–4	1
2	Do you think the operation has damaged your body? (Score 1–4 as for question 1)	1	1	1
3	Do you feel less attractive as a result of your operation? (Score 1–4 as for question 1)	1.21	1–2	1
4	Do you feel less feminine as a result of your operation? (Score 1–4 as for question 1)	1	1	1
5	Is it difficult to look at yourself naked? (Score 1–4 as for question 1)	1	1	1
6	On a scale from 1 to 7, how satisfied are you with your scars? 1=very unsatisfied 2=quite unsatisfied 3=a bit unsatisfied 4=not unsatisfied/satisfied 5=a bit satisfied 6=quite satisfied 7=very satisfied	4.14	1-7	1
7	On a scale from 1 to 7, how would you describe your scars? 1=revolting 2=quite revolting 3=a bit revolting 4=not revolting/not beautiful 5=a bit beautiful 6=quite beautiful 7=very beautiful	4.67	4–7	4
8	Could you score your own scar(s) on a scale from 1 to 10?	9.33	8–10	10
	Total	23.78	16–29	20

gynaecological oncologists) at a university teaching hospital in the UK demonstrated the feasibility, initial safety and cosmetic profile of this port. The GELPOINT offers a means of avoiding lateral ports and improving the cosmetic appearances from surgical scars. There were no immediate complications, conversion to open laparoscopy or laparotomy. Satisfaction using a validated body cosmesis questionnaire was high.

Findings

The adnexa were assessed by pre-procedure ultrasound and pathology specimens obtained at the time of surgery. Ultrasound was available for all the cases and pathology for five out of eight. The largest adnexa measured 6×3.5×2.5 cm and was a brenner tumour. One other adnexa (cystadenofibrothecoma) was a similar size. The other adnexa were small. The mean umbilical incision, measured at the time of surgery, was 28.4 mm (range 21–40 mm). The mean surgical time was 39.6 min (range 29–51 min). Mean blood loss was 30 ml (range 0–50 ml). No additional ports were needed to complete any of the procedures. There were no returns to theatre, blood transfusions or hospital stays exceeding 24 h. There were no complications reported at the 6-week follow-up; no areas of dehiscence or development of umbilical hernia at this stage. The mean post-operative VAS (visual analogue pain score) for day 1 was 46 mm (range 10–76), for day 2 was 38 mm (range 5–65 mm) and day 3 was 30 mm (range 3–59).

Conclusions

This small case series demonstrates the initial safety profile of the GELPOINT single site port when used in a UK NHS tertiary centre by appropriately skilled laparoendoscopic surgeons, adding to a growing number of case series for this technique. In addition, there appears to be very high levels of patient satisfaction, as assessed by a validated body image and cosmesis score. The port carries a significant advantage over other SILS ports since there is no need for reticulated instruments, thereby reducing surgical costs. Even though some scars (up to 4 cm) were a similar or slightly larger size than a standard laparoscopic incision, the fact there was only a single scar located mostly within the umbilicus reduces the overall negative cosmetic impact.

Future studies comparing single site ports to standard laparoscopy should incorporate patient satisfaction scores, particularly in relation to cosmesis.

Conflicts of interest The Gelpoint ports were provided without cost, but the authors declare that neither they nor the NHS trust received financial support for the work from any third party.

Ethical approval No ethical approval was considered necessary for this service improvement project by the authors. Informed consent was obtained from all patients for being included in the project.

Details of the contributions of individual authors Mr Duncan and Mr Prosser-Snelling conceived the work. Mr Prosser-Snelling and Mr Duncan planned and conducted the work, Mr Prosser-Snelling drafted and wrote the manuscript and Mr. Duncan commented and made revisions.

References

1. Fader AN et al (2010) Laparoendoscopic single-site surgery (LESS) in gynecology: a multi-institutional evaluation. Am J Obstet Gynecol 203(5):501.e1–6, ISSN 1097–6868. Available from: http://www.ncbi.nlm.nih.gov/pubmed/20663487
2. Hudry D et al (2013) Comparison of single-port laparoscopy and conventional laparoscopy for extraperitoneal para-aortic lymphadenectomy. Surg Endosc 27(11):4319–4324, ISSN 1432–2218. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23783555
3. Ichikawa M et al (2013) Changing our view of minimally invasive gynecologic surgery: a review of laparoendoscopic single-site surgery and a report on new approaches. Asian J Endosc Surg, (C) 1999?2012 John Wiley & Sons, Inc. 6(3): 151–157. ISSN 1758–5902. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=ovfto&NEWS=N&AN=01478794-201308000-00001
4. Park JY (2014) Laparoendoscopic single-site versus conventional laparoscopic-assisted vaginal hysterectomy for benign or pre-invasive uterine disease. Surg Endosc. ISSN 1432–2218. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25106721
5. Park JY et al (2013) Laparoendoscopic single site (LESS) surgery in benign gynecology: perioperative and late complications of 515 cases. Eur J Obstet Gynecol Reprod Biol 167(2):215–218, ISSN 1872–7654. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23332141
6. Song T (2012) Cosmesis and body image after single-port access surgery for gynaecologic disease. Aust N Z J Obstet Gynaecol 52(5):465–469, ISSN 1479-828X. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23045987
7. Song T et al (2013) Cosmetic outcomes of laparoendoscopic single-site hysterectomy compared with multi-port surgery: randomized controlled trial. J Minim Invasive Gynecol 20(4):460–467, ISSN 1553–4669. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23541248