Modified Lanz incision in appendicectomy – The surgical trainees best friend

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Abstract

Appendicitis is one of the commonest acute surgical diseases and treatment by appendicectomy is the most frequently performed surgical procedure in the western world. After obtaining adequate basic surgical experience, an open appendicectomy is an ideal procedure for junior surgical trainees to develop their operative skills and despite a reduction in training hours, recent figures suggest that surgical SHOs still perform about 30% of these cases. Although they are clearly routine and suitable for junior staff to perform under supervision, as many as 20% of appendicectomies, are for a variety of reasons considered difficult. We aim to be the first to present a modified Lanz incision that we believe provides not only a cosmetic scar but also is placed more frequently over the base of the appendix. It gives adequate access in difficult cases and we feel this is the most appropriate incision for a trainee to use when performing an appendicectomy.

1. Introduction

Appendicitis is one of the commonest acute surgical diseases and treatment by appendicectomy is the most frequently performed surgical procedure in the western world. After obtaining adequate basic surgical experience, an open appendicectomy is an ideal procedure for junior surgical trainees to develop their operative skills and despite a reduction in training hours, recent figures suggest that surgical SHOs still perform about 30% of these cases.

Although they are clearly routine and suitable for junior staff to perform under supervision, as many as 20% of appendicectomies, are for a variety of reasons considered difficult. We aim to be the first to present a modified Lanz incision that we believe provides not only a cosmetic scar but also is placed more frequently over the base of the appendix. It gives adequate access in difficult cases and we feel this is the most appropriate incision for a trainee to use when performing an appendicectomy.

2. Method

The Lanz incision transversely crosses McBurney’s point (now considered to be the junction of the middle and outer thirds of a line joining the right anterior superior iliac spine and the umbilicus). The incision starts 2 cm below and medial to the right anterior superior iliac spine (ASIS) and extends medially for 5–7 cm. Our incision (Figs. 1 and 2) is a modification of the Lanz. Still a cosmetically pleasing incision formed in a skin crease, it is placed 1 cm higher. We have found and evidence points to the fact that the base of the appendix commonly lies higher than McBurney’s point and better access can be achieved to a high-lying appendix through this opening. Increasingly in western society we are encountered with obese patients in whom the position of the umbilicus can descend significantly. Therefore choosing a modified Lanz incision in these circumstances is particularly important.

3. Discussion

McBurney originally described the surgical landmark for locating the appendix in 1889. He referred to it as a point “between an inch and a half and two inches from the anterior spinous process of the ilium on a straight line drawn from that process to the umbilicus”. As previously mentioned, popular general surgical textbooks now quote his original description as the junction of the lateral and middle thirds of a line joining the right anterior superior iliac spine and the umbilicus. Over the past century surgeons have centred their incisions, whether they are Gridiron or Lanz, over this eponymous anatomical landmark.

When performing an appendicectomy it is a mainstream recommendation for cosmetic reasons that the Lanz incision is used more frequently instead of a traditional Gridiron incision. The Gridiron, formed by making a 5–8 cm incision in line with the
external oblique fibres gives good access, but the scar is unsightly as it crosses Langer’s lines. In keeping with this theme and possibly secondary to the emergence of minimally invasive laparoscopic surgery, numerous papers have emerged and published approaches suggesting further renditions of aesthetically pleasing and limited open incisions.7 We aim to present a paper on a trainee friendly incision that is also cosmetic in appearance.

In recent times, studies have disputed McBurney’s observations and evidence points to the fact that 51–75% of the time the base of the appendix is actually superior to McBurney’s point.3,4,8 The position is clearly variable and case reports have documented instances of subhepatic appendicitis.9 While an appendix in this position and other high-lying positions may not be a problem for the unsightly Gridiron incision, that can be easily extended or even converted into a Rutherford Morrison incision, it could leave the surgical trainee floundering should they have selected a more cosmetic Lanz or even a lower placed ‘bikini’ incision.10,11 The only option left to them being an extension via a ‘hockey stick’ incision.

We believe and have observed in 87 of appendicectomies performed by ourselves via a modified Lanz approach that our incision is not only based over the base of the appendix in a greater majority of cases but also gives an improved access. This would be sufficient to even deal with rarities such as the subhepatic appendix.9 One problem with our approach however, is the lack of access to the female pelvis for inspecting for tubo-ovarian pathology, but given that laparoscopic appendicectomy is increasing being considered to be the gold standard for females with a possible appendicitis the relevance of this fact is diminished.12,13

4. Conclusion

This is the first practical response to improved anatomical knowledge of the position of the appendix. We conclude that the surgical trainee should place their incision for an appendicectomy via a modified Lanz incision. It has served us well and we wish to share this experience with our fellow colleagues.

Conflict of interest statement
None to declare.

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Not applicable.

References