**INTRODUCTION:**

Recent papers¹ and reviews²,³ have concluded that Topical Cyanoacrylate skin Adhesives (TCAs) may be a suitable alternative to conventional suture closure for surgical wounds. The use of TCAs has been shown to be less traumatic, faster and provide equivalent/better wound closure when compared to conventional suture or staples. TCAs also reduce the potential for needlestick injury, whilst providing an occlusive microbial wound bandage (patient can shower) and obviate the need for additional dressings and the requirement for removal of bandages/staples/non absorbable sutures.

For Laparoscopic day case surgery, the relatively small trocar wound size as well as potential benefits of TCA’s make their use an attractive proposition.

**LIQUIBAND** Laparoscopic™ (LBL) (MedLogic Global Ltd) is a new formulation of cyanoacrylate that can be used instead of subcuticular sutures for closure of laparoscopic surgical wounds not subjected to excessive tension or flexion. The new applicator allows controlled and accurate use of the glue to close the wound and the integral foam pad provides quick application of the liquid dressing.

**RESULTS**

<table>
<thead>
<tr>
<th></th>
<th>LIQUIBAND</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Patients</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Age (f/m)</td>
<td>60 (43-80)</td>
<td>60 (45-64)</td>
</tr>
<tr>
<td>No. Wounds</td>
<td>157 (5m)</td>
<td>87 (2m)</td>
</tr>
<tr>
<td>Total Length</td>
<td>70 (40-100)</td>
<td>70 (55-78)</td>
</tr>
<tr>
<td>Closure time</td>
<td>160 (90-278)</td>
<td>345 (225-685)</td>
</tr>
</tbody>
</table>

Statistical analysis Mann-Whitney u-test, median and (range)

**Cosmesis** of LBL at day 0 (surgeon) and day 7 (patient survey) was considered “satisfactory” or “good” by all observers.

**Costs**

All prices quoted as per NHS Logistics (inc vat)

<table>
<thead>
<tr>
<th>Closure technique</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUIBAND Laparoscopic™</td>
<td>£12.06</td>
</tr>
<tr>
<td>Monocryl + Dermabond® (absorbable)</td>
<td>£16.04</td>
</tr>
<tr>
<td>Prolene + 4x Mepore® (non-absorbable)</td>
<td>£4.18 + removal costs</td>
</tr>
</tbody>
</table>

Costs do not include additional Mepore® applications that may be required or the time/cost to remove non-absorbable sutures.

**CONCLUSIONS**

TCAs significantly reduce the closure time for laparoscopic cholecystectomy wounds when compared to conventional suture techniques (2min 40 secs vs 5mins 45secs) at decreased cost without compromising cosmesis. All wounds in this study were closed by experienced surgeons. The easy application of TCAs may provide even greater time savings when wounds are closed by inexperienced junior surgeons. Non-absorbable suture techniques, eg. prolene sutures and dressings, remain the least expensive mode of closure, but do not allow the patient to shower and also require follow up for suture removal.

This study found the use of LIQUIBAND Laparoscopic™ easy to use and cost-effective for the closure of laparoscopic cholecystectomies.

**REFERENCES:**


**PATIENTS AND METHODS**

Evaluation of the new TCA for primary closure and occlusive wound dressing on 20 sequential adult laparoscopic patients assessed the effectiveness of wound closure, speed of application, surgeon (day 1) and patient (day 7 - phone survey) perceived cosmesis and any complications with the new TCA. These data were retrospectively compared and contrasted to conventional closure techniques using sutures.

All trocar incisions were closed by using the LBL product. No additional dressings were used once the LBL was applied. Effectiveness of wound closure/cosmesis with LBL was compared to current conventional closure techniques (sub-cuticular sutures & TCA liquid dressing).