The three groups were assumed to have a normal distribution and were assessed statistically using the Student’s t-test. The associations between the side of TF or DQ after CTR and each potential risk factor were investigated using logistic regression. Inferences were obtained by applying generalized estimating equation methodology and using robust estimation of standard errors. A p value < 0.05 was considered to indicate statistical significance.

The incidence of TF in the hand that underwent CTR was 6.6%, compared with 3.5% for the untreated contralateral hand (p < 0.001, 95% CI 0.014–0.049). The most common digit to trigger in the hand that underwent CTR was the thumb. The little finger triggered equally between groups, and the remaining digits triggered more often in the untreated hand. Patients with TF in the hand that underwent CTR were more likely to have the dominant hand affected. The incidence of DQ in the hand that underwent CTR was 0.5%, compared with 0.8% for the untreated contralateral hand (p = 0.316). There were no significant associations for TF or DQ and other conditions. The number of cases with DQ was small, making assessment of associations unreliable.

Because of the large sample size, we were able to make significant conclusions. Concomitant conditions affect all retrospective studies. By comparing the incidence of post-procedural TF or DQ to the incidence of spontaneous TF or DQ in the same patient, the non-operated hand served as an internal control for these concomitant conditions. Despite this control, the study still has weaknesses because it is retrospective. The true incidence of TF or DQ after CTR may be higher, as patients may not have reported initial TF symptoms or were treated elsewhere. Patient-reported past medical history can be variable, as different patients define diseases, such as osteoarthritis, in different terms.

In conclusion, based on our study group, hands with recent CTR are more likely to develop trigger thumb. The remaining digits do not trigger any more frequently after CTR. Patients with TF in the hand that underwent CTR had a higher incidence of triggering in the dominant hand, suggesting that the higher mechanical stress on this hand before and/or after CTR may be a risk factor for developing TF. Hombal and Owen (1970) suggested that loss of the flexor retinaculum allows the flexor tendons to bowstring, putting more tension on the proximal pulleys. They postulated that, given the superficial position of the flexor tendon of the thumb in the carpal tunnel, it is most affected by these increased frictional forces. In contrast to the relationship between CTR and TF, recent CTR is not a risk factor for developing DQ.

Based on these results, we recommend that physicians inform patients who are considering CTR of the increased risk of developing trigger thumb, especially if the treated hand is the dominant hand.

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Conflict of interests
None declared.

References

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Surgical treatment of primary Dupuytren’s contractures of the fingers in the UK: surgeons’ preferences and research priorities

Dear Sir,

A recent systematic review showed there is little evidence to suggest superiority of one surgical treatment for primary Dupuytren’s contractures of fingers over other surgical options (Becker and Davis, 2010). In addition, few, if any, studies have investigated the relative cost benefits of different surgical options. The 306 members of the British Society for Surgery of the Hand (BSSH) who are all fully qualified, independent practitioners (consultants) were emailed in September 2012 and invited to participate in an online questionnaire on the surgical treatment of primary Dupuytren’s contractures.
Dupuytren’s disease. The questionnaire enquired about their current management of primary Dupuytren’s contractures and asked them to rank in order of priority four suggested randomized, controlled studies that compared different surgical treatment options. Use of collagenase injections was not included as an option.

One hundred and sixteen of the 306 BSSH members responded. In total, 76% estimated they performed at least 21 surgical procedures for Dupuytren’s contractures of fingers every year; 24% thought they performed at least 51 per year. One hundred and five (96%) responders regularly performed limited fasciectomy, 32% dermofasciectomy, 27% needle fasciotomy, 20% very limited fasciectomy (segmental aponeurotomy), and 9% fasciotomy with a knife. Regular use of collagenase injections was reported by 12%.

The choice of procedure was determined by the site of the contracture (Table 1). Dermofasciectomy was rarely performed for isolated metacarpophalangeal (MP) joint contractures. Very limited fasciectomy, fasciectomy with a knife, and needle fasciotomy were not regularly utilized by most for isolated proximal interphalangeal (PIP) joint contractures or combined MP and PIP joint contractures.

The ranking of the proposed randomized, controlled studies also depended on the site of the contracture (Table 2).

### Table 1. Procedures performed regularly by surgeons (%) for primary Dupuytren’s contractures of the fingers (each surgeon may perform more than one operation regularly in each scenario)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Isolated MP contracture, %</th>
<th>Isolated PIP contracture, %</th>
<th>Combined MP and PIP contracture, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needle fasciotomy</td>
<td>36</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Fasciotomy with a knife</td>
<td>15</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Very limited fasciectomy/segmental aponeurectomy</td>
<td>4</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Limited fasciectomy</td>
<td>78</td>
<td>91</td>
<td>92</td>
</tr>
<tr>
<td>Dermofasciectomy</td>
<td>2</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Collagenase injection</td>
<td>29</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>

### Table 2. Percentage of surgeons favouring each of the four options for a comparative study of different surgical procedures according to the presentation of the primary Dupuytren’s contracture

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Isolated MP contracture, %</th>
<th>Isolated PIP contracture, %</th>
<th>Combined MP and PIP contracture, %</th>
<th>Pragmatic (all contractures), %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needle fasciotomy in a clinic room vs. limited fasciectomy</td>
<td>53</td>
<td>23</td>
<td>28</td>
<td>42</td>
</tr>
<tr>
<td>Needle fasciotomy or knife fasciotomy in a clinic room vs. limited fasciectomy</td>
<td>23</td>
<td>9</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Very limited fasciectomy vs. limited fasciectomy</td>
<td>12</td>
<td>23</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Limited fasciectomy vs. dermofasciectomy</td>
<td>12</td>
<td>45</td>
<td>46</td>
<td>31</td>
</tr>
</tbody>
</table>

a. For isolated MP joint contractures, 53% of respondents favoured comparison of needle fasciotomy in a clinic room versus limited fasciectomy, with 23% favouring comparison of either needle or knife fasciotomy in a clinic room with limited fasciectomy.
b. For isolated PIP joint contractures, 45% favoured limited fasciectomy versus dermofasciectomy, with 23% favouring very limited fasciectomy versus limited fasciectomy and 23% favouring needle fasciotomy in a clinic room versus limited fasciectomy.
c. For combined MP and PIP joint contractures, 47% favoured limited fasciectomy versus dermofasciectomy and 28% favoured needle fasciotomy in a clinic room versus limited fasciectomy.
d. If all finger contractures were to be treated in the same manner, regardless of which joints were involved, then needle fasciotomy in a clinic room versus limited fasciectomy was favoured by 42% and limited fasciectomy versus dermofasciectomy by 31%. This was despite most respondents reporting that they rarely performed dermofasciectomy for MP joint contractures.

Sixty-six of the 116 respondents indicated a willingness to be involved in a randomized, controlled study comparing different surgical treatment options for Dupuytren’s disease.
This study highlights that limited fasciectomy remains the most popular procedure for the treatment of primary Dupuytren’s contractures of the fingers in the UK. It also demonstrates that surgeons’ practices are determined by the joints affected by the contracture and identifies priorities for future research into the relative benefits of the different surgical treatment options. Finally, it demonstrates a willingness of BSSH members to become involved in multicentre clinical research on this topic.

Conflict of interests
None declared.

Reference

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Delayed rupture of the extensor digitorum tendon of the index finger after a distal radial fracture in a child

Dear Sir,

A 12-year-old girl sustained a closed palmar displaced distal radial fracture. Radiographs showed an extra-articular distal radial fracture with severe palmar displacement. A closed reduction was done and an above-elbow cast applied for 4 weeks, followed by 2 weeks in a below-elbow cast. Initial recovery was uneventful. She was pain-free and had regained full wrist range of motion at 8 weeks of follow-up. Twelve weeks after the injury she consulted because of swelling and pain over the dorsum of the hand with lack of extension of the index finger. Radiographs showed good fracture consolidation, but a dorsal bony prominence was noted at the fracture site (Figure 1). Ultrasound examination revealed a complete rupture of the extensor digitorum (ED) tendon of the index finger with a retraction of 3 cm. The extensor indicis (EI), extensor pollicis longus (EPL), and other ED tendons appeared intact.

The dorsum of the hand was explored under general anaesthesia. A complete rupture of the ED tendon of the index finger was confirmed. Minor attenuation of the ED tendon of the ring finger was also noted. The other extensor tendons were intact. The bony prominence at the site of the fracture was explored and measured 2 by 0.5 cm. The upper edge was sharp and lay in the course of the ED tendons. It was resected subperiosteally, the site of resection was smoothed down, and the periosteum was closed. The distal end of the ED tendon of the index finger was transferred to the EI tendon using a Pulvertaft tendon weave technique. A cast was applied for 4 weeks, after which physiotherapy was started. Check examination after 4 months showed good recovery of index finger extension.

Rupture of the EPL tendon is a well-known complication after distal radial fractures in adults. The rupture occurs on average 7 weeks after injury and is more frequent in minimally or undisplaced fractures (Oren and Wolf, 2009). ED tendon ruptures after conservative treatment are extremely rare. Gladstone (1952) was the first to report two cases of ED tendon ruptures after severely displaced fractures of the lunate bone and ulna. De Boer et al. (2010) described rupture of the EPL tendon with a concomitant rupture of the ED tendon of the index finger after a distal radial fracture. A similar case with sequential rupture of the EPL and ED tendon of the middle finger was reported by Sadr (1984). In both cases the cause of the ED tendon rupture was the retraction of the ED tendon of the index finger with attrition of the ED tendon of the ring finger.