Case report

Vicryl rapide inclusion cysts and suture sinus tracts following hypospadias repair

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A R T I C L E   I N F O

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S U M M A R Y

We report three patients with vicryl rapide inclusion cysts and suture sinus tracts as late presentations and complications of primary hypospadias repair. All three patients underwent correction surgery to remove the cysts and lay open the suture sinus tracts with wounds closed with tissue glue with no further complications reported up to time of publication.

Level of evidence: V.

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Introduction

Hypospadias repair is undertaken by Plastic, Urology and Paediatric surgeons and Poliglactin 910 (Vicryl Rapide; Ethicon, Inc.) is commonly used for skin closure. We present three cases of inclusion cysts and suture sinus tracts formation post single staged tubularised incised plate (TIP) repair1 for hypospadias. Although this is recognised complication with other materials,2 it is not known to occur with vicryl rapide.

Case report

All patients were healthy with no dysmorphic features. They had coronal hypospadias with significant chordae and dorsal hooding. Their primary repair was carried out by the same surgeon using a single staged TIP repair with and glansplasty closed with 6.0 Polydioxanone (PDS; Ethicon) sutures and 6.0 vicryl rapide sutures for skin closure.

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Case 1 had noted to develop a fistula 18 months post primary hypospadias surgery and this was closed.

On annual follow up the following year he presented with ‘blackheads’ (Figure 1) on the ventral surface that had been present for about a year. These ‘black heads’ represented suture cysts with underlying sinus tracts along the pathway of the vicryl rapide sutures from the original surgery and not from the revision procedure. These were explored and the tracts were de-roofed with wounds closed using glue (Histoacryl; TissueSeal®). Follow up at one year was satisfactory.

Case 2 presented three years post-operatively with a suture sinus tract and also noted was an inclusion dermoid cyst on the ventral surface of the repair. This was removed and was closed using a 6.0 vicryl rapide as a subcuticular suture. Eleven months post-operative follow up has been unremarkable.

Case 3 presented one-year post hypospadias repair had removal of an inclusion cyst and a fistula that was closed. A further two years later he had developed multiple inclusion cysts and suture sinus tracts (Figure 2) post hypospadias repair that were excised and closed with histoacryl glue. Six months post-operatively they have been no reported problems.

Discussion

These three patients had hypospadias repairs for coronal hypospadias using the same technique by the same surgeon. All patients had vicryl rapide used for skin closure and subsequently had revision surgery for excision of inclusion cysts and associated suture sinus tracts and the reasons for this remain unclear.

There continues to be a debate about the ideal suture material in hypospadias surgery. Skin closure is often with vicryl rapide which is a synthetic absorbable sterile surgical suture composed of a copolymer made from 90% glycolide and 10% L-lactide. Cysts and tracts have been associated more with absorbable sutures than non-absorbable due to the increased irritation and inflammatory effects. However, this has not been clearly reported with vicryl rapide, particularly in the case of hypospadias repairs. So choice of material could be the culprit for the findings in these patients and furthermore

Figure 1. Blackheads.
urine has been shown to have a differential effect on absorbable sutures used for hypospadias. Bacteria have also been shown to have differential adherence to suture materials.\textsuperscript{3}

Other possibilities could be the knot used for skin closure. Subcuticular sutures have shown to have fewer problems than interrupted sutures in wound closure.\textsuperscript{4}

In an audit of 147 patients in our unit the fistula rate was shown to fall to 6%. However, these three cases may be the start of a new trend. Subsequently we have changed our practice to using subcuticular sutures and dressing with glue.

These findings also highlight the importance of centralized long term follow up as these three patients have presented with the suture sinus tracts and inclusion cysts up to five or so years after their primary surgery and thus advocates the requirement for good long term follow up.

Funding

None.

Conflicts of interest

None declared.

Ethical approval

Not required.

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<thead>
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<th>Patient</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>Date of 1st hypospadias repair</td>
<td>09/2007</td>
<td>02/2010</td>
<td>09/2008</td>
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<tr>
<td>Date of suture sinus tract detection and repair</td>
<td>11/2012</td>
<td>03/2013</td>
<td>03/2011 08/2013</td>
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<td>Post op presentation</td>
<td>5 yrs 2 months</td>
<td>3 yrs 1 month</td>
<td>2 yrs 6 months and then 2 yrs 5 months</td>
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</table>

Figure 2. Suture sinus tract being laid open.
References


