Pilonidal disease simple pathogenesis but complex management

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Abstract

**Design:** retrospective study

**Patients & Methods:** the study was conducted on 75 patients suffering PND with a male to female ratio 59 to 16 done between May 2004 to June 2007 with a follow up range 8-13 and a median of 10.7 months. Sixty four patients had sacrococcygeal disease, 9 patients had umbilical disease, and 1 patient had suprapubic while 1 patient had axillary disease. For sacrococcygeal disease Limberg operation was done in 26.5% (n=17), abscess drainage and curettage in 31.2% (n=20), Bascom operation in 23% (n=15) while conservative treatment in 31.2% (n=20). For umbilical disease, omphalectomy was done in all cases (n=9). Conservative treatment was done for suprapubic disease while excision followed by primary closure was done in axillary disease (n=1) after failure of conservative.

**Aim:** to evaluate different modalities in treating pilonidal disease (PND)

**Results:** For sacrococcygeal disease, patients who received Limberg procedure (n=17) showed complete resolution in 88.2% (n=15) with recurrence rate 11.8% (n=2). Those who received Bascom operation showed complete resolution after all procedures with no recurrence during the follow up period. Patients who received conservative treatment (n=20) showed a success rate of 70% (n=14) with recurrence rate of 30% (n=6) who received Bascom procedure later for their recurrence. For umbilical, suprapubic and axillary disease; omphalectomy, conservative treatment and excision with primary closure were used respectively with no complications encountered.

**Conclusion:** For sacrococcygeal disease, Bascom operation was found to be superior over other modalities with respect to smooth postoperative period and early healing while in umbilical disease conservative shows higher success rate.

Introduction

Pilonidal disease (PND) is a chronic infection of the skin which occurs as a sequence of an inflammatory reaction secondary to embedded hairs located commonly in the natal cleft, less commonly in umbilicus, suprapubic, axillary, interdigital spaces of the hand or rarely peri-areolar or in the prepuce.

The disease is more common among males with a peak age incidence between puberty and 40 years and is also more common in people with thick stiff type of hair ( Hull and Wu, 2002).

The pathology of this condition is that of chronic inflammation with epithelialization of the pits extending not more than 2-3 mm from the surface below which chronic abscess cavity may widely ramify ( Goligher et al., 1992).

PND is a common problem due to the need for frequent and time consuming wound care in addition to high recurrence rates following surgery ( Iesalnieks et al., 2003)

Simple excision carries a higher incidence of wound complications and recurrence (42%). Many other alternatives as Bascom procedure, Limberg procedure, Karydakis procedure and their modifications showed superior results in many studies ( Aydede et al.,2001)

Patients and Methods

Between May 2004 and July 2007, 75 patients with PND treated at Cairo university hospital. According to the site of the disease we have patients with
sacroccygeal (n=64), umbilical (n=9), suprapubic (n=1) and axillary (n=1).

For the sacroccygeal disease the male to female ratio was 51 to 13 and were treated as follows; Limberg operation was done for 17 patients; 15 of them were denovo and 2 patients received this operation after failure of healing following abscess drainage and curettage, all wounds were closed over 18F suction drains removed after seven days.

Drainage and curettage was done in 20 patients with complete healing achieved in 18 of them (90% success rate) while the remaining 2 patients required further intervention as mentioned earlier.

Bascom procedure was done in 15 cases, 9 of them were denovo and the remaining 6 received this procedure after failure of conservative measures to heal the area within 2 weeks.

Conservative treatment in the form of mini-surgery, shaving and alcohol application was offered to selected patients (minimal subcutaneous induration, no history of suppuration, not a recurrent disease) n= 20. Fourteen showed complete response while 6 did not, so further management was needed in the form of Bascom procedure.

Concerning other categories; umbilical cases (n=9) omphalectomy was done in one case and eight cases managed conservatively, suprapubic and axillary PND were treated conservatively. Suprapubic cases showed excellent response while the case of the axillary PND did not, hence, excision and primary closure was done.

Hospital stay varied from 1 to 4 days, after discharge the follow up visits were conducted every week for 1 month then every month for 1 year

Table (1) Patients demography & presentation

<table>
<thead>
<tr>
<th>Demography/clinical presentation</th>
<th>N</th>
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<tbody>
<tr>
<td>Age</td>
<td>16-42</td>
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<tr>
<td>Male/Female</td>
<td>59/16</td>
</tr>
<tr>
<td>Pain</td>
<td>24</td>
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<tr>
<td>Discharge</td>
<td>63</td>
</tr>
<tr>
<td>Inflammation</td>
<td>20</td>
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<td>Abscess</td>
<td>20</td>
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Results

This study was conducted on 75 patients with pilonidal disease in different areas with male to female ratio 59:16, age range 16-42 and follows up ranging from 11 to 13 months with a median of 10.7 months. Sixty four patients had sacrococcygeal disease (85%), 9 patients had umbilical disease (12%), 1 patient had suprapubic disease (1.5%) and 1 patient had axillary disease (1.5%).

For sacrococcygeal disease Limberg operation showed 88% success rate, with recurrence rate of 12% (n=2) in the medial vertical limb within 4 months, and were treated by refreshment of the edges followed by secondary closure. Bascom operation showed a success rate of 100% of cases with no wound related complications, and recurrence recorded during the follow up period, while drainage and curettage have a success rate of 90% with 10% (n=2) failure rate, that required re-intervention for which Limberg operation were offered, lastly, conservative treatment was used in selected cases and resulted in 70% success rate (n=14) , while 6 patients showed no response and underwent Bascom operation with success rate of 100%. 

Bascom’s procedure
For umbilical PND omphalectomy offered complete healing in one case and conservative management offered cure in other patients (n=8), while suprapubic and axillary PND were treated initially by conservative measures which failed to heal the axillary disease and needed further excision and primary closure with complete healing during the follow up period.

**Fig (1) Anatomical classification of PND among the study group**

**Fig (2) Success rate of different modalities**

**Discussion**

In spite of high incidence of pilonidal disease affecting young population and the prolonged disabling period caused by it, surgeons have not reached to unanimity about the best treatment for this condition (Nahas et al., 1997).

It has been reported that the chances of infection are much higher in the wounds created by the lay open technique (Miocinovic et al., 2000).

Excision and primary closure of the wound (done in umbilical & axillary PND in our study) emphasize on quicker healing time, fewer postoperative visits and shorter time off work (Perruchoud et al., 2002).

The incidence of wound dehiscence following excision and primary repair are much less than that was previously thought (Zieger, 1999). However, the complications require longer hospital stay and long periods off work (Destito et al., 1997).

Limberg operation provided a good result but due to high incidence of complications as seroma, hematoma or
wound breakdown in addition to recurrence rate of 12%; we would like to reserve this technique only for extensive cases.

Bascom's operation was found to be an effective treatment for sacrococcygeal pilonidal disease. It results in shorter healing time, minimal morbidity for the patient and a low recurrence rate.

Preservation of tissue and a fat buttress in karydakis procedure (not done in our study) reduce midline tension and encourage primary healing; support of the midline wound using a fat buttress significantly increased the rate of primary healing (Mosquera et al., 1995), which occurred in all our patients with other procedures.

We encouraged the patients to return to their normal activity as soon as possible because it was observed that the wounds healed more quickly in those patients who resumed their normal routine before the healing of the wound because of improvement of both immune response and blood supply to the wound (Ortiz et al., 1977).

Concerning umbilical PND, conservative management gave marvellous result in early cases, only one case required excision of the umbilical scar (omphalectomy) after failure of conservative measures to heal the disease and carries high success rate.

So we recommend Limberg operation in extensive disease, conservative management or Bascom's operation in early cases of sacrococcygeal disease, conservative management for umbilical disease before deciding omphalectomy.

References

نادر الناصور الشعرى أسباب بسيطة وعلاج معقد

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المرض من البحث دراسة الوسائل المختلفة في علاج المرضى. تمت دراسة
على 75 مريض 59 من الرجال و 16 من النساء، 64 يعانون من نادر عصعصي
و 9 ناصور في أطراف و حالات ناصور فوق الجروح و حالات ناصور تحت الزمن.
تم استخدام العلاج التحفظي وأنجز عملية لامبرجر في الحالات المتاخرة وعملية
باسيك في الحالات المتقدمة واستنسل الناصرة بعد العلاج التحفظي في حالة واحدة.
كانت النتائج مرضي في العلاج مع وجود حالات ارتفاع للمرض بعد عملية
لامبرجر ولا يوجد أي مضاعفات بعد إصلاح باسيك التي لها نسبة نجاح عالي.
لذا نوصي باستخدام إصلاح باسيك بعد فشل العلاج التحفظي في الحالات
البسيطة و استخدام إصلاح لامبرجر في الحالات المتاخرة.