Injury, Int. J. Care Injured (2007) **38**, 182—187

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INJURY
INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED

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Coccygectomy in the surgical treatment of traumatic coccygodynia

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Accepted 26 September 2006

KEYWORDS
Coccygodynia;
Trauma;
Surgical treatment;
Coccygectomy;
Clinical outcome

Summary

The purpose of the study: Direct or indirect trauma to the coccygeal bone can induce chronic coccygodynia. The aim of this study is a retrospective analysis of our patients surgically managed for traumatic coccygodynia and a critical review of the results obtained in comparison to the literature.
Basic procedures: We have retrospectively investigated patients with traumatic coccygodynia referred to our centre after a failure of conservative treatment. Surgery (coccygectomy) was performed in 74 patients (64 women, 10 men) suffering from coccygodynia resistant to conservative treatment, all without serious complications, between the years 1998 and 2004. The mean follow up was 4.1 years (range, 2—8 years). The mean age of patients on the date of surgery was 43.4 years (range, 16—65 years). The average duration of pain prior to surgery was 7 months (range, 3 months to one year).
Main findings: All but three patients had either good or excellent results after surgery. Three patients reported postoperative pain lasting 3—6 months. All three had good results after re-operation of a proximal segment without excision. Five postoperative complications, four superficial and one deep infection were observed.
Principal conclusions: In patients with posttraumatic, conservative therapy-resistant coccygodynia, operative treatment with coccygectomy is a feasible management option. We recommend total or partial coccygectomy using a longitudinal incision in carefully selected and well-informed patients.

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0020-1383/$ — see front matter
doi:10.1016/j.injury.2006.09.013

Introduction

Pain in the vicinity of the coccyx has numerous aetiologies and is termed as coccygodynia.[8,27] It is frequently associated with recent or previous trauma such as a fall or childbirth.[26] Affected patients are commonly females in their 30s or 40s.[3,11]

Direct or indirect trauma to the coccygeal bone can induce chronic coccygodynia. The most frequent accident mechanism is axial impact to the most distal part of the spine.[4,13,24] Depending on the severity of impact, injury may range from a mild distortion without bony or ligamentous damage over a fissure in the caudal coccygeal segments to a severely dislocated fracture of the sacrococcygeal synchondrotic complex. All of these injuries can cause chronic, therapy-resistant coccygodynia.[9,21]

Management options are primarily conservative; cushion use, infiltrations with local anaesthetic and crystalloid cortisone suspensions in association with manual therapy and physical applications have shown good results.[2,12,18,19,23] Only in patients where conservative therapy shows no results should an operative procedure be contemplated.

Surgical excision of the coccyx may be used to treat coccydynia. Several authors [1,8,10,13,20,22,27] have reported excellent or good results in 60—90% of the cases treated by operation. Howorth[11] suggested that excision was advisable when there was a clear indication, such as a stiff coccyx in a badly deformed position or a diseased bone. There is an agreement in the literature that operation should not be performed in the absence of well-defined local symptoms[20,22] in patients who do not have sufficient mental stability,[1] or in those suffering from depression or hypochondria.[22]

The aim of this study is a retrospective analysis of our patients managed surgically for traumatic coccygodynia and a critical review of the results obtained in comparison to the literature.

Materials and methods

We have retrospectively investigated patients with traumatic coccygodynia referred to our centre after failure of conservative treatment. Surgery (coccygectomy) was performed in 74 patients (64 women, 10 men) suffering from coccygodynia resistant to conservative treatment, all without serious complications, between 1998 and 2004. We define the term traumatic coccydynia as pain, which is confined to the coccyx, without significantly affecting other structures; it is exacerbated by sitting and initiated by trauma.

The mean follow-up was 4.1 years (range, 2—8 years). The mean age of patients on the date of surgery was 43.4 years (range, 16—65 years). All patients had a history of direct fall onto the coccyx initially causing the coccygodynia.

All patients underwent clinical examination, routine blood tests (complete blood count, erythrocyte sedimentation rate, liver and kidney function tests), plain radiographs of the lumbosacral region, pelvis and coccyx (Fig. 1) as well as computed tomography of the lumbosacral spine (Fig. 2).

All of the patients complained of pain while sitting, and 11 also complained of pain while standing. On physical examination, all patients complained of a marked pain on external and rectal palpation of the coccyx.

The average duration of pain prior to surgery was 7 months (range, 3 months to on year). Conservative treatment consisted of nonsteroidal anti-inflammatory drugs, cushion use, infiltrations with local anaesthetic and crystalloid cortisone suspensions, manual therapy with mobilisation of the coccyx, massage and varying physical applications. In none of the patients did conservative management lead to significant and persistent diminishing of symptoms.

Preoperatively, a constipating or a low residual diet was prescribed to patients to prevent

Figure 1 A 39-year-old woman fell on her buttocks 8 months before presentation and had immediate onset of coccygodynia. Her symptoms were chronic and disabling. Lateral radiograph demonstrates anterior subluxation of the coccygeal mobile segment.