COCCYGODYNIA

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ABSTRACT :

We performed radiographic imaging in 16 patients (13 female and 3 male) having a painful coccyx, following trauma and no pathological findings except dislocation and/or fracture was found. Local anasthetic (lignocaine 1%) and depot steroid (methyl prednisolone acetate) were applied over coccyx. Fifteen of the patients had pain relief the other day and were followed–up about 7 months, this period was pain free and the success rate was determined to be about 93.7%. One patient who didn't profit from local applications and who had a mobil coccyx was operated for coccygectomy including the sacrococcygeal disc. Surgery was performed without complication and was symptom free in the follow–up period.

Key Words: *coccygodynia, local application.*

INTRODUCTION

The last part of the vertebral column, is named "coccyx" because of its similarity to the "cokoo" bird, which lives in the Aegean region, by Herophilus who lived between 330–260 BC and attracts attention not because of its functions but because of its problems (8). Pilonidal sinus and the painful coccyx called coccygodynia are the first of these problems and they are seen as a result of primarily coccygeal and then pelvic, anorectal and spinal cord problems (4, 8). Pain arises as a result of stretching of the coccygeal ligaments, dislocation or fracture of the coccyx and osteoarthritis of the sacrococcygeal joint (4). Traumatic fractures, coccygeal tumors, pericoccygeal glomus bodies and lumbosacral–intradural tumors also cause pain (1, 2).

Idiopathic coccygodynia is attributed to a variety of pathological conditions such as spasm of the pelvic floor muscles, anomalies of the soft tissues in the mid–sacral region, chronic inflammation of an adventitious coccygeal bursa, lesions of the lumbar discs, arachnoiditis of the lower sacral nerve roots, post traumatic osteoarthritis of the sacrococcygeal joint and subluxations and sprain of the cocyx (2, 6, 7).

The current study is undertaken to investigate and present the differences in the diagnostic methods, significant relief of disabling pain after local injections and surgical procedures of the painful coccyx which is discussed little in literature.

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MATERIAL and METHODS

We studied 16 patients with an average age of 34.8 (15–64) who complained of coccygeal pain upon sitting. A history of direct trauma was present in twelve of the cases. The other 4 patients could not remember the beginning of pain. On physical examination, all of the patients had hypersensitivity on coccygeal palpation. The first films were taken in the lateral standing and anteroposterior positions, and changes in position, sacrococcygeal dislocations, fractures and callus formation were investigated. The patients had their standing and sitting films taken before diagnosis. The patients without a history of trauma were evaluated for the risc factors and computed tomographic (CT) scan was performed.

All the patients were re–evaluated for pain in steril conditions and prostrating position and 2cc of lignocaine 1%, and 1 cc of methylprednisolone acetate was injected over the coccyx. The patients were left to rest a while because of pain during the process and were discharged from the hospital without any medication. They were called for control periodically first being after a week. The patient who was operated for L5–S1 discal hernia had severe coccygeal pain without trauma in the postoperative period and she had

the local injection on the coccyx and was prescribed antiinflammatory drugs. When her symptoms continued insistently and because the second injection was unsuccessfull, radiographic investigation was performed and revealed posterior subluxation. The patient was operated for coccygectomy under general anaesthesia.

RESULTS

Patients (13 female and 3 male) who aged an average of 34.8 (15–64), and young age was meaningful for the history of trauma. Falling from the stairs was encountered most frequently (5 cases), falling while sliding (3 cases), falling from a height (2 cases) and traffic accident outside the vehicle (2 cases) were the other causes. 4 cases didn't give a history about beginning of their pain. All of that 4 patients were female, multiparous (average birth no. 3.25) and they were middle aged, so degenerative processes, repeating microtraumas and late complications of labor and delivery were claimed as a cause of pain.

The results of radiographic findings are displayed in Table 1.

Table 1. The results of radiographic findings.

RADIOGRAPHIC FINDING	PATIENT NO
Posterior subluxation	5
Anterior subluxation	4
Sacrococcygeal sparing	3
Fractures	3
Callus formation	1

There was a significant release of pain starting a day after process and it improved in the following day. The fifteen patients who performed local injection were followed–up for seven months and there was no complaint of pain. The patient who had no benefit from the procedures had coccygectomy performed on. She had no complaint during a year of follow–up period. No complications were observed after the injections nor the surgical resection.

DISCUSSION

Painful coccyx or coccygodynia refers to a symptom which can be encountered as a result of pathological conditions such as trauma, tumor, infection or avascular necrosis but the definite etiology remains unclear (2, 4, 5, 6). Trauma plays an important role for this symptom and is usually presents in the history (4, 6). In those cases, presence of a fall on the buttocks or a childbirth are often mentioned as a precipitating factor so a mechanical basis for pain is seen likely (4). A history of trauma in 75% of our patients and the others without a history of trauma, being female and multiparous support these ideas.

Performing a detailed clinical examination before radiographic imaging helps to determine the underlying pathological process and to differantiate the radiating pain (2, 6). A psychriatric examination will help the diagnosis as well as increasing the success of the therapy (6). In most of the cases, covantional direct radiographs are satisfactory for the diagnosis but good results are obtained after assessment of the coccyx with lateral dynamic radiographs described by Maigne (4, 5).

Especially before invasive methods of therapy; 1) dynamic coccyx graphs should be taken, 2) a thorough clinical examination including rectal examination should be performed (4, 5). All of our patients had a detailed examination. The first patients had anteroposterior and lateral coccyx graphs taken for the diagnosis, whereas the last ones were diagnosed by lateral dynamic radiographic imaging described by Maigne et all. The patients without a history of trauma had their CT scan to eliminated other causative underlying pathologies.

The main concern in treating these patients is to reduce the pressure on coccyx so conservative methods are preferred on and most patients respond well (4, 6). Medical treatment with basic analgesics, non–steroid anti–inflammatory drugs and muscular relaxsants give good results when continued about three months (2, 6). The symptoms often subsite in this period. However when conservative measures have failed, invasive methods are indicated (2, 4, 6).

Patients having coccygeal pain because of osteoarthritis were relieved significantly after local anesthetic and steroid injections (3). Caudal epidural steroid injections are also helpful for long periods (3). We had to perform invasive procedures without taking into consideration the three month period because it was hard to follow–up the patients on outpatient basis, pain was getting disabling and all the patients were on medical therapy. There was a significant relief in symptoms.

Surgical procedures are tried for patients who didn't respond to conservative and invasive methods. Simpson performed subcutaneous tenotomy in 1859 for the first time, in painful coccygeal ligaments but the procedure was unsuccessfull (6). Bohm et al. performed sacral rhizotomy to relieve pain but the success rate was about 25%. Subsequently, releiving pain by excision of the coccyx became the common method of surgical treatment and was successfull about 89%. When there is an indication for surgery for the painful coccyx, excision of the intercoccygeal joint which has a primary role in the pathogenesis of idiopathic coccygodynia is satisfactory and is not necessary to remove the first coccygeal vertebra (6).

During the operation, infection of the surgical area because of the anatomic consideration, rectal perforation and bowel herniation are various complications, so sacrococcygeal ligaments should be dissected carefully (1, 9).

As results, in cases with painful coccyx, psychiatric factors, and definite pathologies such as fracture, tumor or infection should be discriminated. In the case of "idiopathic painful coccyx" where the underlying pathology is unclear, conservative and supportive therapy should last about three months and if there is no relief of the symptoms, local injections should be performed. Surgical procedures should be the last alternative method.

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