

# Coccygodynia – pathogenesis, diagnostics and therapy. Review of the writing

**Authors' Contribution:**  
**A** – Study Design  
**B** – Data Collection  
**C** – Statistical Analysis  
**D** – Data Interpretation  
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**F** – Literature Search  
**G** – Funds Collection

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## ABSTRACT:

Coccygodynia is a problem with a small percentage (1%) of the population suffering from musculoskeletal disorders. This pain is often associated with trauma, falling on the tailbone, long cycling, or by women after childbirth. The reason for the described problem can be the actual morphological changes. Idiopathic coccygodynia causes therapeutic difficulties to specialists of many fields. Unsatisfactory treatment, including coccygectomy tends to seek new solutions. They belong to them techniques exploited in the manual therapy which in their spectrum hold: direct techniques - per rectum as well as indirect techniques taking into account distant structures of the motor organ, remaining in dense interactions with the coccygeal part. Idiopathic coccygodynia is a result perhaps from exaggerated tension the muscle of the levator ani, coccygeus and gluteus maximus as well as from irritating soft tissue structures surrounding the coccyx: of sacrococcygeum, sacrospinale, and sacrotuberale ligament. Unfortunately we can't see them in objective examinations so as: the RTC, MR or TK, therefore constitute the both diagnostic and therapeutic problem.

For describing the problem a writing of the object was used both from the field of the surgery and of manual therapy.

Detailed and multifaceted knowledge about causes of the described problem allows more accurately to categorize the patient to the appropriate group and helps to select the best procedure of treatment.

## KEYWORDS:

coccygodynia, causes, treatment, manual therapy, tissue irritation

## DESCRIPTION OF THE PROBLEM AND ITS PATHOGENESIS

Coccygodynia or otherwise coccydynia, as one of the definitions says, is a sacrococcygeal pain syndrome [1], some authors also describe it as pain originating from the coccygeal plexus [2]. The issue was first described and named in 1859 by a professor of medicine, gynecologist and obstetrician - J.Y. Simpson, employed at the University of Edinburgh. He characterized coccygodynia as a deeply localized, persistent pain of the coccyx [3]. However, the first mentions of the issue at hand date back to the turn of XVI and XVII centuries, and long before Simpson's description of the disorder, in 1726, Jean Louis Petit performed first coccygectomy [4].

The literature [2,4] states that this problem affects only 1% of the population suffering from spinal pain disorders. In pilot studies conducted by me in Manual Therapy Center on a group of 7762 people with musculoskeletal disorders, coccygodynia was present in 97 subjects, which amounts to 1.24%.

Dynamics of appearing of the discussed issue is different. In some people symptoms appear from time to time and after a short while resolve spontaneously, in others they persist chronically. Pain of the coccyx appears usually while sitting incorrectly [3,4,5] or after standing up from a sitting position [3,4,5,6]. In women, a connection was noticed between intensification of pain, premenstrual period [3,4] and menstruation [2]. The described pain appears in some subjects during sexual intercourse [2,4] or defecation [3,4]. In the advanced stage, the pain is present during walking [3,5] or prolonged standing [7], and later even during lying down, obstructing rest and sleep.

Genesis of the discussed ailments is broad and varied. Organic diseases which may provoke coccygodynia include:

- cyst/pilonidal sinus [2],
- arachnoid cyst [2],
- neurogenic pain caused by irritation of surrounding nerve roots, plexuses or peripheral nerves located near the coccyx [4]; paralysis of a coccygeal nerve causes a dysfunction of levator ani, and its irritation is a cause of severe pain in the coccygeal region [8],
- neoplasm diseases: tumors of the coccyx and the final segment of the gastrointestinal tract, chordomas [7,9],
- inflammation - Marmor [4] believes that coccygodynia should be called coccygitis, because the clinical picture is very similar to elbow pain caused by epicondylitis,
- growth located on the dorsal side of the coccyx, which is palpable and called "spicule" [4,10]. It appears in 15% of people with the discussed problem,
- referred pain from internal organs, such as: rectum, sigmoid colon, urinary bladder or reproductive organs [13],
- fractures caused by specific injuries - e.g. after falling on a hard, sharp surface [1,7,9] or during labor and delivery [1,7,11], mostly during labor which requires the use of instruments [7,12].

Coccygodynia might be also caused by indirect injuries [11] or summation of micro-injuries [5,6,13] - e.g. prolonged sitting in an incorrect, forced or uncomfortable position or surface [7], also after riding a bicycle or a motorbike [13]. Patients might feel pain while sitting on both soft, as well as hard surfaces [2,5,6]. In 1950, Schapiro called coccygodynia a "television disease" [4]. People whose coccygeal pain is related to a sitting position feel pain when they tilt backwards their trunk and shift the body weight on the sacrum and coccyx [6]. That is why they avoid sitting in a posterior pelvic tilt, they often sit on one buttock to relieve the painful region [3,5]. In others, a correct sitting position with shifting

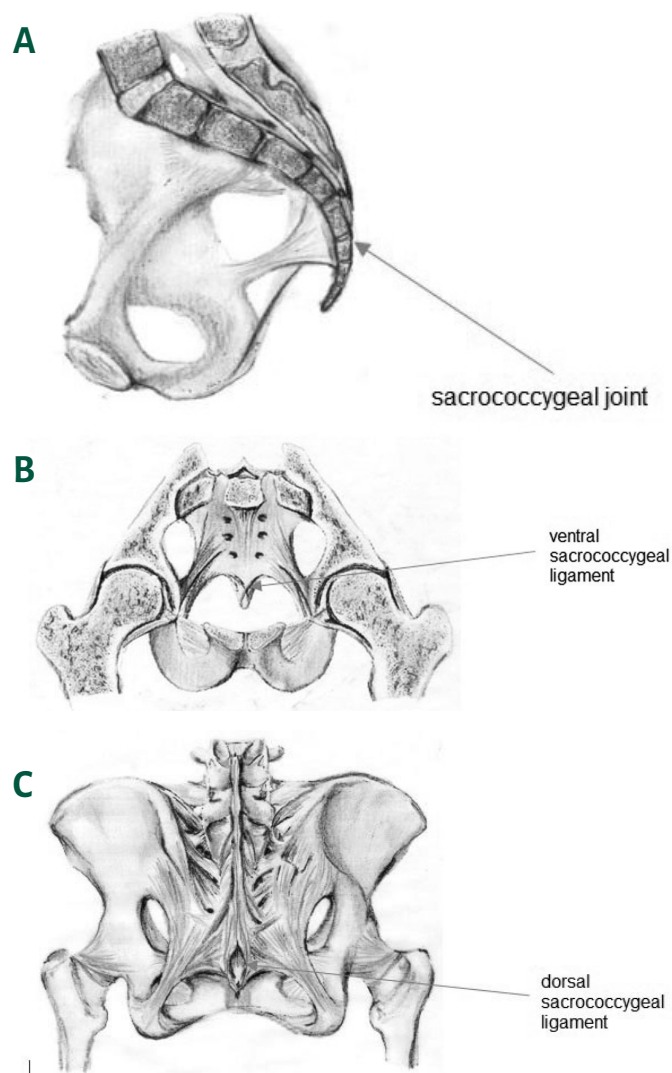
the body weight on the ischial tuberosities completely alleviates the symptoms.

It is said that women are more susceptible to coccygeal pain because of their pelvic structure, where the coccyx and the sacrum are placed in a more vertical position, and because of probability of obstetric/childbirth related injuries [13]. Coccygeal pain occurs five times more frequent in women than in men [4]. Maigne [12] conducted studies among women who developed the discussed pain within 2 weeks after giving birth. In the studied group, 29 (50.8%) women gave birth with the use of forceps, in 24 (42.1%) cases the childbirth was natural and spontaneous, and 4 (7%) women required the use of vacuum. In 6 women out of the whole group, there was a “crunch” characteristic to a bone fracture during child delivery. Forceps delivery turned out to be a factor which increases the risk of postnatal coccygodynia, and a fracture or a shift are the two most frequent defects of the coccyx during child delivery.

The sources claim that coccygodynia might be also a result of injuries, falls on buttocks which happened many years or months before the occurrence of pain, or even a summation of injuries from childhood [5,6]. This phenomenon is explained by the accumulation of irritations in connective tissue structures, which possess tissue memory [5]. It is a specific trait of connective tissue structures for remembering and storing information that can be clinically silent for many years and get revealed only after exceeding the excitation threshold, which is different for every organism. In contrast to the above, Maigne [6] claims that only injuries from a month before the symptoms increase the risk of coccygeal instability, especially the posterior shift. He thinks that the instability is one of the causes for coccygeal pain. Based on this thesis, he performed a dynamic x-ray examination of the sacrococcygeal region [10], thanks to which he described mobility values of the coccyx and categorized them in four groups:

- the correct mobility of the coccyx is set within 5°-25° of flexion in a sitting position,
- mobility above 25° of flexion in a sitting position is assessed as hypermobility,
- mobility below 5° of flexion in a sitting position is assessed as hypomobility,
- and a posterior dislocation - is a relocation of the movable part of the coccyx to a dorsal flexion while sitting.

Examinations based on dynamic lateral radiographs [14] show that 50% of patients with coccygodynia have changes in mobility of the coccyx, which go beyond the standards (according to the above scale). In those studies, the author concludes that there are two cases which point to instability of the coccyx as a cause of coccygodynia. Firstly, when the coccyx shifts / relocates backwards in a sitting position, and there are no visible changes while standing up – this situation is mainly applicable to a structure of the coccyx, where it is quite straight, vertical and short, often in obese people [6,14]. Secondly, when a flexion of the coccyx in a sitting position goes beyond 25° – in people whose coccyx is strongly bent and longer than usual [14]. However, anomalies in mobility of the sacrococcygeal joint are not found in everyone. Observations done by Georgian researchers unambiguously show that in examinations of patients with coccygodynia might be noticed a ventral setting of the coccyx, stiffness of the sacrococcygeal joint or hypermobility of coccygeal vertebrae [15]. This is confirmed by other researchers who claim that coccygeal pain and its intensity



**Fig. 1.** Sacrococcygeal region:  
a - from the lateral side, sacrococcygeal joint;  
b - from the ventral side, anterior sacrococcygeal ligament;  
c - from the dorsal side, superficial dorsal sacrococcygeal ligament [5].

is not related to mobility of the coccyx [5]. Mobility of the coccyx is individually variable [5,8].

Some researchers think the discussed problem is caused by deformations of the bone itself [4], incorrect position, excessive length or stiffness. As Bochenek says [8] – the last two vertebrae of the coccyx attempt to asymmetrically blend together which may cause the coccyx to tilt laterally, anteriorly, and in some cases posteriorly. It is a natural trait and it does not cause pain.

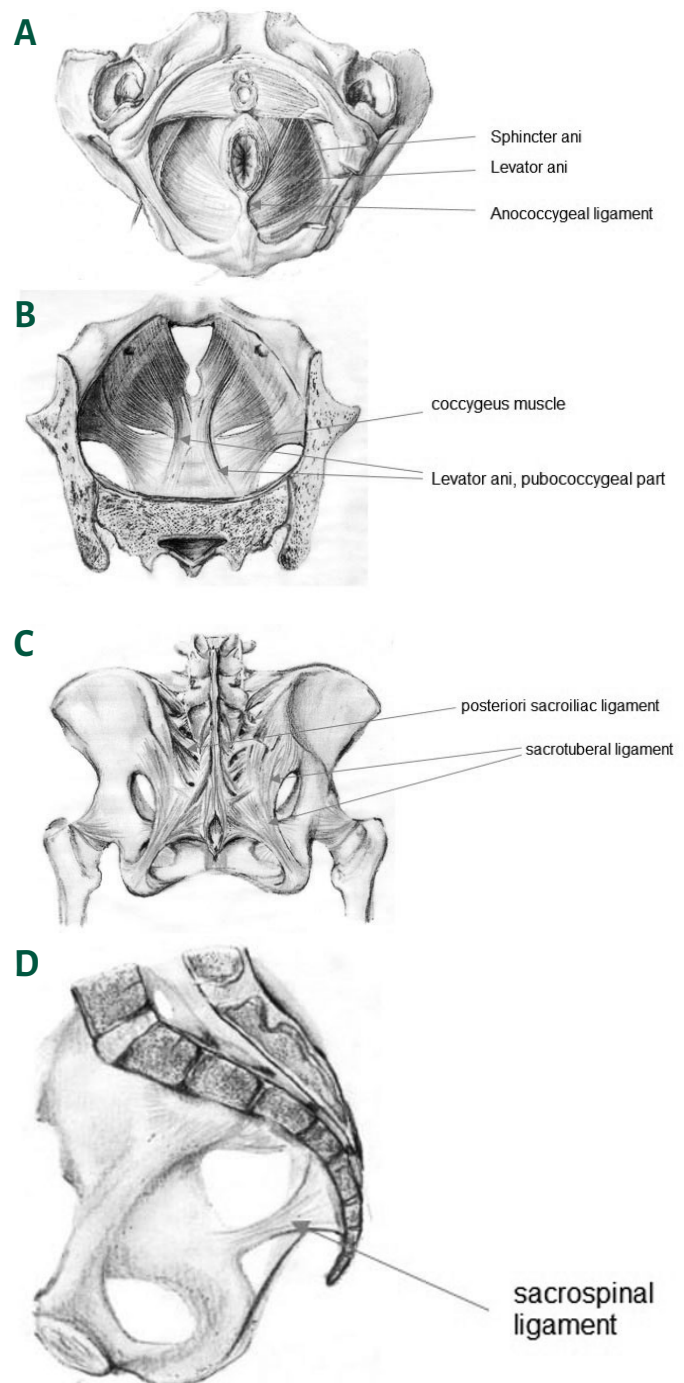
According to Maigne and co-authors' studies, BMI is another clear factor which correlates with coccygodynia [6]. 3 groups were distinguished in the conducted studies. In a group with obese people, there was an increased risk of a posterior shift of the coccyx. In a group with people whose weight is within norm, there was a hypermobility or standard mobility on X-ray images. However in a group of people who were underweight, a problem with a protruding coccyx or an anterior shift was the most frequent. Authors of the studies write that obesity is a risk factor in the discussed problem, explaining this phenomenon by saying that obese people have lower mobility of the pelvis in a sagittal

plane and they sit with insufficient rotation of the pelvis, thus not protecting the coccyx.

Other references say that a sudden weight loss is a risk factor of coccygodynia [7] and results in a loss of a natural tissue protection.

Another category of causes are the causes related to the sacrococcygeal joint – inflammation of this joint and the surrounding tissues [3,4]. In this case, degenerative and proliferative changes are seen as the cause. However, it would be good to compare these findings with Deyo's thesis [16] who claims that because of structural assessment with the use of X-ray, the cause of a structural change was found only in one out of 25 000 cases. Others report [4] that in 41% of patients with idiopathic pain and in 44% with post-traumatic coccygeal pain, objective traits were found indicating degeneration of a disc connecting the coccyx with the sacrum. However, respectively in 59% and 56% of patients no pathological changes were found in the sacrococcygeal joint, despite the feeling of pain. Rakowski [5] and Słobodzian [17] write that in problems with the lumbar spine region, despite morphological changes in a form of nucleus pulposus hernia which can be observed in MRI scan, only a small percentage of problems are a result of an actual disc-root conflict or other degenerative changes of the disc itself. They report that the majority of symptoms originate from functionally changed connective tissue structures of the movable spinal segment: articular capsule, supraspinous and interspinous ligaments. According to Rakowski [5], analogically to the above, the coccygeal pain results from irritation of connective tissue structures and muscles located near the coccyx (pic. 1), as well as ones further away but which interact with this region.

In relation to the above, other authors [13] write that the foundation of coccygeal pain lies in a lesion of ligament structures. Those structures were considered by Simpson who were performing tenotomy of coccygeal ligaments [11]. However, the treatment was not effective. Simpson thought of the ligaments probably only in a structural aspect, he did not take into consideration the irritation of tissues – a functional change of these tissues [5]. A definition states – “it is a reaction of the body to negative stimulation, caused by a static overload of the musculoskeletal system. It occurs independently of structural and organic changes. It is related to them only if those changes are decoded by the body as a negative stimulus. Structural and organic changes create spots with lowered overload tolerance, they can only facilitate the occurrence of a functional change of tissues” [5]. The described notion refers to both ligaments, muscles, as well as fascia or skin with subcutaneous tissue and it may generate many local and distant symptoms, occurring (radiating) far away from the place of dysfunction. One of its traits is an excessive tactile sensitivity. It is confirmed by many researchers who say that because of incorrect functioning or excessive tissue overload, including an excessive and chronic muscle tension [5], ischemia and hypersensitivity develop in some areas [18]. Mense and Simmons [19] say that primal tissues take a form of hypersensitivity, then discomfort, and at the final stage of pain – they create trigger points. The authors explain that those are areas on muscle bellies or their fascia, which are characterized on pressure by tenderness, radiating pain or synalgia. Some researchers say that musculofascial trigger points which occur in the coccygeal region are the cause of coccygodynia [4]. Lewitt [20] found another term for the same type of changes – hyperal-



**Fig. 2.** Muscles and ligaments of the sacrococcygeal region:  
a - view from the coccygeal side, muscle: levator ani, anal sphincter, anococcygeal ligament;  
b - view from inside of the pelvis, levator ani and coccygeus muscles;  
c - view from the dorsal side, sacrotuberous ligament,  
d - view from the lateral side - sacrospinous ligament [5].

gesia (excessive pain sensitivity), and Jones talks about “pressure hypersensitivity”. The described changes are visible in objective medical tests, such as imaging tests: X-ray, MRI or CT [5]. For this reason, if objective causes of the symptoms are not found, patients are diagnosed with an inherent, idiopathic coccygodynia [1,11]. This group of patients provides the biggest challenges for practitioners [6]. Literature states that the cause of idiopathic coccygodynia is an excessive tension of structures connected to the coccyx. It applies mainly to muscles, such as: coccygeus [5], pubococcygeus part of levator ani [3,4,5,13], anal sphincter [3,5],



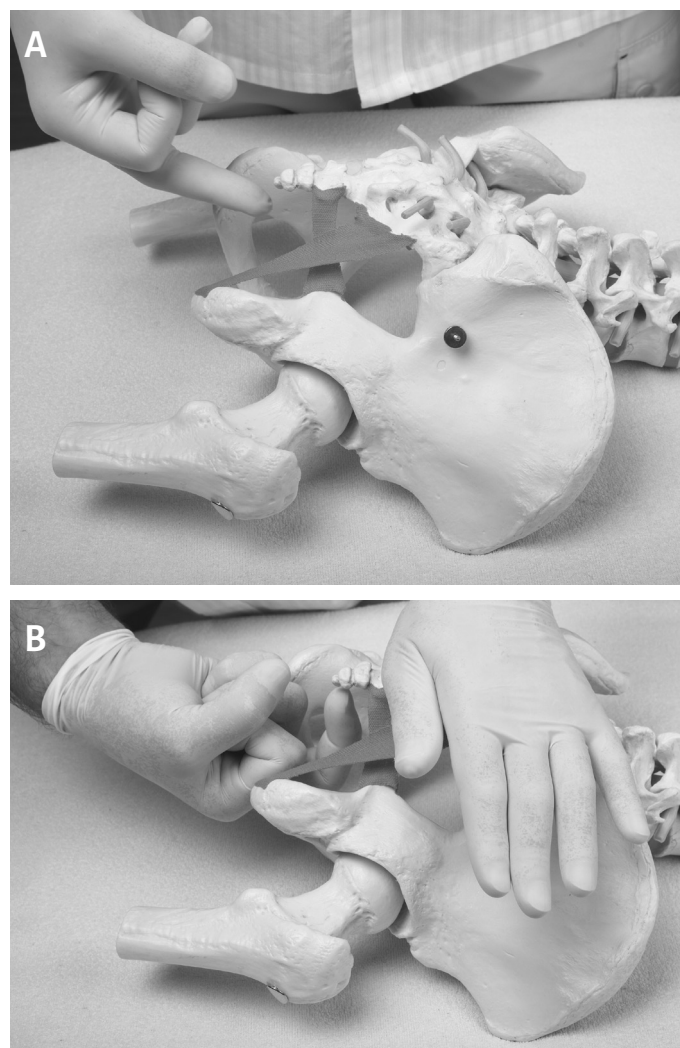
but also gluteus maximus and piriformis muscles [2,5]. Sacrospinous ligaments, sacrotuberous ligaments and sacroiliac ligaments are engaged in this mechanism [5] (pic. 2).

The studies show that muscles of the pelvic floor are more tensed in people who had injuries related to the coccyx [4,6], compared to those who did not have this kind of injury. Rakowski writes that increased resting tension of the pelvic floor structures are the result of a specific reaction of the body to stress [5]. This region has a particularly clear reaction to fear [5]. The authors who write about coccygodynia notice a fact that it might be a psychosomatic disorder and it often occurs in patients with depression [1,2,11].

Some researchers [2,9] claim that degenerative disc disease in a lumbar segment of the spine has an effect on the occurrence of this problem, which my studies at Manual Therapy Center confirm. The studies were conducted on 81 patients with various musculoskeletal disorders, and it turned out that statistically significant was a relation between the occurrence of coccygodynia and L5/S1 intervertebral space stenosis. Simpson noticed that many patients suffering from coccygodynia feel pain in the lumbar spinal region [3,4,13] and the region of thighs or buttocks [3]. Other authors write about pain of the sacrococcygeal joint spreading to crotch and gluteal muscles [11] or to the sacrum and higher segments of the spine [2]. Others [5] have noticed a closed relation between functional disorders of movable segments of the lumbar spine, sacroiliac joints, and structures of the pelvic floor.

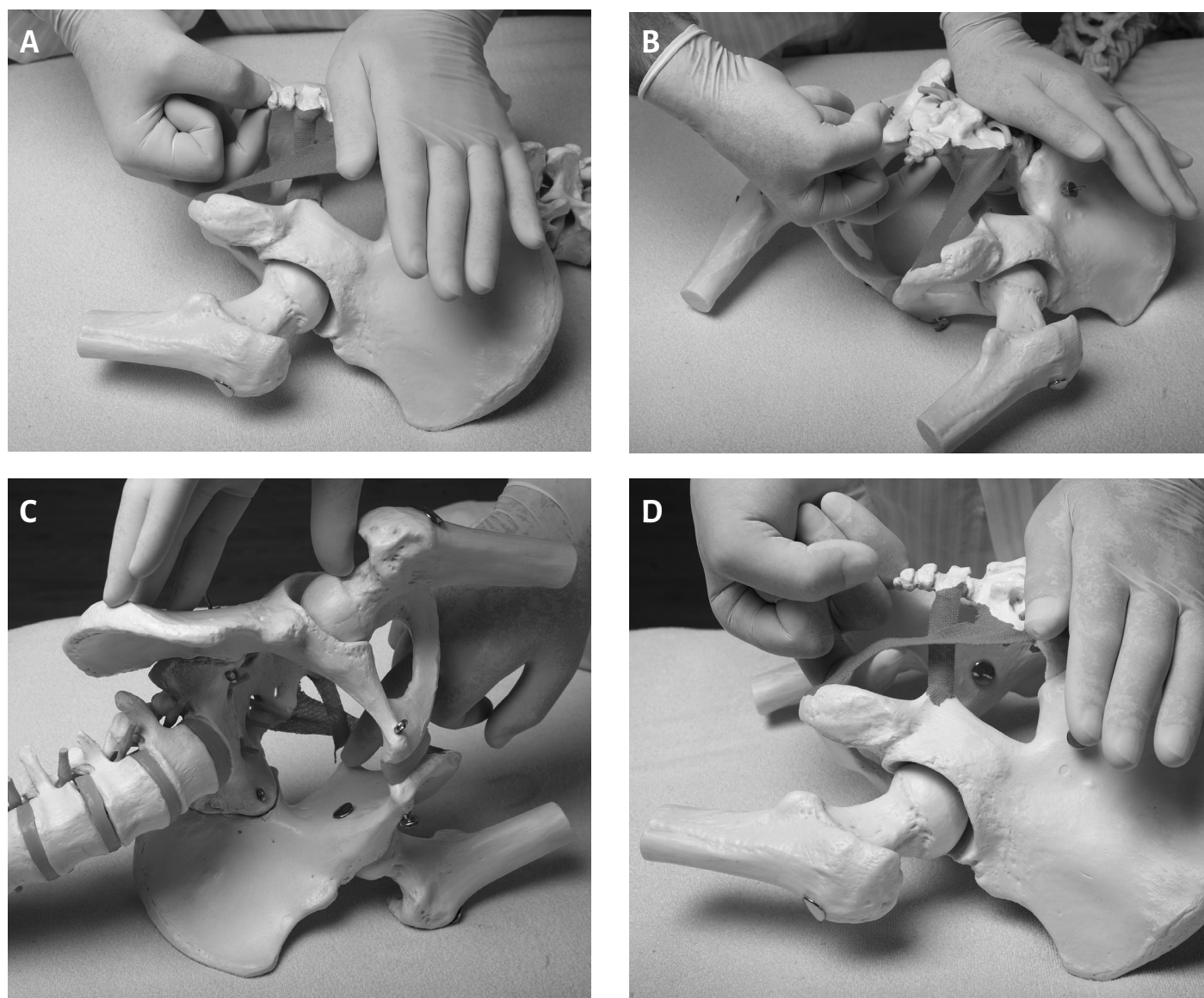
## DIAGNOSIS AND THERAPY

A diagnosis of the described problem should include a specific algorithm. In a medical interview, the following questions must be included: since when symptoms started, what was the onset, was there a direct injury of the coccyx, what positions and time of a day exacerbate the symptoms, are there any activities which lessen the symptoms, what are the accompanying symptoms, are the symptoms related to stress. Tests which should be performed in case of a continuous coccygeal pain include functional X-ray, CT or MRI, depending on hypotheses of the doctor. If an organic disease is excluded, a patient should be subjected to a pelvic floor muscles efficiency test: resting tension and any maximal muscle contraction of the puborectalis part of levator ani and external anal sphincter [5] (pic. 3), in compliance with a hypothesis of an excessive tension of the pelvic floor muscles. This test should be supplemented by tests examining functional coordination of the pelvic floor muscles during a contraction, ability to relax and, more importantly, ability to push, because this mechanism is often dysfunctional [5]. Other than the above, a pressure hypersensitivity of tissues connected to the coccyx should be checked: sacrococcygeal ligaments, sacrospinous ligaments, sacrotuberous ligaments, coccygeus muscles, levator ani and other tissues palpable per rectum, including the piriformis muscle [5]. This approach enables to also examine tactile sensitivity of the sacrococcygeal joint and the coccyx apex, as well as mobility of the coccyx in ventral and dorsal directions (pic. 4). Other than direct tests of the pelvic floor structures and the coccyx, the examination should include a manual assessment of static balance of the pelvis, muscle balance, and tissue sensitivity of specific elements of the movable spinal segments in the lumbar region, as well as pelvic ligaments. After detailed diagnostic tests, the patients should be categorized according to a suitable treatment method.



**Fig. 3.** Rectal examination of any possible contraction: a - external anal sphincter muscle; b - puborectalis muscle [5].

The first method of choice applied in case of coccygodynia is a typical conservative treatment which includes pharmacological treatment [11,27]. Initially, non-steroidal anti-inflammatory drugs are applied, if they are ineffective then coanalgesics are additionally applied – anticonvulsive drugs or further tricyclic antidepressants, sometimes opiates or opioids [2]. To some patients, concurrently with the above methods, analgesic suppositories are applied, a rest in a horizontal position is recommended, and physical therapy modality procedures are introduced, as well as they are recommended to offload the coccyx by sitting on offloading cushions. Dalbayrak et al. [23] report that such treatment is effective only in ¼ of patients suffering from the described problem. If this treatment is ineffective, corticosteroids are implemented in a form of injections in the sacrococcygeal region [2,11,13]. As Harat and co-authors [2] report, three types of injections are applied: the first method includes injections in the vicinity of the coccyx – which, according to authors, gives a short-term improvement in 60% of cases. The second method is giving injections in the vicinity of the coccyx while additionally moving it for about a minute (flexion and extension) – a short-term improvement in 85%, long-term – in 60%. The third method describes injections directly in the sacrococcygeal joint under X-ray guidance – improvement in 60-70% in 2-4 months, and in 30% after more than a year. The same authors cite after Maigne information that steroid injections are far more



**Ryc. 4.** Pressure sensitivity test: a - apex of the coccyx; b - sacrospinous ligament and coccygeus muscle; c - periosteum of the ischial spine, attachment of sacrospinous ligament and coccygeus muscle; d - sacrotuberous ligament [5]

effective in people with visible sprains of the coccyx than in cases of patients with standard mobility of the coccyx in X-ray scans.

Maigne observed two groups of patients treated by injections in the vicinity of the coccyx. In the first studies, 142 out of 272 people were selected who had instability of the coccyx. Injections were applied directly in the sacrococcygeal joint with or without later manipulation of the coccyx. 76 people showed good results [14]. In another studied group [12], which included women in postnatal period who underwent a two-month conservative treatment (offloading cushions, manual therapy, analgesia), injections were applied in the coccyx apex or the sacrococcygeal joint disc. If the pain returned after administering a drug, the procedure was repeated. If the second injection gave relief for a shorter time than the first one or for a time shorter than 6-8 months or there was no improvement after the first injection, another treatment method was suggested which included manual therapy or coccygectomy.

Coccygectomy is used as a last resort treatment method [2,4,7,11,12,13,14,15,23,24,25,26,27], although there are different views on a topic of its relevance. Some people think that it is an unnec-

essary procedure, others believe that it is a very good treatment method. Some people recommend a removal of the whole coccyx, and others just a part of it.

Georgian researchers [15] observed very good results after a removal of the coccyx. As much as 90.3% of patients declared improvement after the surgery, at least a year after the procedure. It meant that these people went back to their previous lifestyle. In 9.7% of people the effects were satisfactory, which meant reduction of symptoms, although there was a mild pain during sitting or prolonged walking. Wray [13] writes that 90% of patients who did not react to conservative treatment felt improvement after coccygectomy. Maigne [12] in his studies of a group of 142 patients diagnosed with instability of the coccyx gives an example of 37 people who did not react to a basic conservative treatment (NSAID, injections) and underwent a surgical treatment. After two years of the surgery, the results were as follows: in 62% of patients – great results (over 90% pain reduction), good results – in 30% of patients (75-89% pain reduction), poor results – 8% (less than 50% improvement). Patients who assessed their results as great were still complaining about a discomfort in the coccygeal region while



sitting for more than 2 hours. Patients who declared their results as good were saying that there is still pain, but significantly less intense or it occurs after sitting for 1.5 hour. As it can be seen based on the above information, even patients who underwent radical treatment may still feel some symptoms. That is why this method is considered by some people as controversial. The studies of Tilscher et al. [13] show that in 11 people who had coccygectomy, there was no long-term improvement present.

It is thought [2,11,13] that appropriate diagnosis and a thorough qualification for surgery, which is a last resort treatment of the coccygeal pain, are crucial. It is believed that a surgical treatment by removing a part or the whole of coccyx should only be applied to people who:

- do not react to conservative treatment – Postaccini [11 – after Szypuła] thinks that conservative treatment cannot be shorter than 3 months, and Hodge [11 – after Szypuła] says that the time should not be shorter than 6-8 months,
- are diagnosed with non-physiological mobility of the coccyx in objective tests, such as: X-ray, MRI, CT [2,11,12],
- had a coccyx related injury [2],
- showed improvement after steroid injection treatment [2].

Before qualifying patients for this treatment, it should be taken into consideration that the procedure is burdened with the risk of infection and complications. This treatment should be applied only after trying other types of therapy, including manual therapy and physical therapy modality treatment.

Andres and Chaves [13] emphasize that a better understanding of physiology, anatomy and pathomechanisms of the origin of coccygodynia will enable to better choose a therapy. They report that a therapy of the discussed problem should encompass physical therapy modality treatment, including procedures meant to relax the pelvic floor tissues, which turned out to be effective in excessive tension of levator ani. The authors at the same time report that a physical therapy modality treatment, including ultrasound therapy and short-wave diathermy, has minimal effects [13]. It is possible that because of the association of physiotherapeutic treatment with only physical therapy modality procedures, other procedures of physiotherapy and manual therapy available for the discussed problem are omitted. Manual techniques meant for coccygodynia are often performed per rectum. Maigne [24] states after Sugar that the first mentions of manual therapy techniques performed per rectum were described in 1634 by Ambroise Pare. In literature, there can be found a few manual therapy methods performed per rectum for people with coccygeal pain. Thiele describes [4] a levator ani muscle massage done vertically to its fibers and a stretching method of that muscle. He also mentions a coccygeus and piriformis muscles massage [24 after Thiele]. Maigne R. suggests a mobilization of the coccyx to its extension together with levator ani muscle stretching [24 after Maigne R.]. On the other hand, Mennell was doing a mobilization of the coccyx in the sacrococcygeal joint [4,24 after Mennell], by gripping the coccyx from the ventral and dorsal sides and performing flexion, extension and rotation via per rectum. Rakowski [5] describes mobilizations for coccygeal pain, which he performs in the direction of pain – usually in the direction to extension. The most preferable are mobilizations performed in accordance with a principle of pain disappearance – the mobilization is held until the pain starts to subside and then it is deepened to the next pain threshold, which

is accepted by the patient. The next type of techniques performed in manual therapy for coccygeal pain are pressure mobilizations of hypersensitive trigger points [5]. After finding a trigger point or a maximum pain point, you should stop the finger and wait until hypersensitivity lessens, then you can move the finger in the search of other hypersensitive points. These mobilizations can be performed for all structures available via per rectum, described above during the diagnosis of the problem.

Maigne [24] in studies conducted with co-workers assessed the effectiveness of per rectum therapy in 102 patients suffering from coccygodynia. The treatment lasted 10 days and contained 3 five-minute-long procedures. If the coccyx was immobile or in a flexed position, such techniques were used as: levator ani muscle stretching and coccyx extension mobilization. However, if the coccyx was in an extended position, then only a delicate stretching of the levator ani was applied. The control group was subjected to 3 medical procedures with the use of magnetic field in minimal dosages (placebo effect). After a month and after 6 months since the end of treatment, the group who underwent mobilizations per rectum had better results than the control group. After the analysis of data, it turned out that patients who underwent manual therapy shortly after the occurrence of symptoms have a chance for good treatment results. The studies showed that 30.8% of people with a stable coccyx have a chance for good results after per rectum procedures, contrary to the control group (13.6%). On the other hand, patients with an unstable coccyx did not react to the manual therapy treatment better than the control group. But those who had showed improvement after the manual therapy, in dynamic X-ray tests displayed improvement in the form of a bit bigger extension of the coccyx. The authors in a summary of their studies claim that in the comparison of the two above therapies, the therapy via per rectum was more effective. Those studies also showed that people who had a coccyx related injury react well to manual treatment [24].

Maigne et al. in other studies [22] compared three methods for treating coccygodynia. They divided the patients into 3 groups. One of the groups received treatment in the form of levator ani and coccygeus massage via the technique described by Thiele. In the second group, a sacrococcygeal joint mobilization was applied, according to Mennell's method. The third group underwent a levator ani muscle stretching by Maigne. All methods were performed per rectum. The results were satisfactory for 25.7% of subjects after 6 months, and for 24.3% of subjects after two years. The results varied based on the cause of coccygodynia. The patients with an immobile coccyx had the least improvement. People with a standard mobility of the coccyx in the imaging tests were the subjects who had the best results. Levator ani and coccygeus massage, as well as stretching were more effective than mobilizations of the coccyx, which were working only in the group with a standard mobility of the coccyx [22].

Authors who studied the problem believe that a specific type of therapy should be applied in different types of coccygodynia [13,24]. Maigne says that manual therapy should be helpful for people who do not react to injections in the sacrococcygeal joint. The treatment of coccygodynia should be also extended to parts of the musculoskeletal system which are related to the problem. Rakowski [5] tells about a functional thoracolumbar passage (Th8-L2), and the studies of other authors shows that in particular cases, when the basic treatment failed, a stimulation at the L2 level [13] brought

good results. Bradley cites Lora and Long's studies, where patients felt a pain radiating to the coccyx during L3/L4, L4/L5 and L5/S1 stimulation [28].

To create an algorithm for treating coccygodynia, all possible symptom formation and preservation mechanisms described above should be considered. Depending on the pathogenesis, a

suitable therapeutic method should be applied, which requires a close cooperation of the doctor, a physiotherapist and a patient, as well as their full commitment in the complex treatment process. Manual treatment of coccygodynia requires further observations and studies: treatment which include techniques both direct – local, as well as indirect via non-local tissues of the musculoskeletal system.

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