Coccygectomy: indications, follow-up and results

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COCCYGECTOMY: INDICATIONS, FOLLOW-UP AND RESULTS

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INTRODUCTION

With a coccygectomy, the key to success is selecting the right indication.

INDICATIONS

Faced with a case of coccydynia, surgeons should ask themselves certain questions before considering coccygeal ablation:

- Does the pain definitely originate from the coccyx?
- Is the pain incapacitating?
- Have all the medical options been exhausted?
- Will coccygeal ablation be successful?

The presence of a static or dynamic morphological anomaly of the coccyx is a definite argument in favour of a local origin for the pain; the same goes for pain of a mechanical nature.

Serious disruption to the activities of daily living or to the patient's working life is required for a surgical solution to be sought.

Full and properly managed medical treatment is essential before any surgical undertaking. In fact, a positive response to injections, even a short one, is a positive sign. Conversely, the continual and total failure of all medical treatment makes the surgical option very questionable. Furthermore, patients' behaviour during the period of medical treatment makes it easier to understand their symptoms and expectations.

In addressing these important issues, I have always benefitted from initial processing by Dr Maigne, who has treated and selected patients with care before presenting them to me. Previous medical triage is essential and a discussion of coccyx surgery should not be contemplated without it. The indication for a coccygectomy should be established via a multidisciplinary approach.

In my experience, patients eligible for surgery demonstrated either:

- instability: posterior dislocation is the most common form of instability; anterior dislocation and hypermobility are less common
- a spicule: recent weight loss can readily trigger the pain
- much more rarely, dysplasia.

Once an operation is contemplated, preoperative explanations are long and detailed, as little is known about coccyx surgery and there are still quite a few misconceptions about the outcome of coccygectomy among attending physicians, as well as on the internet.

It is surprising to note that, after 25 years of the operation being performed and with more than 500 people undergoing surgery, no one has demonstrated the slightest anxiety about the proximity of the rectal wall and the risk of damaging it. Rather, people worry about:

- the possibility of paraplegia or paralysis
- the possibility of pelvic organ descent
- sterility.
- the risk of infection
- the long recovery period
- the risk of failure.

As far as infections are concerned, I explain to them how, in my work, I have minimised the risks:(1)

- preoperative precautions: washing the day before the operation and shower on the morning of surgery
- perioperative precautions: disinfection of the skin, antibiotic prophylaxis, biological adhesive for the wound, a dressing to isolate the scar from the anal margin
- postoperative precautions: antibiotic prophylactic perfusion for 48h, strict rest for 14 days.

As for the recovery period, I advise people that they will need to take 3 months off work, and that the time taken for the pain to disappear in a seated position varies greatly from person to person but is in the range of 3 to 12 months.

After reassuring patients who will undergo the operation that such complications cannot possibly arise, I warn them about three very real problems:

FOLLOW-UP

Patients are encouraged to come back to see me if scar formation seems odd in any way; those who live a distance away can send a photo of the scar if they are worried. They can contact my secretary if they need to take more time off work.

For the baseline assessment, the patients were given a 10-point questionnaire scoring the presence of pain during activities of daily living or at work, the timing of the onset of pain, and pain intensity using a visual analogue scale (VAS). Score 0 indicated no pain and 10 indicated permanent disabling pain.

RESULTS

Complete failures are rare and are associated with particular situations in which a poor outcome may be foreseen:

- accident at work involving litigation
- depression
- diffuse pain
- disability
- lack of response to injections.

In total, in relation to cases of instability and spicules, I have systematically noted that:

- 50% of patients are cured around the third month
- 20% around the sixth month, and
- 20% around 1 year.

After 1 year, 10% still experience discomfort, to a greater or lesser degree, in a seated position.

Finally, in two exceptional cases, the abnormal appearance of the segment of the coccyx led to a biopsy, which revealed a chordoma. In one case, this did not involve the soft tissue and over the course of 3 years did not recur on MRIs performed every 6 months. The other required reoperation and radiotherapy but did not recur over the course of 18 months.

In our experience the results for instability, as published in 2004 for 61 cases, were excellent or good in 87% of cases and unsatisfactory in 13%. (2)

For coccygeal spicule the study published in 2015 relating to 33 cases showed a 79% satisfactory outcome and 21% unsatisfactory outcome. When asked 'Would you have the surgery again?', only one patient answered in the negative.(3)

Our experience confirms the results of a meta-analysis published in 2010 by EJ Karadimas et al.(4) that looked at 24 papers. This systematic analysis revealed that 504 of 596 patients treated with coccygectomy had an excellent or good outcome (84.6%), 46 patients a fair outcome (7.7%) and 46 a poor outcome (7.7%).

Therefore, it is reasonable to expect that, after proper selection of patients, the chances of a satisfactory outcome are about 80%. Though the surgical procedure is simple, management of the postoperative period is tricky since, for almost half of patients, the pain will take 6 months or more to fade.

However, I believe that the conclusion of CC Wray in his paper of 1991 is still sound and mirrors my own experience: "A striking feature in this study was the patients' gratitude that their condition was taken seriously and treated sympathetically. Many had tolerated pain for a long time and felt that their symptoms had previously been belittled."

In conclusion, my overall impression is that coccygectomy is a useful operation.

Letter of thanks

December 2014

Dear Professor Doursounian,

I write you, as well as Doctor Maigne, to sincerely thank you for the new opportunity to live that you gave me. With your close reading of my scans, your professional view and experience and your excellent medical treatment you turn my hopeless case into a treatable and recoverable one.

I remember when Dr. Maigne told me about a spicule and I started crying. It was not a sadness cry but light-heartedness: it was actually something wrong, so the phantasmagoric pain turned into something solid to fight against. I will never be able to explain what it meant to me at this point, when I was starting to believe the doctors that said it was nothing to be done.

After that, you continued leading my way. Your human attention, even when I wrote you from [illegible], gave me no second thoughts about going to Paris to have a coccygectomy with you. After the surgery (that left no scar at all!) and the hospital stay, your follow up was meticulous and caring, with your visits into our apartment itself and your wise advices about going step by step on the recovery.

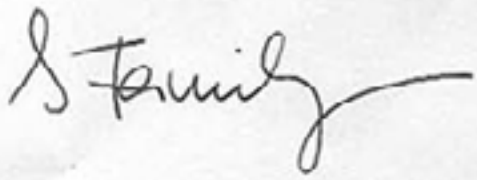
The fact is that everything you predict it possibly would happen, it really came true. After hard first months, I started feeling a change on my pain levels from the third one, speeding the recovery progress from the fifth month after the surgery until now. It allowed me to restart not only my university classes but my whole life again, living without the constant and exhausting pain on my lower back, starting to enjoy a meal or a silly movie on the TV over again.

With this little gift my family and I want to thank you for everything you have done, hoping that this [illegible] treat give you a part of the joy that your French treatment have given us.

We wish you a Merry Christmas that, in our case, you made possible.

With very best regards,

[illegible] and Family.



BIBLIOGRAPHY

1 - Prevention of post-coccygectomy infection in a series of 136 coccygectomies. Doursounian L, Maigne JY, Cherrier B, Pacanowski J. Int Orthop. 2011 Jun;35(6):877-81. doi: 10.1007/s00264-010-1058-9.

2 - Coccygectomy for instability of the coccyx. Doursounian L, Maigne JY, Faure F, Chatellier G. Int Orthop. 2004 Jun;28(3):176-9

3 - Coccygectomy for coccygeal spicule: a study of 33 cases. Doursounian L, Maigne JY, Jacquot F. Eur Spine J. 2015 May;24(5):1102-8. doi: 10.1007/s00586-014-3753-5

4 - Surgical treatment of coccygodynia: an analytic review of the literature. Karadimas EJ, Trypsiannis G, Giannoudis PV. Eur Spine J. 2011 May;20(5):698-705. doi: 10.1007/s00586-010-1617-1

5 - Coccydynia. Aetiology and treatment. Wray CC, Easom S, Hoskinson J. J Bone Joint Surg Br. 1991; 73:335-8.