



Sciatic neuritis due to fibrovascular bands and myxoid neurofibroma. Arthroscopic decompression and excision

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Sciatic neuritis due to fibrovascular bands and myxoid neurofibroma. Arthroscopic decompression and excision

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Abstract

A 34-year-old lady was referred to our clinic due to a chronic hip and leg pain that did not improve with rehabilitation and after three corticosteroid injections. The MRI showed sciatic neuritis and sciatic entrapment due to type 3 fibrovascular bands. Arthroscopic surgery was indicated to release the nerve entrapment. A small part of piriformis was also released. During surgery, a myxoid neurofibroma 1cm long was found at one of sciatic branches, and was excised and sent to pathology. 6 months after surgery patient was pain free and she was able to do a normal life, including minor sports like walking fast and mountain hiking.

Sciatic nerve entrapment is a relatively new pathology. In the last years, new MRI protocols and technology have given us the opportunity to diagnose small areas of inflammation and nerve entrapments. Also, new arthroscopic instruments and devices let us release these entrapments during endoscopic procedures with very few complications and risks.

We are showing a case of sciatic nerve entrapment and neuritis due to fibrovascular bands and a myxoid neurofibroma. Six months after endoscopic release and excision, patient was pain free and totally recovered.

Introduction

The concept of fibrous bands playing a role in causing symptoms related to sciatic nerve mobility and entrapment represents a challenge for orthopaedic surgeons and arthroscopists. Nowadays, only a few medical centers have a team capable of diagnosing and treating this unfrequent clinical entity and everyday new data is available regarding the best indications for surgery and when, how and what exactly we have to treat around the nerve.

We report the case of a patient affected by chronic subgluteal space syndrome, secondary to two concomitant etiologies: sciatic nerve entrapment due to hypertrophic piriformis muscle, and mainly a

neurovascular conflict sustained by the close contact between a redundant trunk of the inferior gluteal artery and the sciatic nerve.

Case Report

A 34-year-old woman was seen for excruciating pain in the left buttock radiating to the posterior thigh and knee. No specific history related to any sports or heavy work. She did not work seated but walking small distances in a grocery. Her body mass index was 22. She had been treating her pain in another hospital with no relief, using antiinflammatory drugs, rehabilitation and corticosteroid injections. Ultrasound only showed some sciatic neuritis and inflammation around the piriformis muscle.

The first step was to order an MRI, that showed sciatic neuritis and type 3 fibrovascular bands around the nerve, mainly coming from the inferior gluteal artery. We recommended the patient to undergo arthroscopic surgery to excise a small amount of piriformis muscle and to excise the fibrovascular bands, giving the nerve movility and decreasing the inflammatory entrapment causing neuritis and neuralgia.

The surgery was done with the conventional technique, excising all the fibrovascular bands around the nerve, the bursitis and scar tissue around it, and testing the movility and entrapment around the piriformis, where some dissection was made to free the nerve. During the procedure, a 1-2cm long cyst-like formation was found adjacent to one of the main nerve branches, and was also excised and sent to pathology examination. The procedure took 4 hours and was made with no traction, with general anesthesia and spinal anesthesia. We used epinefrine in saline solutions and 60-100mg Hg pressure pump. Hemostasia and coagulation with electrocautery were essential during the work around the nerve.

The day after surgery, the patient started walking with crutches, taking celebrex 200mg once a day and ice 4 times a day. Also, in the 4th day postop she started to swim. The sutures were removed at 20 days and crutches too.

Since the first day after surgery, the patient was able

to climb the stairs to her fifth-floor apartment with little pain at the beginning and no pain after the second visit on the 20th day.

The WOMAC score improved from 36,7 points preop to 89,8 points at 6 months postop. The patient started working at 4th month postop but continued going to physical therapy daily 2 months more.

Discussion

Sciatic entrapment due to fibrovascular bands is a rare condition that may eventually require decompression through the release and excision of the bands. Although open techniques have shown satisfactory results with a low incidence of complications, the arthroscopic decompression is a predictable treatment that allows to diagnose any other pathologies and permits to free the nerve with low risks and complications. Like any other arthroscopic technique, the incidence of adverse events is lower than the open method. The only problem of the arthroscopic release is that it requires a long learning curve based in other endoscopic surgeries and also peritrochanteric surgeries, and the surgeon must be aware of the diversity of the sciatic anatomy and the peritrochanteric and subgluteal anatomy. We presented this case as an example of good result of arthroscopic sciatic nerve release and also an example of how arthroscopic evaluation of the subgluteal space can sometimes find pathology that MRI is not showing because of its size or because of the lack of a dynamic diagnostic test at this machine.

References

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Illustrations

Illustration 1

Peritrochanteric Bursitis. At first view, the sciatic nerve appears at its distal part surrounded by inflamed bursa and signs of previous corticosteroid injections

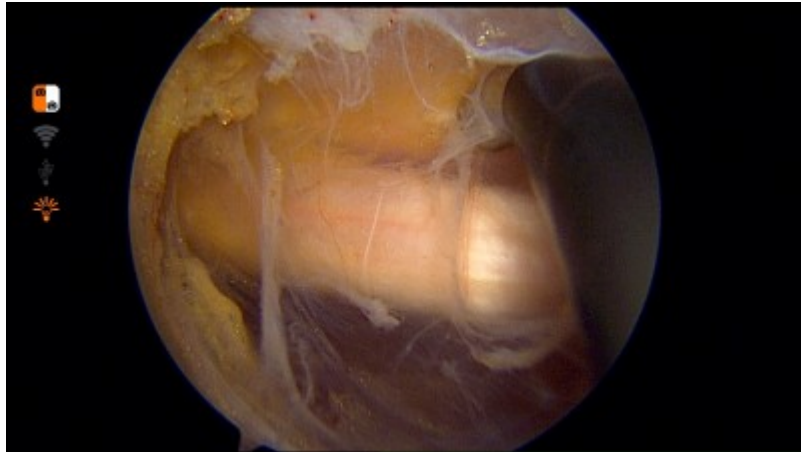


Illustration 2

Cleaning fibrosis and scar tissue around the nerve and its roots. Thick fibrovascular bands can be seen.

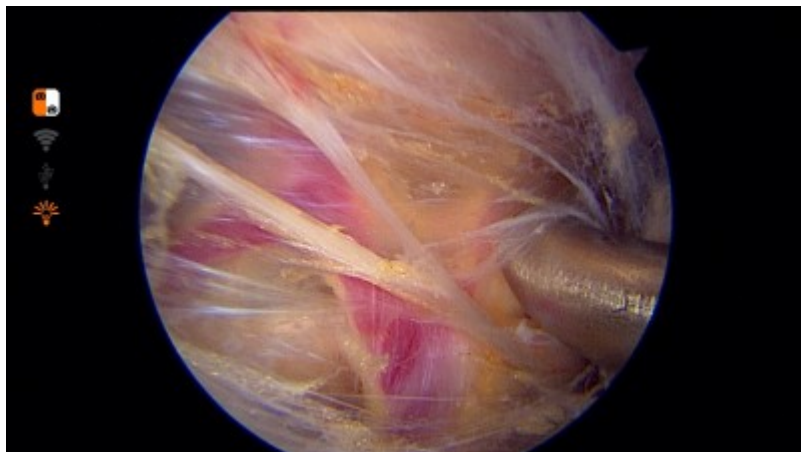


Illustration 3

Cleaning fibrosis and scar tissue around the nerve and its roots. Thick fibrovascular bands can be seen.

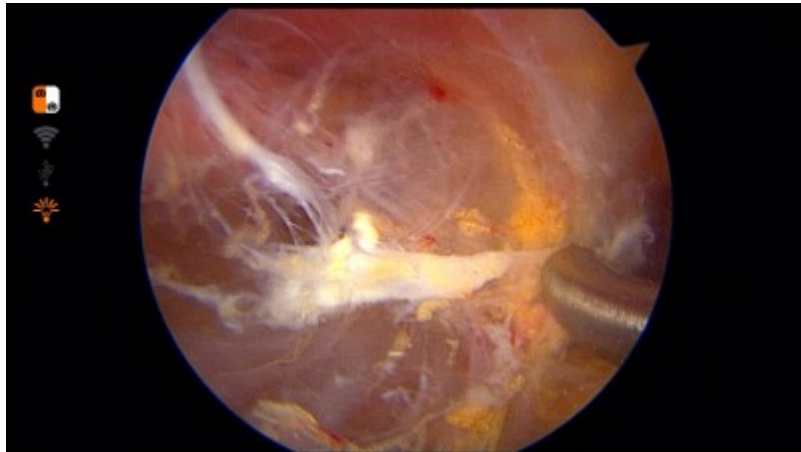


Illustration 4

Scar tissue as result of injections



Illustration 5

Scar tissue, fibrovascular bands and myxoid neurofibroma around sciatic nerve

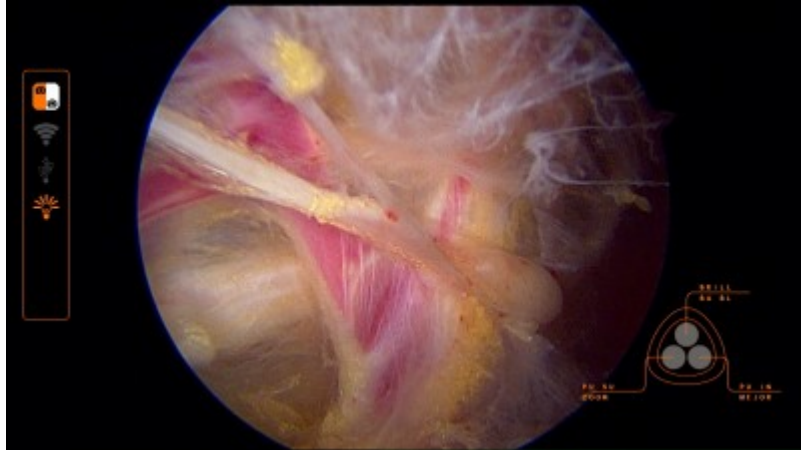


Illustration 6

Myxoid neurofibroma extirpation

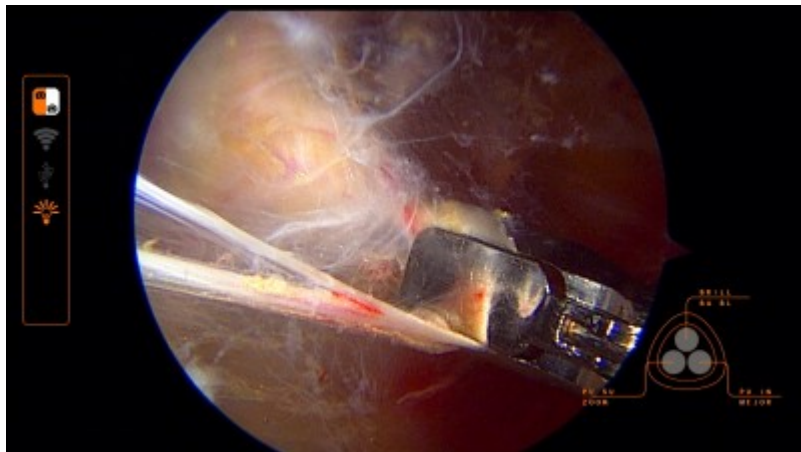


Illustration 7

Sciatic nerve cleaning



Illustration 8

Freed Sciatic nerve

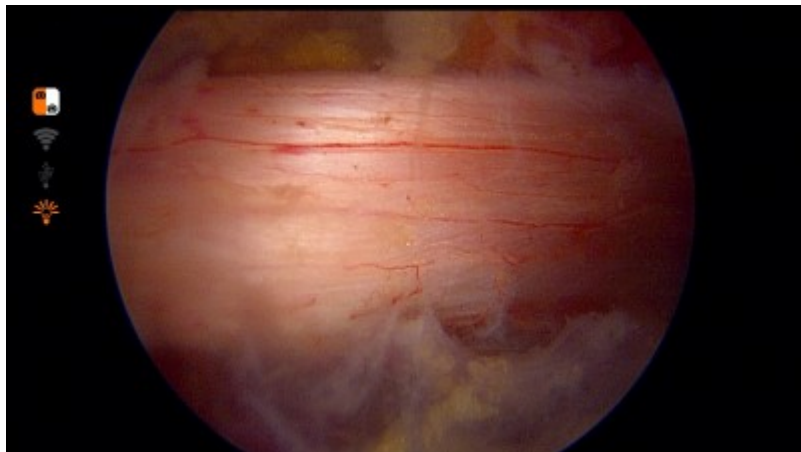


Illustration 9

Freed Sciatic Nerve

