The difficult topic of pudendal neuralgia

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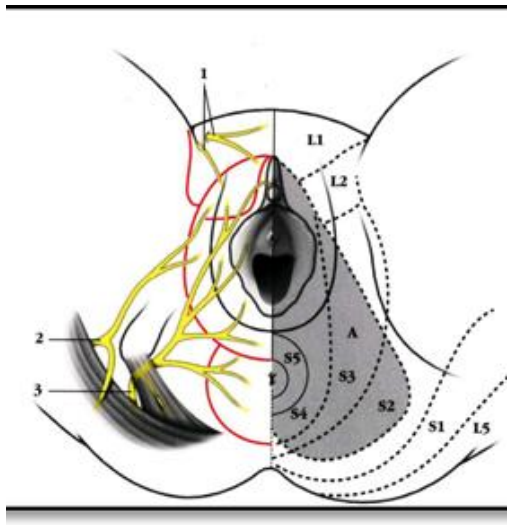
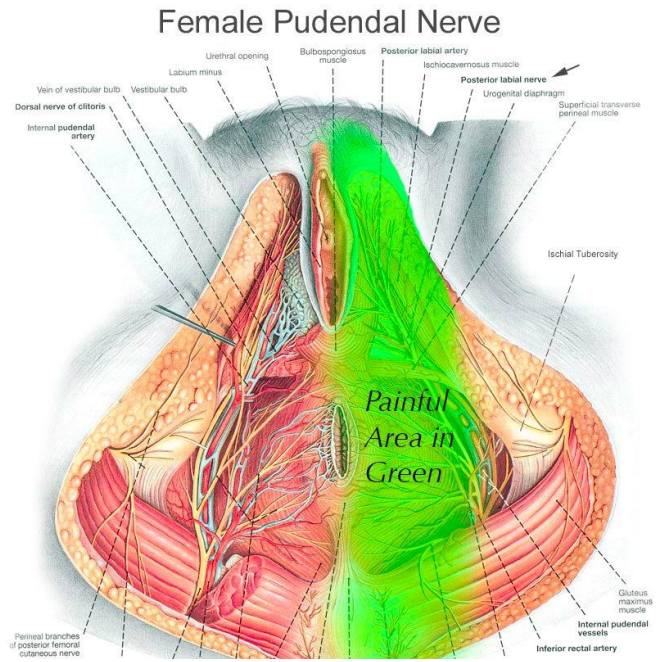
PN/CN entrapment → Chronic perineal pain syndrome



Male perineal muscles: inferior view

→ Chronic PELVI-PERINEAL syndrome: urinary, defecatory, sexual problems



Diagnosis

Nantes criteria:

- Pain in the area of the nerve
- Pain is predominantly experienced while sitting
- The pain does not wake the patient at night
- Pain with no objective sensory impairment
- Pain relieved by diagnostic pudendal/cluneal nerve block

Labat JJ, Riant T, Robert R, Amarenco G, Lefaucheur JP, Rigaud J. Diagnostic criteria for pudendal neuralgia by pudendal nerve entrapment (Nantes criteria). Neurourol Urodyn 2008; 27: 306-10.

Do not forget!!

PPSQ

(Pelvic Pain Sensitization Questionnaire)

This pelvic pain sensitization questionnaire is diagnostic guide. It is applicable for patients with pelvic-perineal pain lasting for more than 3 months, whose symptoms appear disproportionate to lesional items recognized by clinical and laboratory findings (including usual infectious report, imaging and endoscopy).

	Lower urinary tract	Lower digestive tract	Genito-sexual tract	Mucocutaneous areas	Muscular system	score
Lower pain perception thresholds	❑ Pain influenced by bladder filling and / or urination	❑ Pain influenced by the distension and / or rectal emptying (materials, gas)	❑ Pain during sexual activity	❑ Perineal and/or vulvar pain in response to normally non-painfull pressure (allodynia) (e.g. pain preventing Tampons used during menstruations, or discomfort with tight clothing)	❑ Pelvic trigger points (e.g., localized to piriformis, internal obturator and/or levator ani musculature)	/5
Temporal distribution	❑ Pain after urination	❑ Pain after defecation	❑ Pain after sexual activity			/3
Symptoms variability	❑ Variability in pain intensity (evolving with high and low) and / or variability in painful topography					/1
Associated syndromes	❑ Migraine or tension headaches and/or fibromyalgia and/or chronic fatigue syndrome and/or post-traumatic stress disorder and/or restless leg syndrome and/or temporo-mandibular joint disorder and/or multiple chemical sensitivities					/1
					Total Pelvic Pain Sensitization Score	**/10**

Pain sensitization involves several pathophysiological mechanisms: lower nociceptive perception thresholds, spatial and temporal expansion of pain distribution. The spatial distribution is not quantified in an individualized way because it is assessed indirectly by the increasing involvement of different body functions.

This questionnaire does not assess pain intensity or the psycho-social impact of pain"

Treatment

Multidisciplinary approach

Avoidance of painful stimuli

Physiotherapy

Psychotherapy

Pharmacological treatment is led by tricyclic antidepressants and anticonvulsants

Pulsed Radiofrequency

Neuromodulation: sacral or pudendal

Surgery

Surgical treatment

Surgery

- Recommended after failure of other treatments
- Different surgical procedures
  - Laparoscopic
  - Perineal
  - Transgluteal open: GOLDEN STANDARD : RCT

Eur J Pain 2022 Jan;26(1):7-17.

Recommendations on the management of pudendal nerve entrapment syndrome: A formalised expert consensus

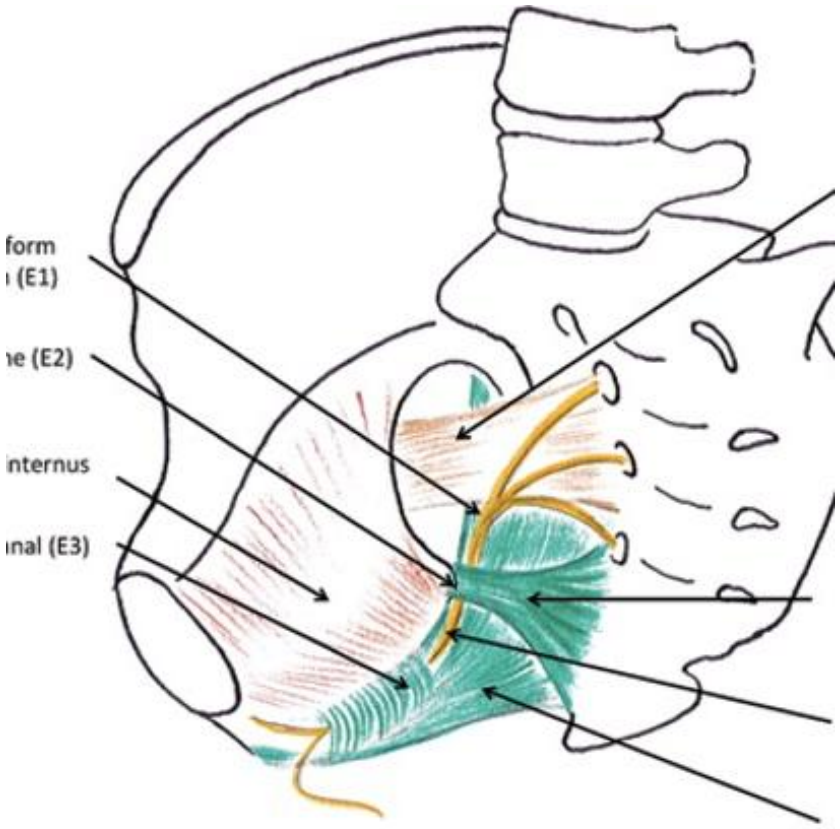
→Surgery effective in ***60-80 % of cases***

→Inclusion criteria

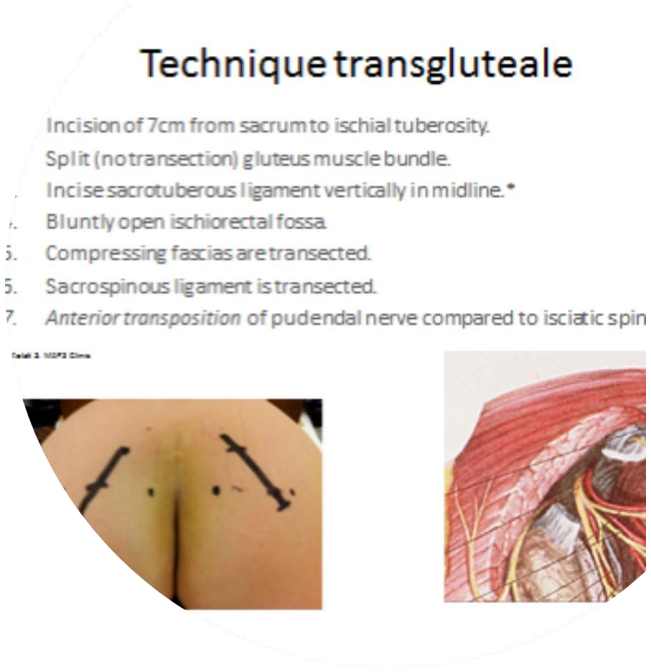
All the known treatments options leave room for improvement:
PhD on "Surgical innovations in the treatment of pudendal and cluneal nerve entrapment syndrome"

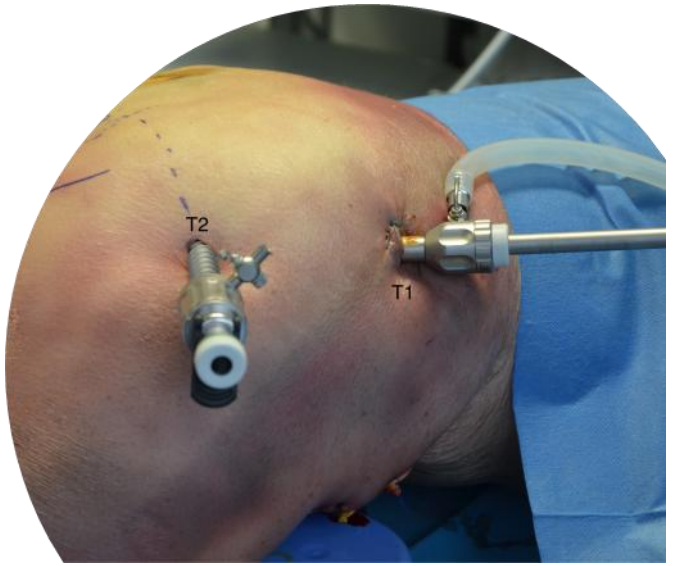
- Develop and test a minimally invasive procedure for pudendal and/or cluneal nerve release in case of entrapment

- Combine nerve release with pudendal neuromodulation in order to improve outcomes



Brugmann: ENTRAMI



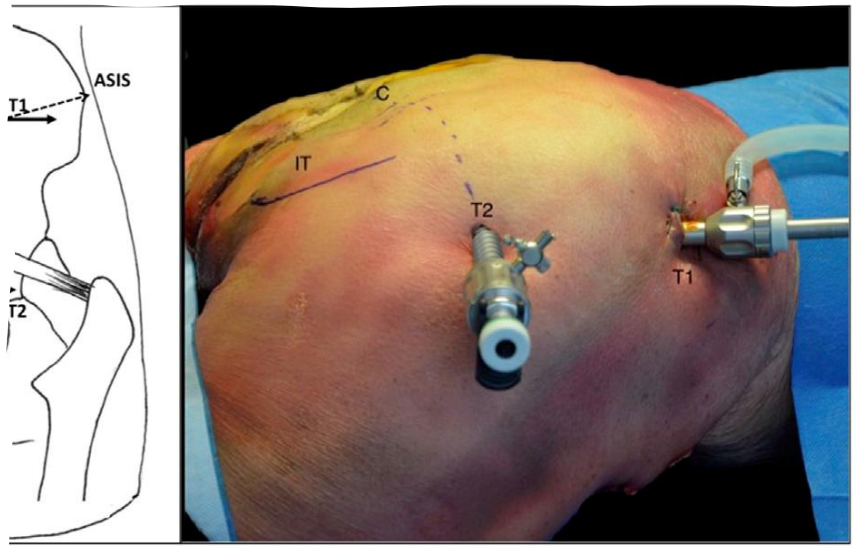


A new endoscopic minimal invasive approach for pudendal nerve and inferior cluneal nerve neurolysis: An anatomical study

Ploteau S, Robert R, Bruyninx L, Rigaud J, Jottard K.
Neurourol Urodyn. 2018 Mar;37(3):971-977

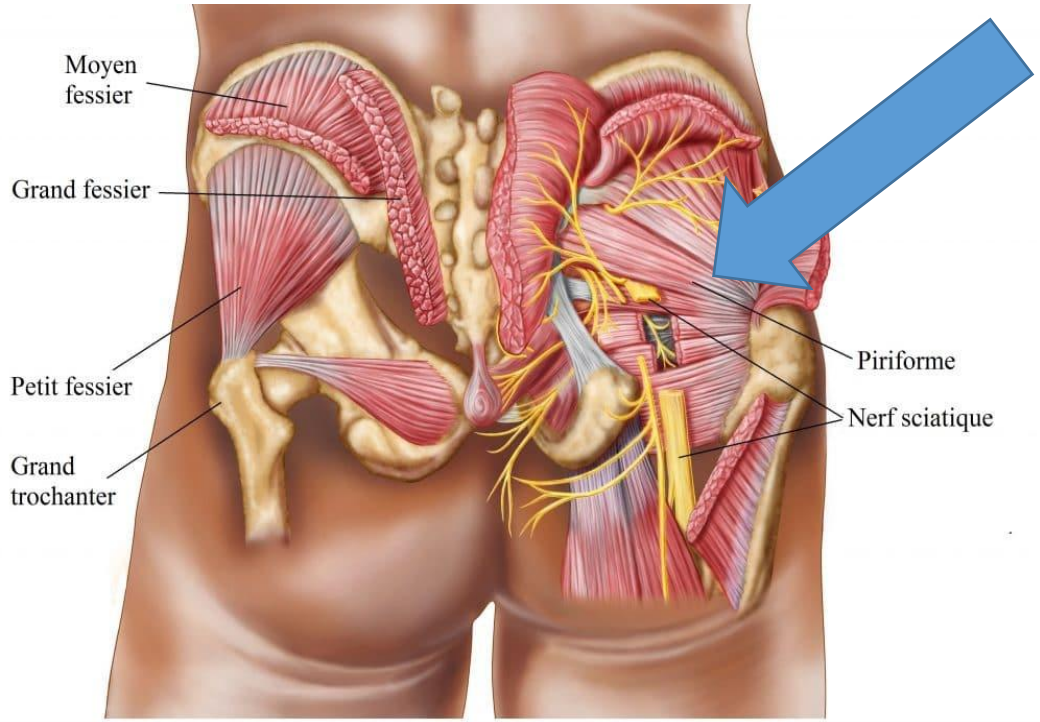
Ten transgluteal approaches were performed on five cadavers

1. Identification of the landmarks and positioning of the trocar for optical system
2. Pneumodissection



A new endoscopic minimal invasive approach for pudendal nerve and inferior cluneal nerve liberation: An anatomical study.
Stéphane Ploteau MD, PhD1 | Roger Robert MD2 | Luc Bruyninx MD3 | Jérome Rigaud MD, PhD4 | Katleen Jottard MD3
Neurourol Urodyn. 2018 Mar;37(3):971-977. doi: 10.1002/nau.23435.

2. Identification of the sciatic nerve and the posterior femoral cutaneous nerve



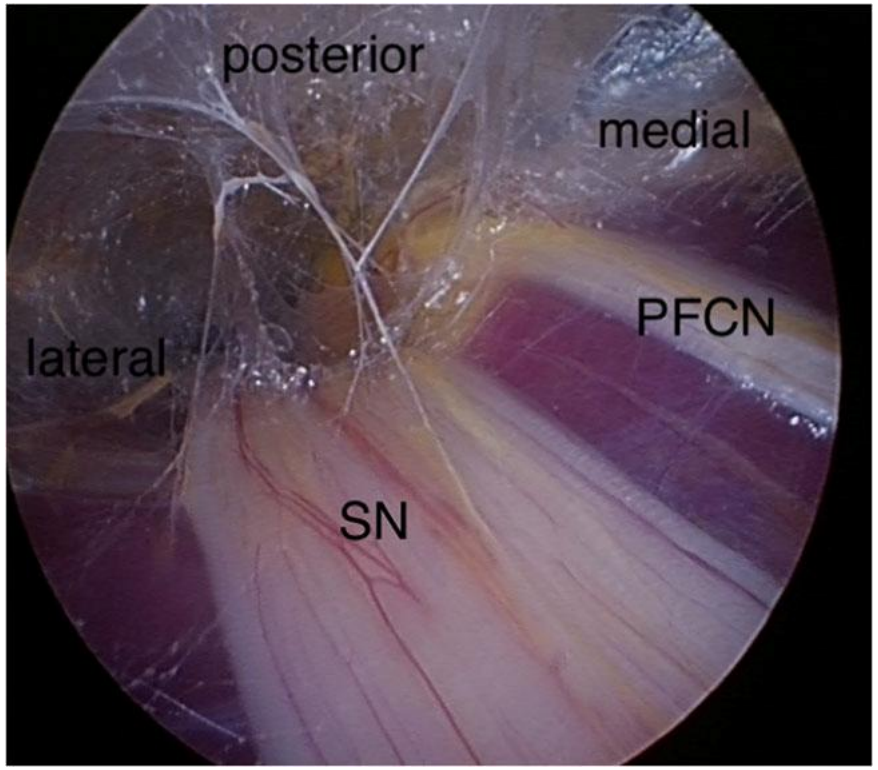
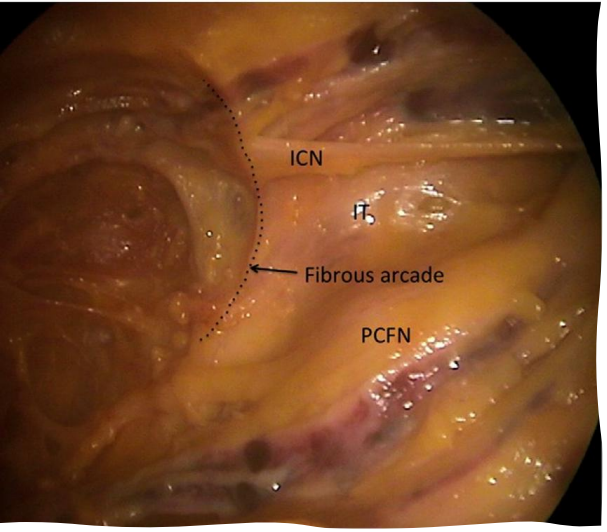
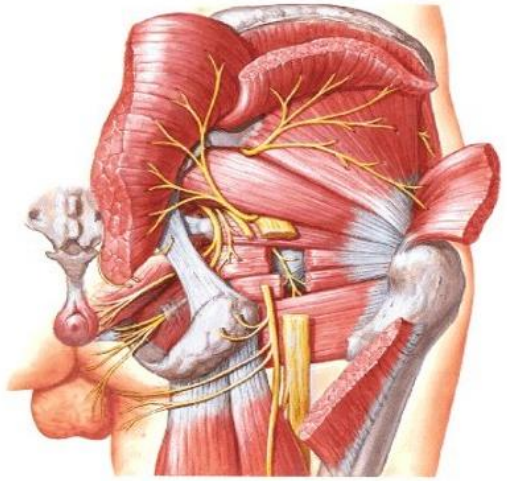
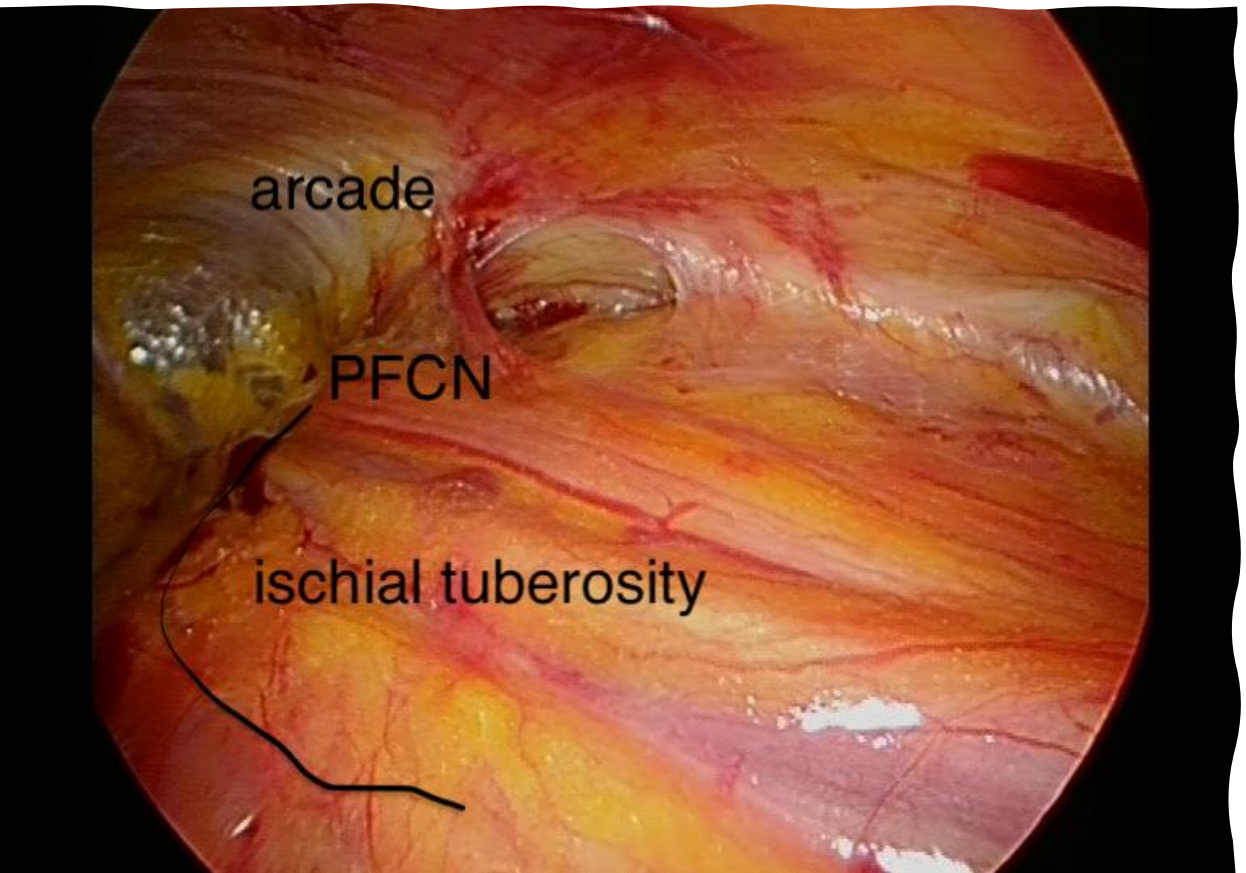


Fig. 2 Identification of the sciatic nerve; patient in ventral decubitus; right side; SN, sciatic nerve; PFCN, posterior femoral cutaneous nerve



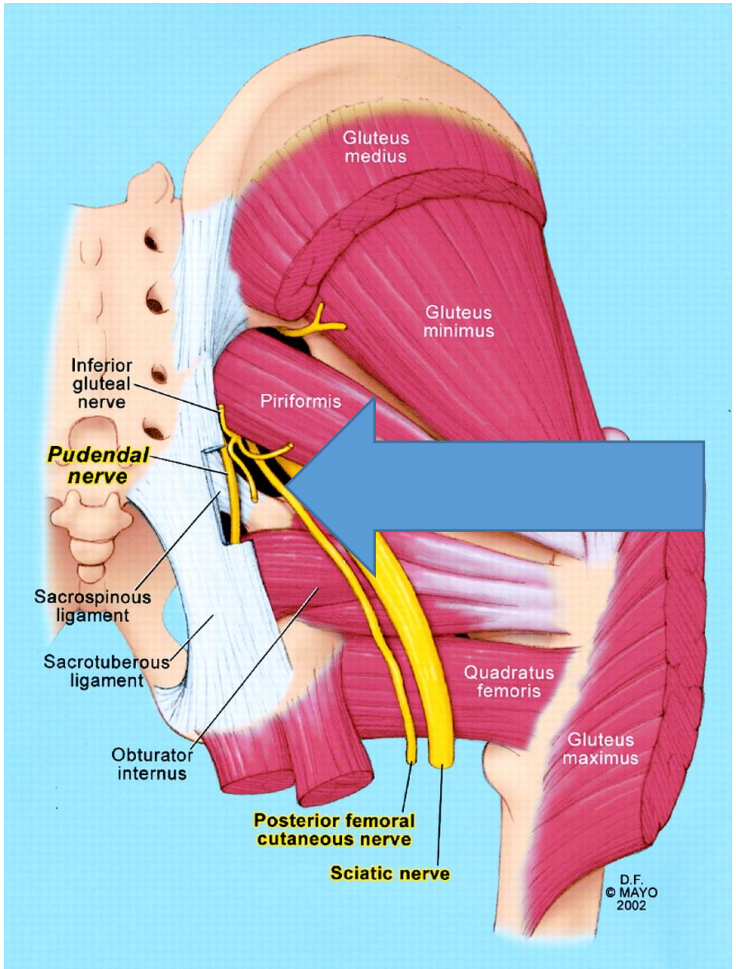


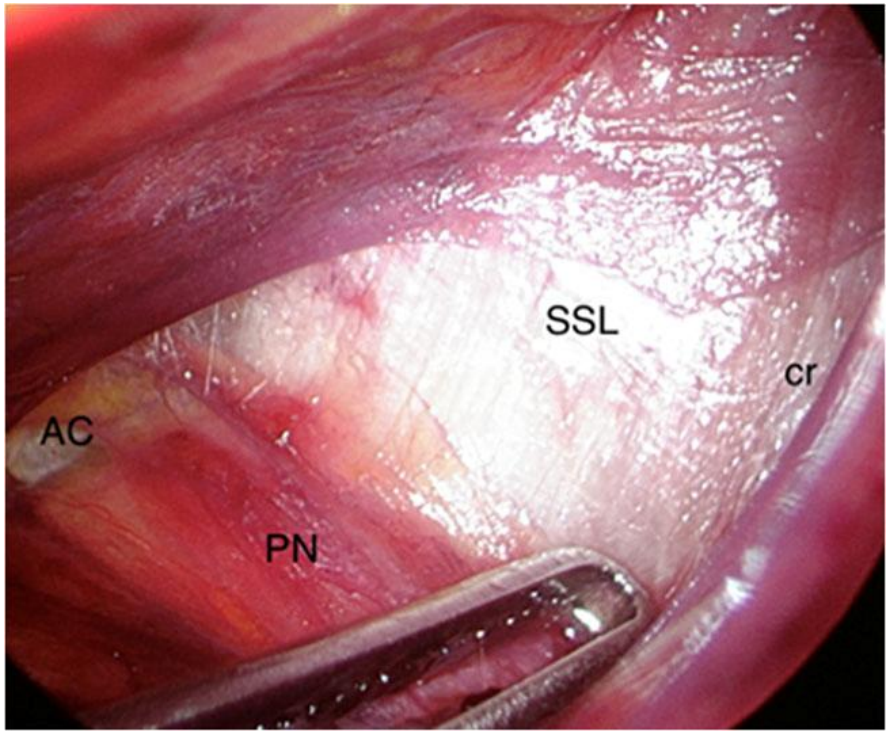


3. Identification of entrapment sites and liberation PFCN and inferior cluneal branches

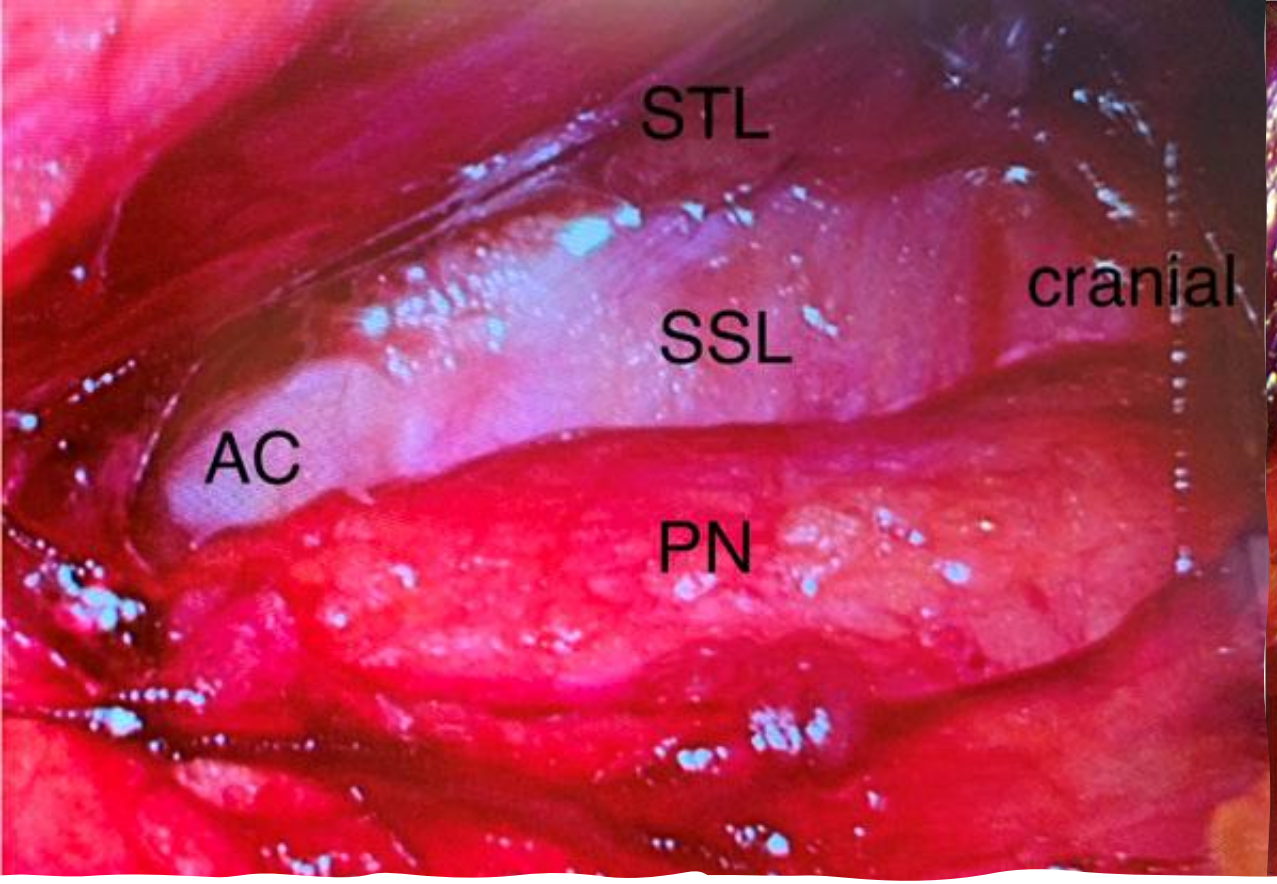
- Lef side. (IT), ischiatic tuberosity; (CPFN), cutaneous posterior femoral nerve. Fibrous arcade which cluneal nerve entrapment (dashed line)

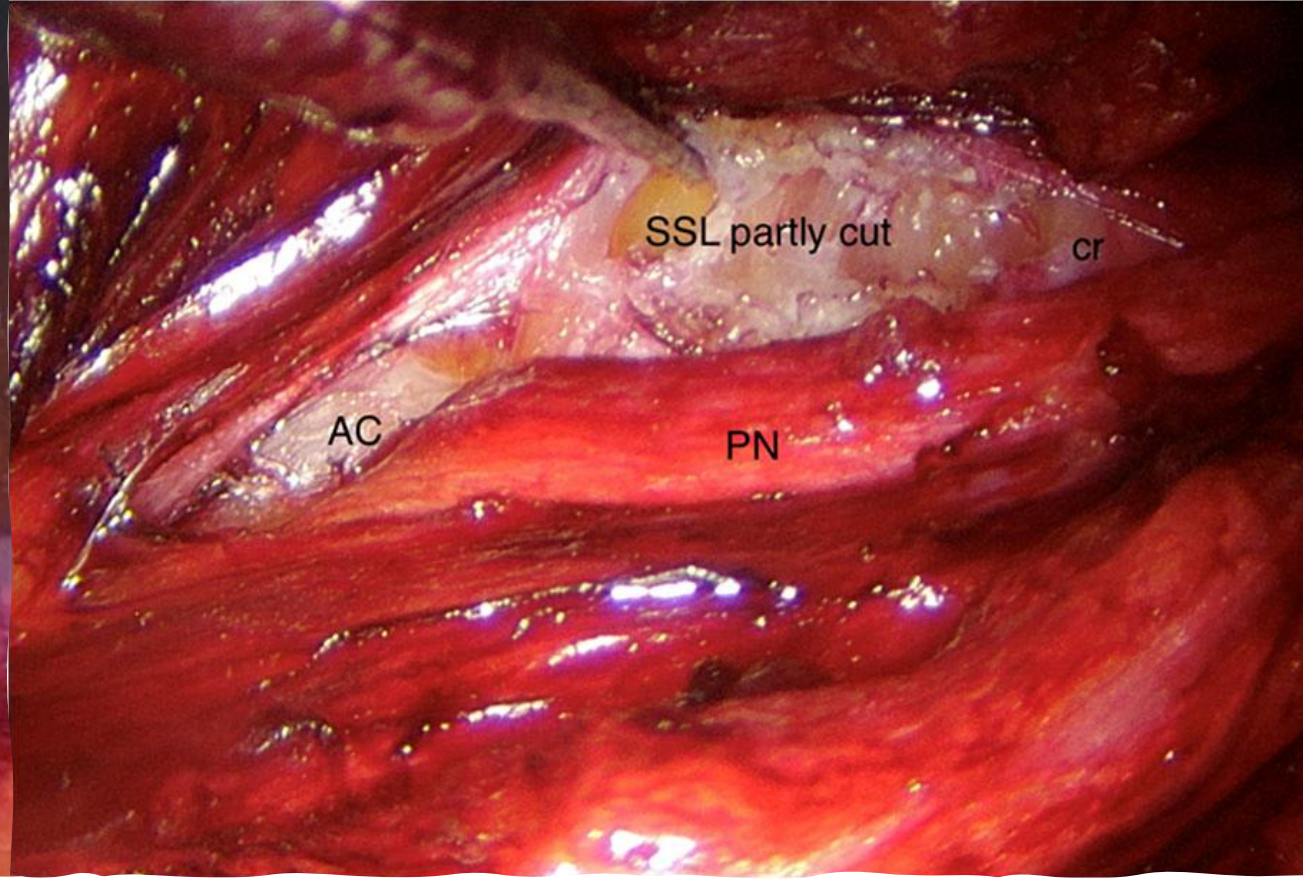
4. Identification of the sacrotuberous, sacrospinous ligament and the pudendal nerve from the infrapiriformis channel up to Alcock's canal





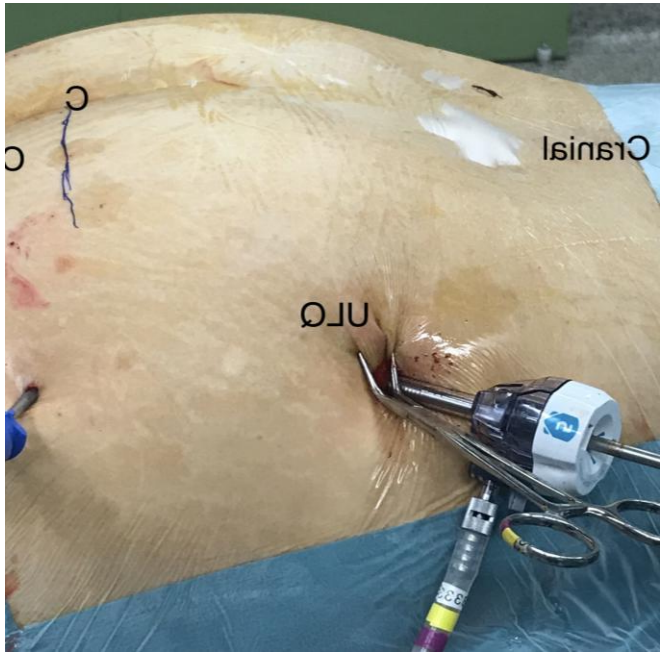
Patient in ventral decubitus; right side; cr, cranial; PN, pudendal nerve; AC, Alcock's canal; SSP, sacrospinous ligament; STL, sacrotuberous ligament

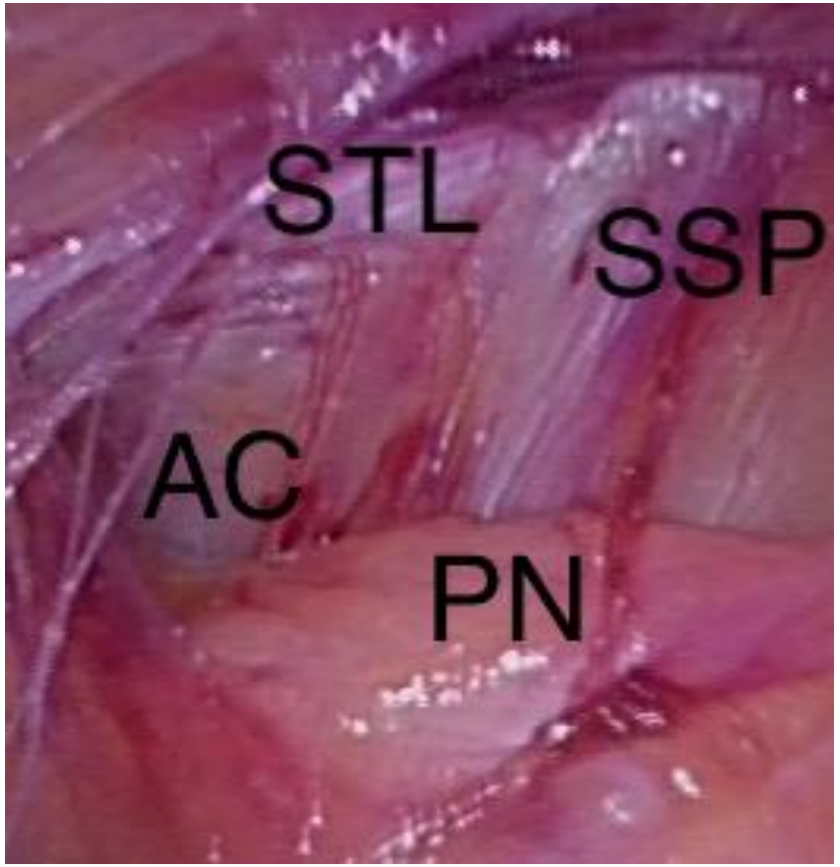




5. Liberation and transposition pudendal nerve

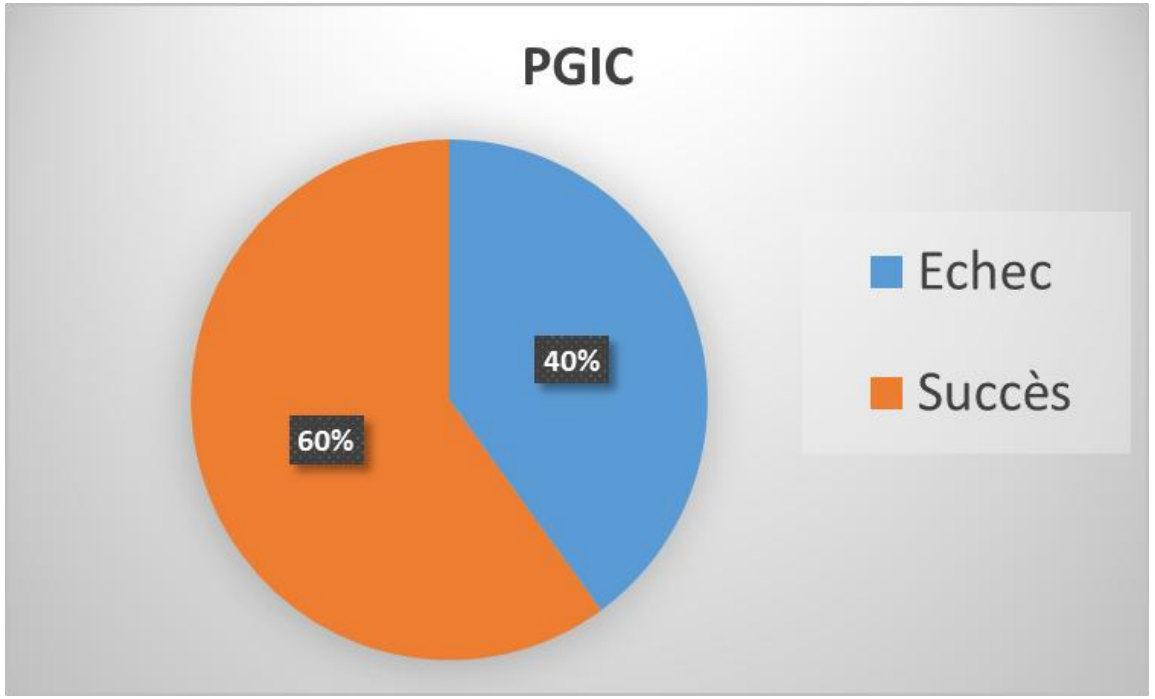
ENTRAMI technique: clinical practice





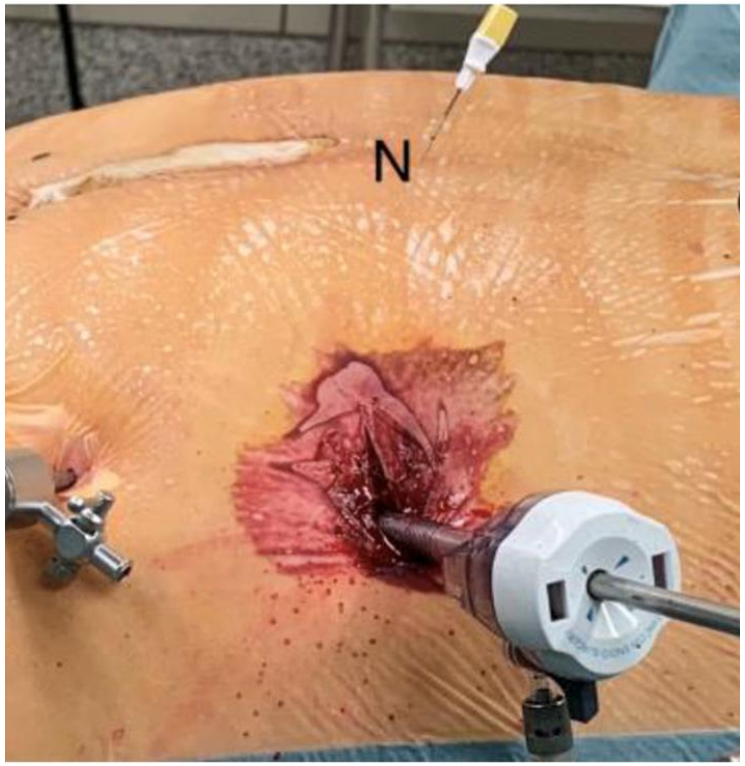
100 patients follow up 6 months – 7 years

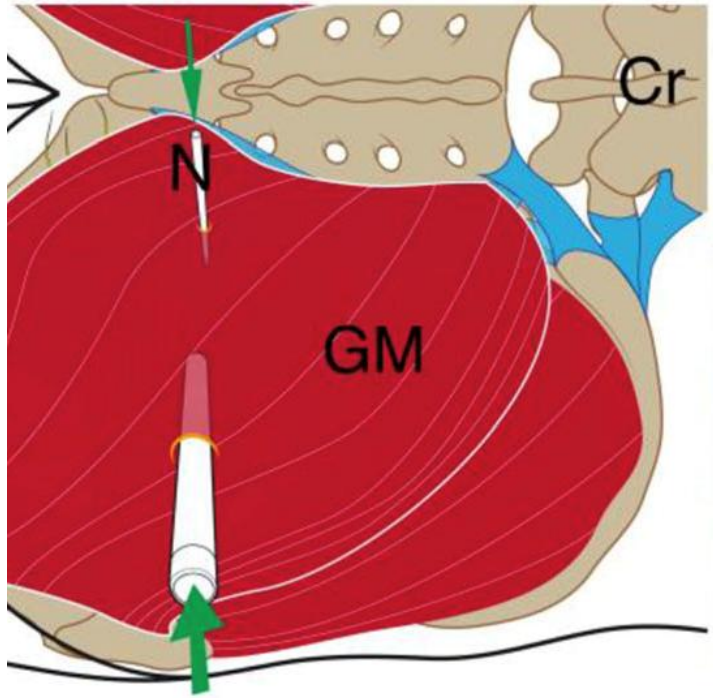
163 pudendal nerves - 14 cluneal nerves

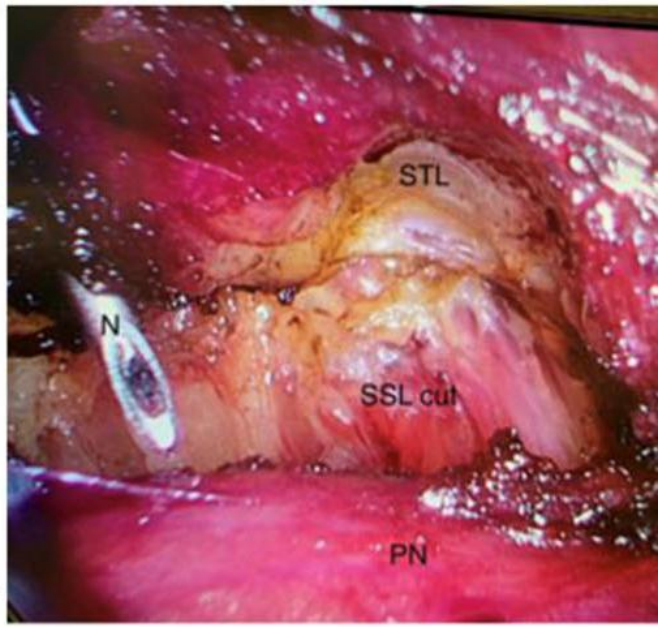


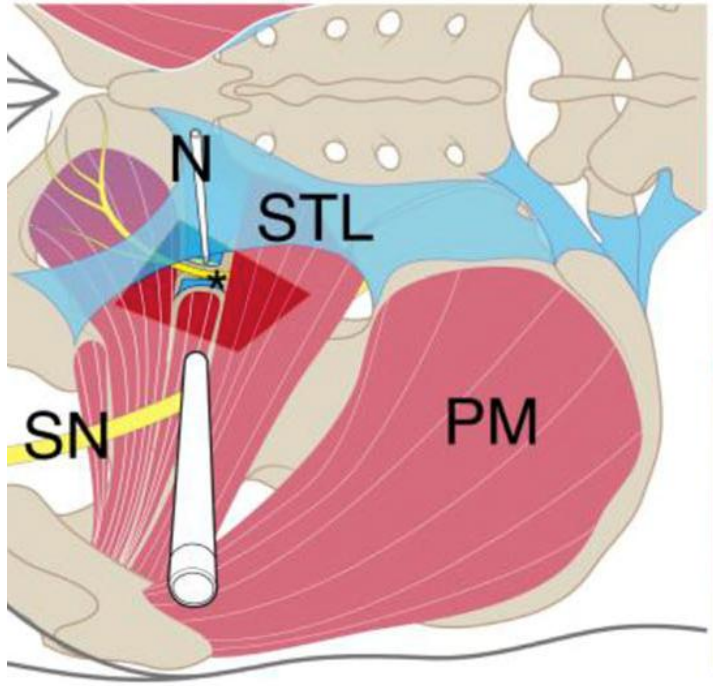
	Echec	Réussite PGIC			Total
		[30-49] %	[50-89] %	≥ 90 %	
N	32	13	26	8	79
%	40% (32/79)	60% (47/79)			100%

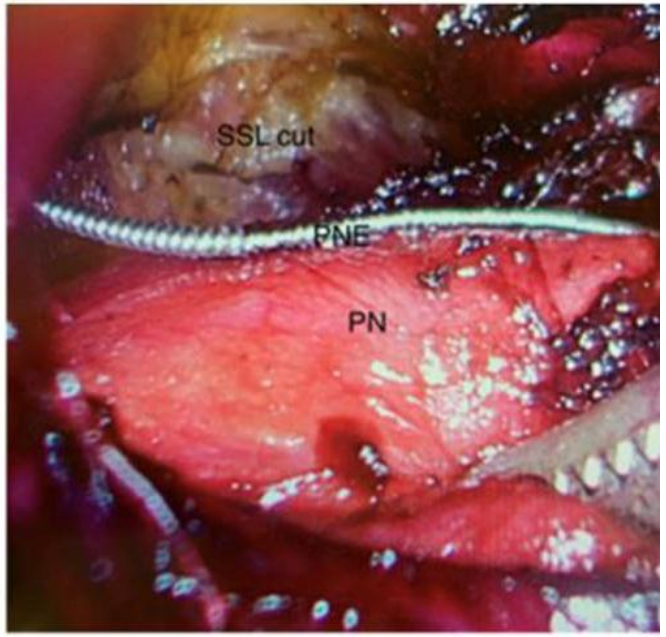
Pilot study











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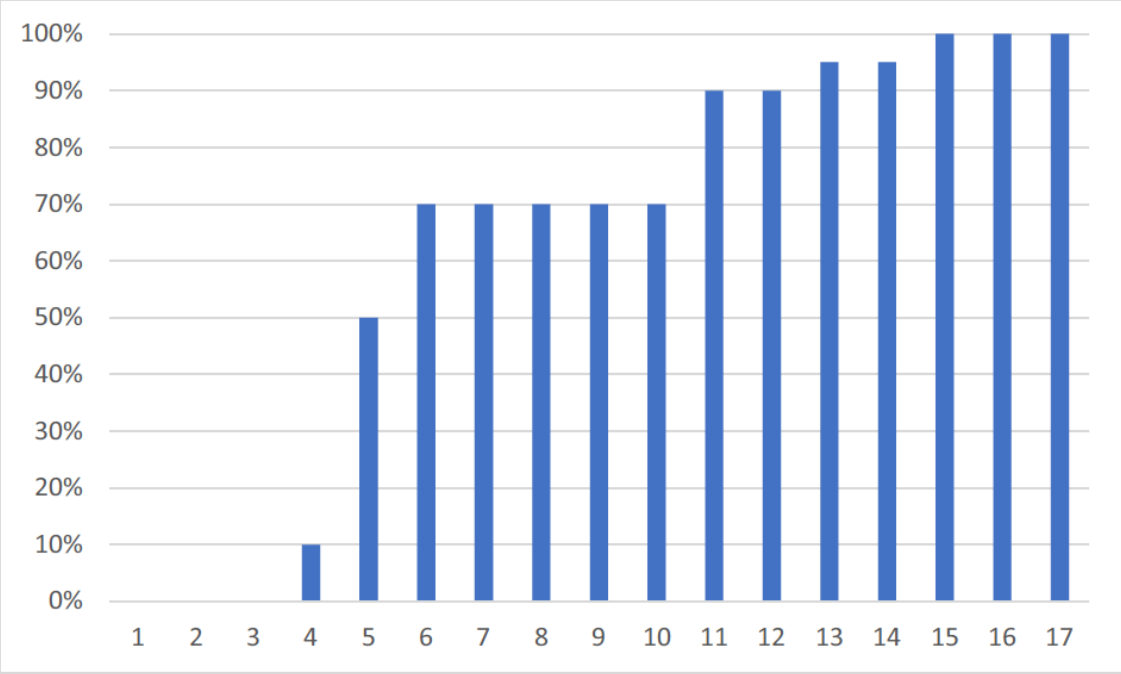
Numeric Pain Rating Scale (0-10)

baseline	1 month of PNE	PNE out
9.5	3.5	6

Patient Global Impression of Change (0-100%)



PGIC	nr	1 month PNE
>50%	13	77%
>90%	7	40%

Age
Gender
Ethnicity
Socioeconomic background
Employment status and occupational factors
Smoking
Alcohol
Physical activity
Nutrition
Sunshine and vitamin D
Pain
Multimorbidity
Mental Health
Surgical and medical interventions
Weight
Sleep disorders
Genetics
Attitudes and beliefs about pain
History of violent injury, abuse, or interpersonal violence

What about failures?

Complexity of chronic pain syndrome
Central sensitisation
Modifiable and non-modifiable factors
Mental health
Others?

General discussion

- Diagnosis and treatment is challenging
- Need for multidisciplinary approach
- Surgery can be part of the solution
- Clear indications for surgery !
- Combination minimal invasive approach with pudendal neruomodulation seems promising

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