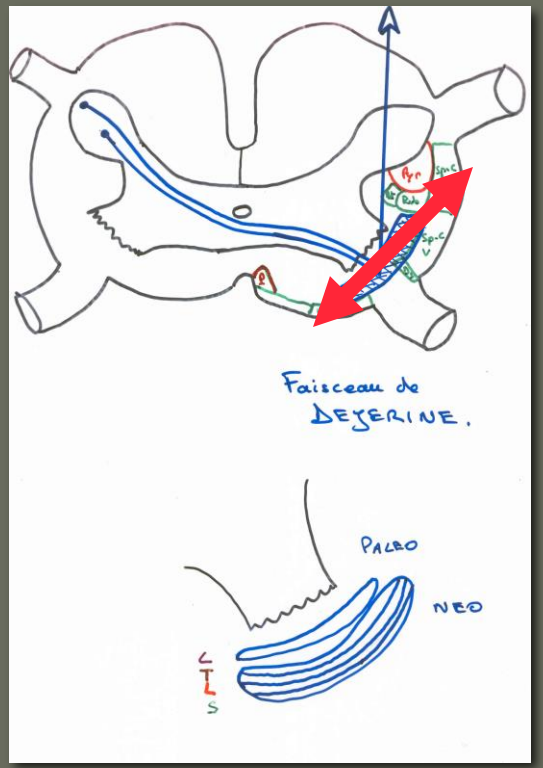
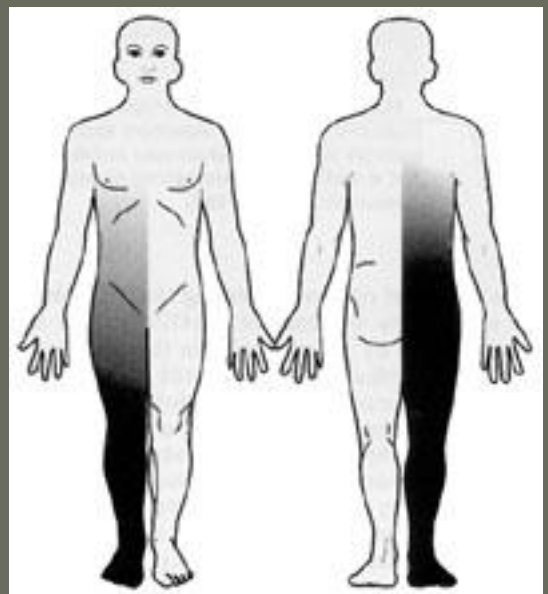
Cordotomie antéro-latérale pour douleurs du cancer

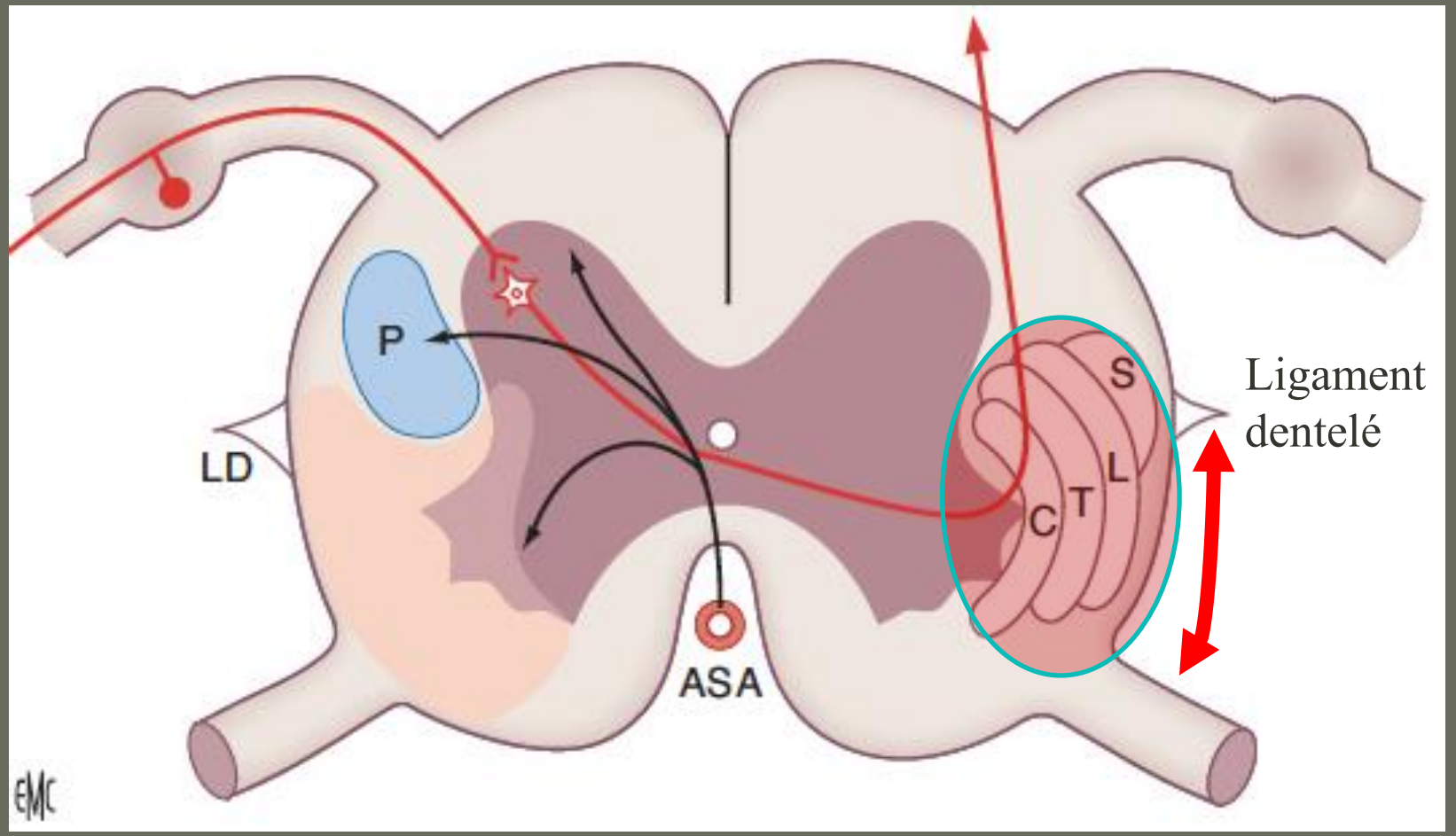
Cordotomie antero-latérale
(Spiller et Martin, 1912)



- Interruption de la voie nociceptive au niveau du faisceau spinothalamique dans le cordon antérolatéral



à l'origine d'une anesthésie thermoalgique controlatérale


P
LD
ASA
S
L
T
C
Ligament
dentelé
EMC

Technique neurochirurgicale sous utilisée ?

J Pain Symptom Manage 2010

Palliative Care Rounds

Open Thoracic Cordotomy for Refractory Cancer Pain: A Neglected Technique?

Nicola Atkin,, Kate A. Jackson, R. Andrew Danks et al.

Supportive and Palliative Care Unit (K.A.J.) and Neurosurgery Unit and Palliative Care Department (N.A.), The Royal Melbourne Hospital, Melbourne, Victoria, Australia

Although open thoracic cordotomy will not commonly be required, it remains a valuable option for a small group of patients with refractory cancer pain. Access to these procedure should be available to pain and palliative care services and referral should be considered in select cases of otherwise refractory cancer pain.

See the corresponding editorial in this issue, pp 153–154.

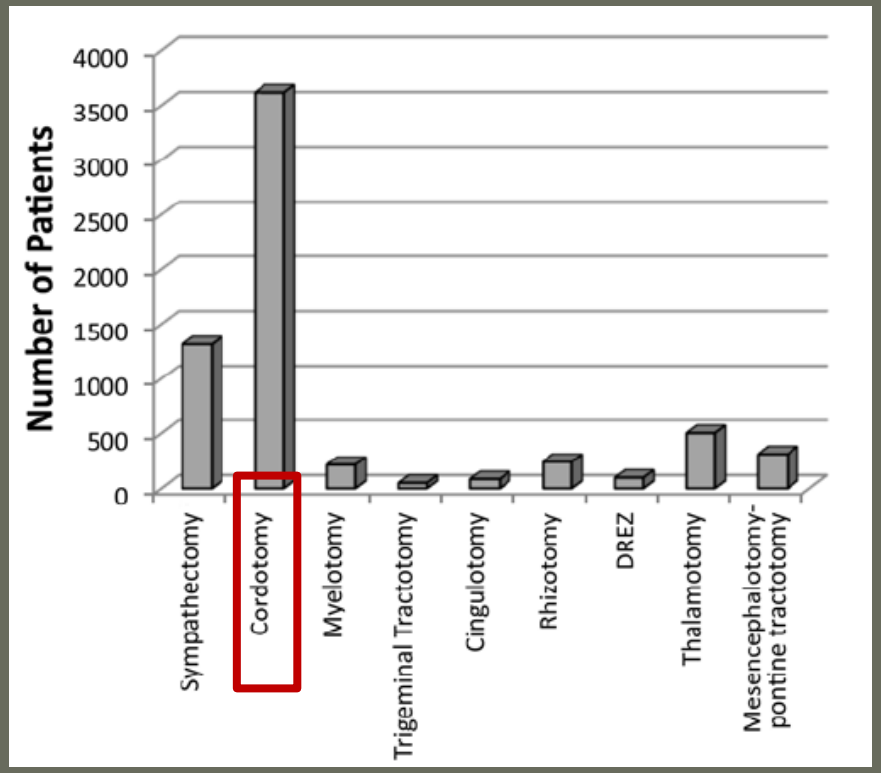
J Neurosurg 114:155–170, 2011

Destructive procedures for control of cancer pain: the case for cordotomy

A review

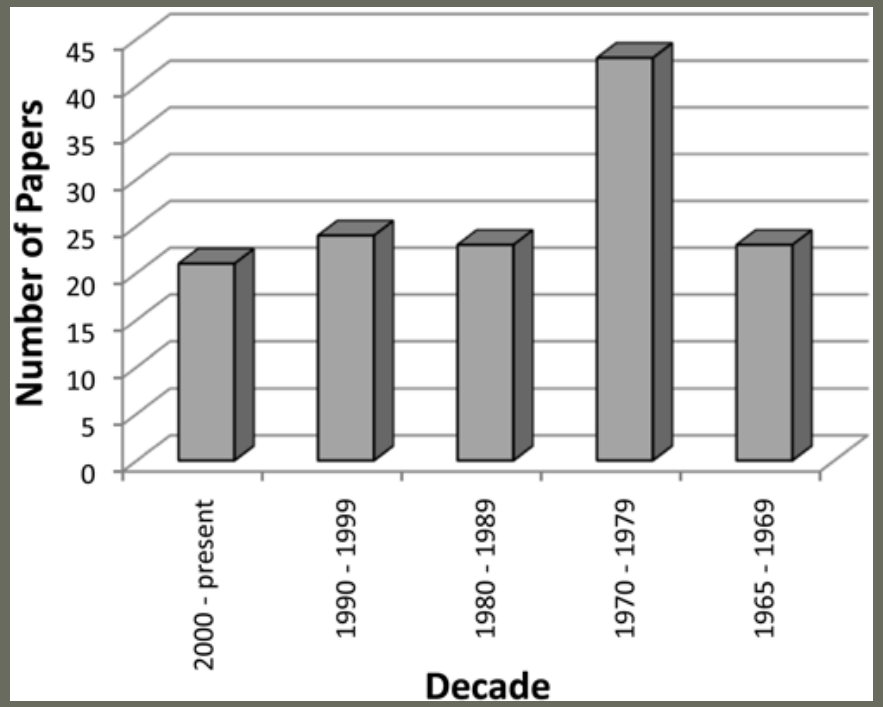
Ahmed M. Raslan, M.D., Justin S. Cetas, M.D., Ph.D., Shirley McCartney, Ph.D., and Kim J. Burchiel, M.D.

Department of Neurological Surgery, Oregon Health & Science University, Portland, Oregon



Technique lésionnelle
la + pratiquée

Nb d'articles / décades

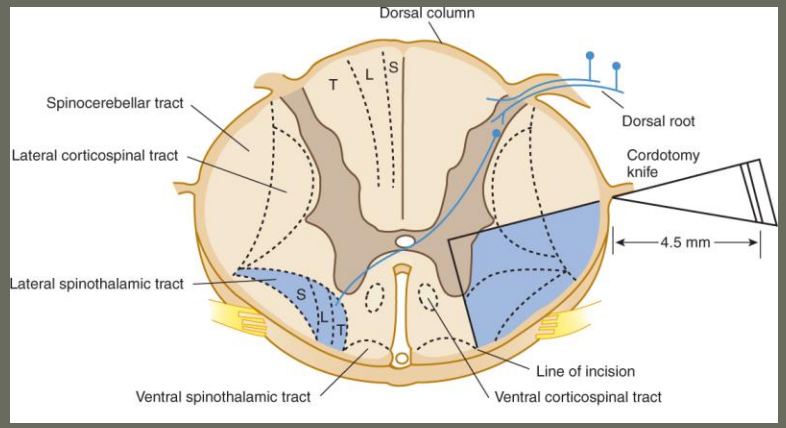


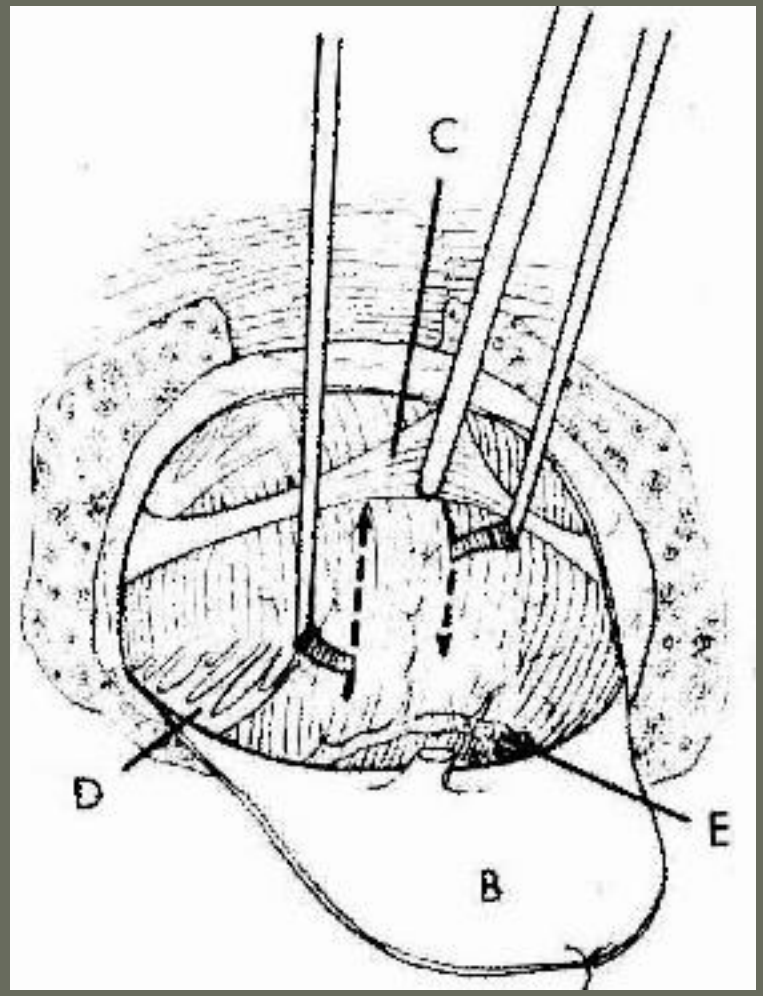
Variantes techniques

- Percutaneé vs chirurgicale
- Cervicale haute vs thoracique haute

Cordotomie antero-latérale

- Chirurgie ouverte
- Sous AG – 1h
- Abord rachidien limité





C. J. , ♀ 70 y

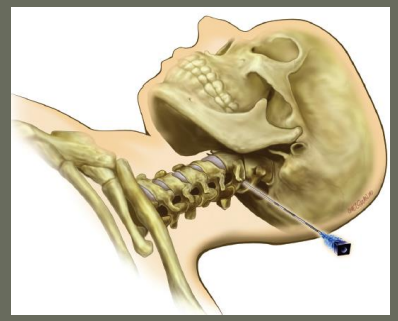
- Myxofibrosarcoma of the thigh
- Open left T1 antero-lateral cordotomy

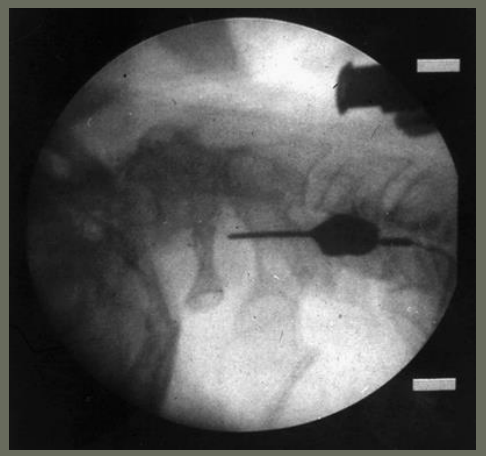
Cordotomie antero-latérale

Technique Percutanée sous AL (←coop patient)

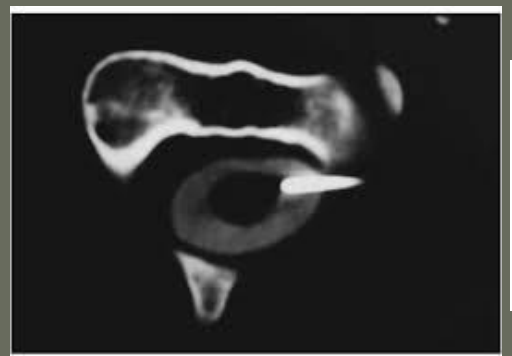
- Niveau cervical C1-C2

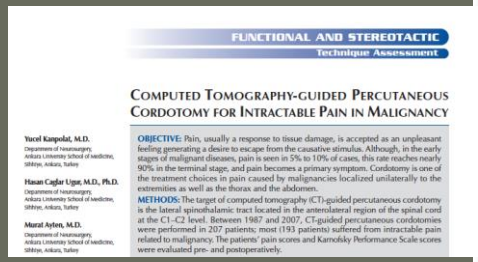
Under radiological and electrophysiological control *Mullan, 1965*





Under CT and electrophysiological control *Kanpolat, 1987*




FUNCTIONAL AND STEREOTACTIC
Technique Assessment

COMPUTED TOMOGRAPHY-GUIDED PERCUTANEOUS CORDOTOMY FOR INTRACTABLE PAIN IN MALIGNANCY

Yucel Kanpolat, M.D.
Department of Neurosurgery, Ankara University School of Medicine, Sihhiye, Ankara, Turkey

Hasan Caglar Ugur, M.D., Ph.D.
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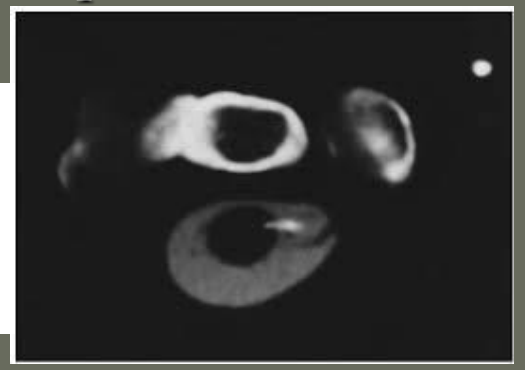
Murat Ayten, M.D.
Department of Neurosurgery, Ankara University School of Medicine, Sihhiye, Ankara, Turkey

OBJECTIVE: Pain, usually a response to tissue damage, is accepted as an unpleasant feeling generating a desire to escape from the causative stimulus. Although, in the early stages of malignant diseases, pain is seen in 5% to 10% of cases, this rate reaches nearly 90% in the terminal stage, and pain becomes a primary symptom. Cordotomy is one of the treatment choices in pain caused by malignancies localized unilaterally to the extremities as well as the thorax and the abdomen.

METHODS: The target of computed tomography (CT)-guided percutaneous cordotomy is the lateral spinothalamic tract located in the anterolateral region of the spinal cord at the C1–C2 level. Between 1987 and 2007, CT-guided percutaneous cordotomies were performed in 207 patients; most (193 patients) suffered from intractable pain related to malignancy. The patients' pain scores and Karnofsky Performance Scale scores were evaluated pre- and postoperatively.



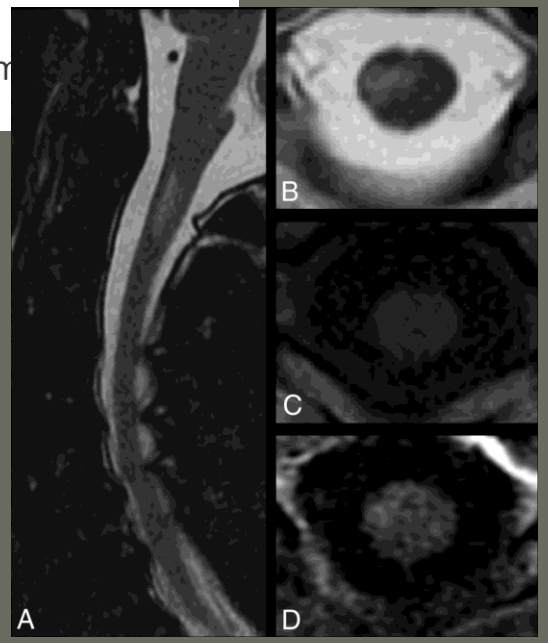
Stereotact Funct Neurosurg 2002;78:53–63
(DOI:10.1159/000068012)

MRI-Guided Frameless Stereotactic Percutaneous Cordotomy

McGirt M.J. · Villavicencio A.T. · Bulsara K.R. · Gorecki J.
Author affiliations

Division of Neurosurgery, Duke University Medical Center, Durham

At an average of 6 months of follow-up (range 5–11), excellent pain relief was achieved in 83% (5/6)



Cordotomie antero-latérale
Résultats

CHAPTER I

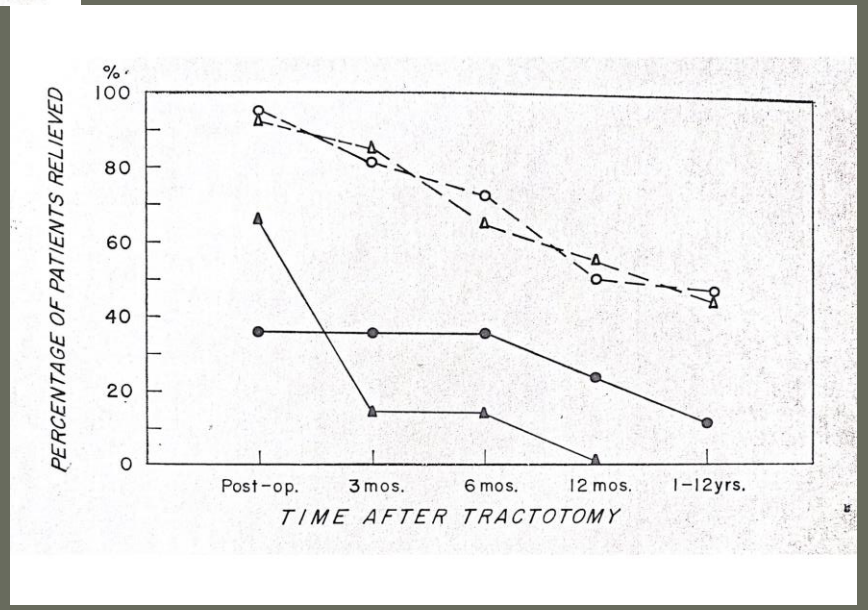
Cordotomy: Assessment of its Effectiveness and Suggestions for its Improvement

JAMES C. WHITE, M.D.

INTRODUCTION

The spinothalamic tract was first described by Edinger in 1889 (4), but its function was not known until a postmortem reported by Spiller (21) in 1905 disclosed that a pair of discrete tuberculomas in each anterior quadrant had been the cause of bilateral loss of sensibility to pain and temperature. At Spiller's suggestion, the first cordotomy was performed by Martin in 1912 (22). Less well known is the fact that Schüller (19) had already carried out the operation in monkeys in Vienna in 1910. The operation was perfected by Frazier (8) in this country and by Foerster (6) in Germany. It was the latter who first carried the tractotomy to the upper cervical level.

1963 Malignant vs. NonMalignant



Neurochirurgie. Sep-Oct 1976;22(5):437-44.

[Spino-thalamic cordotomy in cancerous pain. Results of a series of 124 patients operated on by the direct posterior approach]

[Article in French]

L Mansuy, M Sindou, G Fischer, J Brunon

PMID: 1071136

Cordotomie antero-latérale

Revue d'une série lyonnaise 171 cas
et de 2022 cas de la littérature

- Efficacité à court terme :
  - Chir ouv 71%
  - Per cut 88%
- Efficacité à long terme :
  - 6 mois 75%
  - 1 an 40%

JNS

LITERATURE REVIEW

J Neurosurg 130:1039–1049, 2019

Contemporary concepts of pain surgery

JNSPG 75th Anniversary Invited Review Article

Kim J. Burchiel, MD, and Ahmed M. Raslan, MD

Department of Neurological Surgery, Oregon Health & Science University, Portland, Oregon

Pain surgery is one of the historic foundations of neurological surgery. The authors present a review of contemporary concepts in surgical pain management, with reference to past successes and failures, what has been learned as a subspecialty over the past 50 years, as well as a vision for current and future practice. This subspecialty confronts problems of cancer pain, nociceptive pain, and neuropathic pain. For noncancer pain, ablative procedures such as dorsal root entry zone lesions and rhizolysis for trigeminal neuralgia (TN) should continue to be practiced. Other procedures, such as medial thalamotomy, have not been proven effective and require continued study. Dorsal rhizotomy, dorsal root ganglionectomy, and neurotomy should probably be abandoned. For cancer pain, cordotomy is an important and underutilized method for pain control. Intrathecal opiate administration via an implantable system remains an important option for

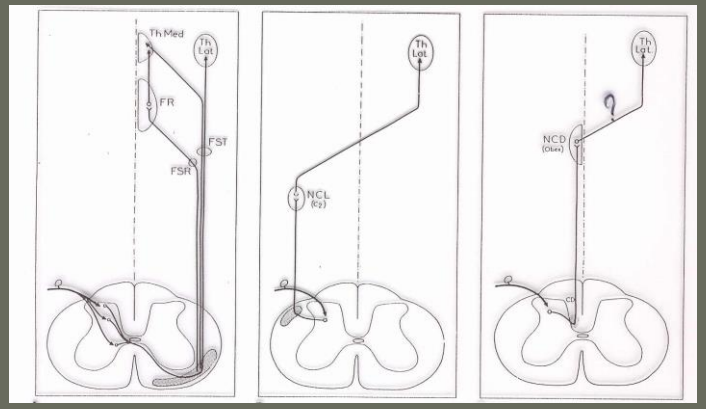
TABLE 1. Mean, median, minimum, maximum, and standard deviation values of Karnofsky Performance Scale and visual analog scale scores[a]

Cordotomy	Preoperative		Postoperative		*P* value
	Mean ± SD	Median (range)	Mean ± SD	Median (range)	
VAS	7.61 ± 0.61	8 (5–9)	1.29 ± 2.21	0 (0–10)	<0.001
KPS	45.2 ± 14.4	40 (10–80)	65.7 ± 13.4	70 (20–100)	<0.001

Problème du retour de douleurs
> 18 mois après cordotomie

Quel type de douleur ? Mêmes préop– différentes ?

- Evolution du cancer – métastases
- Insuffisance de la lésion → vraie récidive douleurs
- Existence d'autres voies nociceptives ascendantes ?



Complications - spécifiques

- **Hypoventilation d'origine centrale**

Défaillance respiratoire surtout cordotomie cervicale haute bilatérale ou unilatérale sur poumon sain unique (⚐K poumon)

- **Incontinence urinaire**

Cordotomie sous C5 surtout

Cordotomie antero-latérale

 +

- Sous AL chez patient en mauvais EG
- Sous AG technique simple et rapide
- Couvre large territoire
- Réduction des opioïdes
- Suivi simple
- Non couteux

 -

- Technique délicate AL
- Effets temporaires (6 à 18 mois)
- Seulement pour douleur unilatérale
- Induit thermo-analgesie
- Peut induire douleurs neuropathiques secondaires (dysthesies)

See the corresponding editorial in this issue, pp 153–154.

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Department of Neurological Surgery, Oregon Health & Science University, Portland, Oregon

TABLE 6: Final recommendation grade for cordotomy in cancer pain*

Grade of Recommendation	Benefit vs Risk & Burden	Methodological Quality of Supporting Evidence	Implications
1C—strong recommendation, low-quality evidence for cordotomy in cancer pain	benefits of pain reduction clearly outweigh risks & burdens, vice versa	observational studies or case series	strong recommendations for use of cordotomy in somatic cancer pain, but may change when higher quality of evidence becomes available

* Based on the analysis in Table 5, a strong recommendation for utilization of cordotomy in patients with unilateral somatic pain below the neck. The GRADE system allows the generation of strong recommendations based on weak evidence, defined as a Class IC recommendation.

Shémas d'indications préférentielles dans les douleurs des cancers en évolution

- Localisées
- Lésion K stabilisée – EG +
- Espérance de vie > 6 mois

Infusions IT /IV

Techniques ablatives

- Drezotomie (Pancoast…)
- Cordotomie (K sein…)
- Tractotomie (K ORL)

- Diffuses - axiales
- Evolution rapide
- Espérance de vie limitée

Infusions IT /IV

Shémas d'indication dans les Douleurs séquellaires (neuropathiques)

- Neurostimulation *(douleurs continues)*

  - Transcutanée : neuropathie périphérique (post chimio, trauma, radiothérapique…)

  - Médullaire : neuropathie périphérique, plexuelle, radiculaire

  - Corticale : plexus, moelle spinale

- Drezotomie *(douleurs paroxystique)*

  plexite radique

Conclusions

- Utile pour certains patients sélectionnés
- Discussion cas par cas du rapport bénéfices /risques
- Dans un contexte de prise en charge multidisciplinaire
- En concertation avec l'équipe d'oncologie
- Pas trop tôt, ni trop tard…