



12th EFIC PAIN SCHOOL

NEUROPATHIC PAIN

October 24-27, 2022

AIM Neuropathic pain is triggered by lesions or disease of the somatosensory system, and in particular of the ascending pain and temperature pathways and their cortical targets. Recent advances in the basic and clinical knowledge of neuropathic pain have led to a re-evaluation of how to impart information on this topic (EFIC Core Curriculum for the European Diploma in Pain Medicine - 3.2). The EFIC European Federation of Pain School on Neuropathic Pain will help health professionals involved in the management of neuropathic pain to refine their diagnostic and assessment skills, improve their ability to interpret clinical, instrumental and laboratory findings, and establish the most appropriate treatment.

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Caroline Perchet
Roland Peyron
Charles Quesada
Andrea Truini
Luis Villanueva
Ipek Yalcin

8:30– 10:30 What are we referring to?

8:30 – 9:10 **Definitions – diagnostic paths - epidemiology**
Per Hansson / Oslo
 An introduction to basic concepts on what is, and what is not, neuropathic pain. The lecture retraces the history of this concept, variations in definitions and diagnostic algorithms, and introduces uncertainties in 'frontier' syndromes to be discussed later in the course.

9:10 – 9:50 **The interview – a patient/doctor dictionary**
Roberto Casale / Piacenza
 The interview is critical to make a first working hypothesis, but the patient's words must be translated into medical meaning. A proper use of the main pain-related descriptors is pivotal to interpret the clinical features of the patient in terms of geography (distribution) and history (development in time).

9:50 – 10:30 **Questionnaires, diaries, et al., When and how**
Didier Bouhassira / Boulogne-Billancourt
 The words used by patients with neuropathic pain are characteristic, and questionnaires are used to collect patients' symptoms (and sometimes the clinical exam) into standardized formats. This lecture will introduce to the rationale and proper use of questionnaires for screening, identification and follow-up of NP patients, but also to their limitations linked to the subjective nature of responses.

10:30 – 11:00 Coffee break

11:00– 13:00 From words to hands: how to examine your patient

11:00 – 11:40 **Sensory examination in neuropathic pain**
Per Hansson / Oslo

11:40 – 12:15 **Motor and autonomic examination in neuropathic pain**
Daniel Ciampi de Andrade / Aalborg

12:15 – 13:00 **Morphological testing: skin biopsy, corneal confocal microscopy**
Andrea Truini / Rome

13:00 – 14:00 Lunch

14:00 – 16:00 Hands-on sessions: Instrumental assessment of neuropathic pain

14:00 – 14:40 **Quantitative sensory testing**
Caroline Perchet, Andrea Truini and Luis Garcia-Larrea / Lyon, Rome

14:40 – 15:20 **Electrophysiological testing**
Caroline Perchet, Andrea Truini and Luis Garcia-Larrea / Lyon, Rome

16:00 – 16:30 Coffee break

16:30 – 17:10 **Neither nociceptive nor neuropathic. The 'nociplastic' concept**
Didier Bouhassira / Boulioune-Billancourt

17:10 – 17:50 **Discussion of typical clinical cases using the notions acquired during the day**
All faculty

Mechanisms of neuropathic pain (I) – From animal to human

8:30 – 9:10 **Pathophysiology of neuropathic pain: what we know; what we suspect; what we ignore**
Luis Villanueva / Paris

Basic research has identified a number of mechanisms related to the development of chronic neuropathic pain, which will be discussed at this lecture, together with the many unresolved questions and the most promising avenues to develop mechanism-based therapies.

9:10 – 9:50 **Can we translate mechanisms (in animals) into symptoms (in humans)?**
Anthony Dickenson / London

This lecture will cover mechanisms of pain in a translational context to patients. How and to what extent can we develop animal models that are relevant to the understanding of human pain symptoms.

9:50 – 10:30 **Can we translate from humans to animals? : human models of neuropathic pain**
André Mouraux / Brussels

Being able to mimic aspects of neuropathic pain directly in humans has a huge potential to understand pathophysiology. Several human models respond to clinically active medications but not to clinically inactive medications, including some that worked in animals but failed in the clinics. They may inform basic research for new drug development.

10:30 – 11:00 Coffee break

Mechanisms of neuropathic pain (II) – From human to human

11:00 – 11:40 **What functional imaging tells us about NP mechanisms**
Roland Peyron / Saint-Etienne

Functional imaging has contributed unique insights into the processing of neuropathic pain in the human brain, including functional and morphological reorganisation in central nociceptive networks and changes in fundamental brain neurochemistry. Future therapeutic strategies should benefit from these findings.

11:40 – 12:20 **How neuropathic symptoms help disclose mechanisms**
Andrea Truini / Rome

Patients with neuropathic pain experience pain of diverse types. Clinical and neurophysiological studies suggest that the various pain types arise through distinct mechanisms, and this lecture will show how mechanism-based approaches could aid the tailoring of therapy to the individual patient, and be useful for drug development.

12:15 – 13:00 **Neuropathic pain in neurological disorders: complex pains and complex mechanisms**
Daniel Ciampi de Andrade / Sao Paulo - Aalborg

Pain with neuropathic and non-neuropathic origins often coexist in neurological disorders. This lecture will discuss the differences in mechanisms, the essentials of diagnosis and the cues to orient the patient toward the most appropriate management.

13:00 – 14:00 Lunch

14:00 – 14:40 **Assessing emotions in animal models: lost in translation?**
Ipek Yalcin / Strasbourg

14:40 – 15:20 **Emotions, pain and the human brain: a short history**
Luis Garcia-Larrea

15:20 – 16:00 **Discussion on clinical cases. Include cases where simple algorithms may not work well**
Luis Hansson, Hanna, Casale, LGL, plus cases brought by attendants

Early end – visit to the Maison Lumière - birth place of Cinema



Pharmacological approaches

8:30 – 9:10 **Systemic drugs for transduction, transmission & modulation of neuropathic pain**
Magdi Hanna | London
Systemically administered drugs used for neuropathic pain act upon different targets and entail pain relief via different modes of action, which the practitioner needs to know.

9:10 – 9:50 **Topical medications for neuropathic pain**
Roberto Casale | Piacenza
Topical drugs administered through the skin induce clinically useful concentrations at the site of application exclusively, without achieving significant systemic levels, hence avoiding systemic adverse effects. Peripheral localized neuropathic pain can be effectively relieved by topical medications.

9:50 – 10:30 **Intravenous and intraspinal approaches for neuropathic pain**
Andrei Brinzeu | Lyon
While oral or topical medications are first line therapeutic options, more invasive alternatives become necessary in resistant cases. The intravenous and intraspinal approaches (epidural and intrathecal) offer useful routes of drug administration for neuropathic pain resistant to first-line therapies.

10:30 – 11:00 Coffee break

Non-pharmacological approaches

11:00 – 11:40 **Functional neurosurgery for neuropathic pain**
Patrick Mertens | Lyon

11:40 – 12:20 **Noninvasive cortical neuromodulation for neuropathic pain**
Luis Garcia-Larrea and Nathalie André-Obadia | Lyon

12:15 – 13:00 **Physical medicine: Physiotherapy and allied techniques in neuropathic pain**
Charles Quesada | Lyon

13:00 – 14:00 Lunch

14:00 – 14:40 **Who would have thought?: Psychotherapies in neuropathic pain**
Lance McCracken | Uppsala, London
Neuropathic pain (NP) includes physical, emotional, and social impacts. Greater NP severity leads to greater depression and lower quality of life, and this in turn to more severe NP. It appears that what the person does (or does not do) in the context of NP makes a great difference. This lecture explores the relevance, evidence for and potential of psychological treatments in NP.

14:40 – 15:20 **General guidelines for the treatment of neuropathic pain in 2022**
Nadine Attal | Paris
Based on the knowledge acquired from the preceding lectures, this lesson proposes a reasoned algorithm of recommended treatments that takes into account both the mechanism of pain and the quality of evidence for each method and includes both pharmacological and non-pharmacological approaches

16:00 – 16:30 Coffee break

16:30 – 17:30 **Practical sessions: noninvasive or minimally invasive procedures:**

Non-invasive cortical stimulation: demonstration rTMS and tDCS
Nathalie André Obadia, Caroline Perchet and Luis Garcia-Larrea | Lyon

Botulinum toxin, sphenopalatine and occipital nerve blocks, capsaicin patches,...
Geneviève Demarquay and Christian Gov | Lyon

Practical session and discussion

8:30 – 10:30 **Practical session on interventional approaches**
Jean-Bernard Caillet | Lyon
A manikin-based, interactive anatomical demonstration of invasive techniques for spinal, dorsal ganglion and subcutaneous neuromodulation.

10:30 – 11:00 Coffee break

11:00 – 13:00 **Now that you think you know... Current Challenges in Neuropathic pain Managements and Research**
How to start setting up a 'pain clinic' in your hospital
Key diagnostic images you should fix in your head (MRIs, echo, ...)
Blood tests for treatable causes of neuropathy
How to use algorithms without being their slave
Understanding, interpreting and using info in research papers
Conceiving and performing clinical research (yes you can)

13:00 End of the course

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COURSE VENUE

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