

THE ITALIAN CONSENSUS CONFERENCE ON PAIN IN NEUROREHABILITATION. RATIONALE AND METHODOLOGY

Stefano Tamburin,¹ Stefano Paolucci,² Francesca Magrinelli,¹ Massimo Musicco,^{2,3} Giorgio Sandrini^{4,5}

¹Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona; ²IRCCS Santa Lucia Foundation, Rome; ³ITB CNR Segrate, Milan; ⁴C. Mondino National Institute of Neurology Foundation, IRCCS, Pavia; ⁵Department of Brain and Behavioural Sciences, University of Pavia, Italy

BACKGROUND AND AIMS

Pain is very common in the neurorehabilitation setting, where it may represent a target for treatment, but can also negatively influence rehabilitation procedures directly or through the side effects of painkillers. To date, there are neither guidelines nor consensus on how to assess and treat pain in neurorehabilitation. Because of the very scanty pieces of evidence on this topic, the Italian Consensus Conference on Pain in Neurorehabilitation (ICCPN) was promoted by the Italian Society of Neurorehabilitation (Società Italiana di Riabilitazione Neurologica, SIRN) and the Italian Society of Physical and Rehabilitative Medicine (Società Italiana di Medicina Fisica e Riabilitativa, SIMFER) and included experts from different scientific societies. The present paper illustrates the rationale, methodology, and topics of the ICCPN. The recommendations of the ICCPN will offer some information on how to deal with pain in neurorehabilitation, and may represent the starting point for further studies.

METHODS

The methodology of the ICCPN was based on the Italian guidelines for organizing a consensus conference, the Italian guidelines on stroke (Stroke Prevention and Educational Awareness Diffusion) and the Consensus Conference on neuropsychological rehabilitation in adult patients. Most of the current guidelines and evidence on the pharmacological and non pharmacological treatment of pain may be difficult to transfer to the field of neurorehabilitation, and sound evidence is lacking for the majority of rehabilitative treatments of pain. For these reasons, we considered evidence derived from experimental, observational, case-control and other types of study, as well as the opinion of experts.

ICCPN task force. The ICCPN task force was composed by a promoter committee, a technical-scientific committee, and a jury. The task force of the ICCPN was formed by experts from SIRN, SIMFER, and from other Italian scientific societies interested in neurology, rehabilitation, and pain including (in alphabetical order) the Italian Association of Physiotherapists (Associazione Italiana Fisioterapisti, AIFI), the Italian Association for the Study of Pain (Associazione Italiana per lo Studio del Dolore, AISD), the Italian Society of Clinical Neurophysiology (Società Italiana di Neurofisiologia Clinica, SINC), the Italian Society of Neurology (Società Italiana di Neurologia, SIN) and their Study Groups on Neurosciences and Pain (Neuroscienze e Dolore), the Italian Society of Neuropsychiatry of the Infancy and the Adolescence (Società Italiana di Neuropsichiatria dell'Infanzia e dell'Adolescenza, SINPIA), the Italian Society of Pain Clinicians (Società Italiana dei Clinici del Dolore, Federdolore), the Italian Society of Palliative Care (Società Italiana di Cure Palliative, SIPC), the Italian Society of Rheumatology (Società Italiana di Reumatologia, SIR), and the Italian Society for the Study of Headache (Società Italiana per lo Studio delle Cefalee, SISC).

ICCPN topics and working groups. The topics of the ICCPN were divided into 27 working groups, which were incorporated into seven main paragraphs, three of which dealt with general issues, and the remaining four dealt with specific clinical conditions that may be encountered in the neurorehabilitation setting. Common diseases with nociceptive pain were also included, because they may coexist with neurological conditions, especially in the elderly. The main paragraphs and working groups are listed below.

A. Diagnosing and assessing pain in neurorehabilitation: from translational research to the clinical setting: 1. translation research on pain; 2. neuropathic, nociceptive and mixed pain; 3. instrumental evaluation of pain. B. The role of gender and psycho-social factors on pain in neurorehabilitation: 4. sex-related pain biomarkers; 5. the psychiatric comorbidity and the anthropological and cultural dimensions of pain; 6. the psychological dimension of pain. C. Pharmacological and non pharmacological strategies in the integrated approach to pain in neurorehabilitation: 7. pharmacological, interventional, physical and complementary therapy for the treatment of pain; 8. coping strategies, psychotherapy and cognitive-behavioural therapies for pain; 9. the role of the physical therapist. D. Assessing and treating pain associated with stroke, multiple sclerosis, cerebral palsy, spinal lesions and spasticity: 10. pain and spasticity; 11. pain in acute and chronic stroke; 12. pain in multiple sclerosis; 13. pain in spinal cord injury; 14. pain in cerebral palsy and in pediatric patients. E. Pain in degenerative, post-traumatic, infectious, and neoplastic central nervous system diseases: 15. pain in movement disorders; 16. pain in motor neuron disease; 17. pain in chronic disorders of consciousness and dementia; 18. Pain in oncology and neurooncology; 19. pain in neuroinfettivology. F. Pain in neuromuscular disorders and neuropathies: 20. pain in plexopathy, radiculopathy and mononeuropathy; 21. deafferentation and phantom limb pain; 22. pain in peripheral neuropathies. G. Headache, low back pain, and other nociceptive and mixed pain conditions: 23. headache and facial pain; 24. low back pain and failed back surgery syndrome; 25. osteoarticular pain; 26. myofascial pain and fibromyalgia; 27. chronic pelvic pain.

Each working group had a chairperson and their members defined a number of questions to be answered by the ICCPN. Conflicts of interests were declared at the time of the formation of the groups, and the chairperson was chosen among those declaring no conflict of interests.

Bibliographic search and papers collection. For the bibliographic search, the following search engines were used: Pubmed (<http://www.ncbi.nlm.nih.gov/pubmed>), Medline and Embase (<https://www.embase.com/>). Sets of specific and sensitive keywords or a combination of keywords were chosen, and the keywords of each group were checked centrally by a steering committee before launching the search. When possible, MeSH terms were used. The search was extended to a time period of 30 and 20 years, respectively, for pharmacological and non-pharmacological studies. All the pertinent meta-analyses, guidelines and reviews were considered, including the Cochrane Library (www.thecochranelibrary.com). Meta-analyses were always collected and included. Previous guidelines and recommendations were sought from search engines and other sources including national and international scientific organizations, patient organizations, and national or supranational health-related bodies. The conclusion of the ICCPN task force relied on quality assured scientific data, and previous guidelines and recommendations were evaluated with the appraisal of guidelines for research and Evaluation (AGREE) checklist, and eventually adopted in part or partially. The conclusion of the reviews were critically evaluated on the basis of the scientific quality of the original papers, which could serve as a source of additional data. Unpublished RCTs were searched on clinical trials registries (www.clinicaltrial.gov; www.clinicaltrialsregister.eu) or on pharmacological industries websites. Data from non-refereed journals, books or other publications were considered only upon the judgement of the task force members.

Data evaluation and scoring of evidence. After bibliographic search, and papers collection, the full papers, including those in press, were read and data collected from the papers themselves. The evidence pertaining each workgroup topic was evaluated and scored according to the Oxford 2011 levels of evidence. These levels stipulate a gradient from the best (level 1) to the worst evidence (level 5) for systematic reviews, RCTs, cohort studies, case series, and mechanistic reasoning. The bibliographic information, conclusions, and level of evidence of all the papers were tabulated in worksheets.

Proposal of the recommendations and evaluation by the jury. Each group prepared a final report with the defined questions and their answers, which were presented as recommendations with different grading strength. The reports contained also summary tables and worksheets with tabulated data from original papers with levels of evidence. Each report included a structured summary with the main conclusions. Existing guidelines and/or consensus conferences prepared by other organizations, where appropriate, were adopted in part or whole with acknowledgement and respect for copyright. The format of each report was as follows: title, authors, structured abstract, objectives, background, search strategy, method for reaching consensus, results, recommendations, conflicts of interest, references. The reports of all the groups were evaluated by the jury, and, when necessary, discussed with each group before preparing the final recommendations and strength grading. The levels of the strength of recommendations was evaluated according to A, B, C, D, and good practice point (GPP) score. The top level is A and refers to high quality RCTs, and the worst level is GPP and refers to the best approach based on expert opinion, in the absence of any evidence from literature.

Writing and diffusion of ICCPN recommendations. The conclusions of the ICCPN has been written in English for publication in a peer-reviewed journal (expected time of publication: second half of 2016). In addition to the print copies, the conclusions will be made freely downloadable on a specific website and presented to national and international congresses. An audit on the ICCPN recommendations, including stakeholders (patients association, health technology producers, health administrators), will follow their publication and diffusion.

CONCLUSION

The conclusions and recommendations of the ICCPN will represent a first step for answering the still open question of how to deal with pain in the setting of neurorehabilitation.

Apart from offering some practical information on the evaluation and treatment of pain in this specific setting, they may represent the starting point for further studies, which hopefully will reach a high enough quality level to move from consensus conference conclusions to true guidelines.

THE BOARD OF THE ITALIAN CONSENSUS CONFERENCE ON PAIN IN NEUROREHABILITATION (IN ALPHABETICAL ORDER):

Michela Agostini,¹ Enrico Alfonsi,² Anna Maria Aloisi,³ Elena Alvisi,⁴ Irene Aprile,⁵ Michela Armando,⁶ Micol Avenali,^{2,4} Eva Azicnuda,⁷ Francesco Barale,⁴ Michelangelo Bartolo,⁸ Roberto Bergamaschi,² Mariangela Berlangieri,⁴ Vanna Berlincioni,⁴ Laura Berliocchi,⁹ Eliana Berra,² Giulia Berto,¹⁰ Silvia Bonadiman,¹⁰ Sara Bonazza,¹¹ Federica Bressi,¹² Annalisa Brugnara,¹⁰ Stefano Brunelli,¹⁷ Maria Gabriella Buzzi,⁷ Carlo Cacciatori,¹⁰ Andrea Calvo,¹³ Cristina Cantarella,¹⁴ Augusto Tommaso Caraceni,¹⁵ Roberto Carone,¹⁶ Elena Carraro,¹⁷ Roberto Casale,¹⁸ Paola Castellazzi,¹⁰ Gianluca Castelnuovo,^{19,20} Adele Castino,²¹ Monica Cella,²² Rosanna Cerbo,²³ Adriano Chiò,¹⁹ Cristina Ciotti,¹⁴ Carlo Cisarì,²⁴ Daniele Coraci,²⁵ Elena Dalla Toffola,^{26,27} Giovanni Defazio,²⁸ Roberto De Icco,^{2,4} Ubaldo Del Carro,²⁹ Andrea Dell'Isola,²⁴ Antonio De Tanti,³⁰ Mariagrazia D'Ippolito,⁷ Elisa Fazzi,^{31,32} Angela Federico,¹⁰ Adriano Ferrari,³³ Sergio Ferrari,¹⁰ Francesco Ferraro,³⁴ Fabio Formaglio,¹⁵ Rita Formisano,³⁵ Simone Franzoni,³⁶ Francesca Gajofatto,¹⁰ Marialuisa Gandolfi,¹⁰ Barbara Gardella,²⁷ Pierangelo Geppetti,³⁶ Alessandro Giammò,¹⁶ Raffaele Gimigliano,³⁷ Emanuele Maria Giusti,²⁰ Elena Greco,¹⁰ Valentina Ieraci,³⁸ Marco Invernizzi,²⁴ Marco Jacopetti,³⁹ Iwona Jedrychowska,⁴⁰ Marco Lacerenza,⁴¹ Silvia La Cesa,⁴² Davide Lobba,¹⁰ Francesca Magrinelli,¹⁰ Silvia Mandrini,²⁶ Umberto Manera,¹³ Gian Mauro Manzoni,^{19,20} Paolo Marchettini,⁴³ Enrico Marchioni,² Sara Mariotto,¹⁰ Andrea Martinuzzi,¹⁷ Marcella Masciullo,⁷ Susanna Mezzarobba,⁴⁴ Danilo Miotti,⁴⁵ Angela Modenese,¹⁰ Marco Molinari,⁷ Salvatore Monaco,¹⁰ Giovanni Morone,⁷ Rossella Nappi,^{26,27} Stefano Negri,^{5,32} Andrea Pace,⁴⁶ Luca Padua,^{5,47} Emanuela Pagliano,⁴⁸ Valerio Palmerini,²³ Stefano Paolucci,⁷ Costanza Pazzaglia,⁵ Cristiano Pecchioli,⁵ Giada Pietrabissa,²⁰ Alessandro Picelli,¹⁰ Andrea Polli,¹ Carlo Adolfo Porro,⁴⁹ Daniele Porru,²⁷ Marcello Romano,⁵⁰ Laura Roncari,¹⁰ Riccardo Rosa,²³ Marsilio Saccavini,⁵¹ Paola Sacerdote,⁵² Giorgio Sandrini,^{2,4} Donatella Saviola,³⁰ Angelo Schenone,⁵³ Vittorio Schweiger,¹¹ Giorgio Scivoletto,⁷ Nicola Smania,¹⁰ Claudio Solaro,²² Vincenza Spallone,⁵⁴ Isabella Springhetti,⁴⁰ Stefano Tamburin,¹⁰ Cristina Tassorelli,^{2,4} Michele Tinazzi,¹⁰ Rossella Togni,²⁶ Monica Torre,⁷ Riccardo Torta,³⁸ Marco Traballesi,⁷ Erika Trabucco,²² Marco Tramontano,⁷ Andrea Truini,⁴² Valeria Tugnoli,⁵⁵ Andrea Turolla,¹ Massimiliano Valeriani,⁵⁶ Gabriella Vallies,¹⁰ Elisabetta Verzini,¹⁰ Mario Vottero,¹⁶ Paolo Zerbini,⁵⁷

¹Neurorehabilitation Department, Foundation IRCCS San Camillo Hospital, Venice, Italy; ²C. Mondino National Institute of Neurology Foundation, IRCCS, Pavia, Italy; ³Department of Medicine, Surgery and Neuroscience, University of Siena, Siena, Italy; ⁴Department of Brain and Behavioural Sciences, University of Pavia, Pavia, Italy; ⁵Don Gnocchi Foundation, Milan, Italy; ⁶Department of Neuroscience and Neurorehabilitation, Bambin Gesù' Children's Hospital, IRCCS, Rome, Italy; ⁷IRCCS Santa Lucia Foundation, Rome, Italy; ⁸Neurorehabilitation Unit, IRCCS INM Neuromed, Pozzilli, Italy; ⁹Department of Health Sciences, University Magna Graecia of Catanzaro, Catanzaro, Italy; ¹⁰Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Verona, Italy; ¹¹Department of Surgery, University of Verona, Verona, Italy; ¹²Campus Biomedico University, Rome, Italy; ¹³Rita Levi Montalcini Department of Neuroscience, University of Turin, Turin, Italy; ¹⁴Physical and Rehabilitation Medicine Unit, Tor Vergata University, Rome, Italy; ¹⁵Palliative Care, Pain Therapy and Rehabilitation, Fondazione IRCCS Istituto Nazionale dei Tumori di Milano, Milan, Italy; ¹⁶Neuro-Urology Department, City Hospital Health and Science of the City of Turin, Turin, Italy; ¹⁷Neuropediatric Rehabilitation Unit, E. Medea Scientific Institute, Conegliano, Italy; ¹⁸Department of Clinical Neurophysiology and Pain Rehabilitation Unit, Fondazione Salvatore Maugeri IRCCS, Montescano, Italy; ¹⁹Psychology Research Laboratory, Istituto Auxologico Italiano IRCCS, Ospedale San Giuseppe, Verbania, Italy; ²⁰Department of Psychology, Catholic University of Milan, Italy; ²¹ASL of the Province of Lodi, Lodi, Italy; ²²Neurology Unit, Head and Neck Department, ASL 3 Genovese, Genoa, Italy; ²³Hub Terapia del Dolore Regione Lazio, Policlinico Umberto I, Sapienza University, Rome Italy; ²⁴Department of Health Sciences, Università del Piemonte Orientale, Novara, Italy; ²⁵Department of Orthopaedic Science, Sapienza University, Rome, Italy; ²⁶Department of Clinical, Surgical, Diagnostic and Pediatric Sciences, University of Pavia, Pavia, Italy; ²⁷IRCCS Policlinico San Matteo Foundation, Pavia; ²⁸Department of Basic Medical Sciences, Neuroscience and Sensory Organs, Aldo Moro University of Bari, Bari, Italy; ²⁹Section of Clinical Neurophysiology and Neurorehabilitation, San Raffaele Hospital, Milan, Italy; ³⁰Cardinal Ferrari Rehabilitation Center, Santo Stefano Rehabilitation Institute, Fontanelato, Italy; ³¹Childhood and Adolescence Neurology and Psychiatry Unit, City Hospital, Brescia, Italy; ³²Department of Clinical and Experimental Sciences, University of Brescia, Brescia, Italy; ³³Children Rehabilitation Unit, IRCCS Arcispedale S. Maria Nuova, Reggio Emilia, Italy; ³⁴Section of Neuromotor Rehabilitation, Department of Neuroscience, Azienda Ospedaliera Carlo Poma, Mantova, Italy; ³⁵Poliambulanza Foundation Istituto Ospedaliero, Geriatric Research Group, Brescia, Italy; ³⁶Department of Health Sciences, Section of Clinical Pharmacology and Oncology, University of Florence, Florence, Italy; ³⁷Department of Physical and Mental Health, Second University of Naples, Naples, Italy; ³⁸Department of Oncology and Neuroscience, University of Turin, City Hospital Health and Science of the City of Turin, Turin, Italy; ³⁹University of Parma, Parma, Italy; ⁴⁰Functional Recovery and Rehabilitation Unit, IRCCS Fondazione S. Maugeri, Pavia, Italy; ⁴¹Pain Medicine Center, Humanitas San Pio X, Milan, Italy; ⁴²Department of Neurology and Psychiatry, University Sapienza, Rome, Italy; ⁴³Pain Medicine Center, Hospital San Raffaele, Milan, Italy; ⁴⁴Department of Medicine, Surgery and Health Sciences, University of Trieste, Trieste, Italy; ⁴⁵Palliative Care and Pain Therapy Unit, Fondazione Salvatore Maugeri IRCCS, Scientific Institute of Pavia, Pavia, Italy; ⁴⁶Neuro-Oncology Unit, Regina Elena National Cancer Institute of Rome, Rome, Italy; ⁴⁷Institute of Neurology, Catholic University, Rome, Italy; ⁴⁸Developmental Neurology Unit, C. Besta Neurological Institute Foundation, Milan, Italy; ⁴⁹Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena, Italy; ⁵⁰Neurology Unit, Azienda Ospedaliera Ospedali Riuniti Villa Sofia Cervello, Palermo, Italy; ⁵¹ASL 2 Bassa Friulana-Isontria, Italy; ⁵²Department of Pharmacological and Biomolecular Sciences, University of Milano, Milano, Italy; ⁵³Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOEMI), University of Genoa, Genoa, Italy; ⁵⁴Department of Systems Medicine, University Tor Vergata, Rome, Italy; ⁵⁵Neurological Unit, University Hospital of Ferrara, Ferrara, Italy; ⁵⁶Division of Neurology, Ospedale Pediatrico Bambino Gesù, IRCCS, Rome, Italy; ⁵⁷Neuro-orthopaedic Program, Hand Surgery Department, Santa Maria Hospital MultiMedica, Castellanza, Italy.

REFERENCES

- Aloisi AM, Berlincioni V, Torta R, et al. The role of gender, psycho-social factors and anthropological-cultural dimensions on pain in neurorehabilitation. Evidence and recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation. Eur J Phys Rehabil Med. 2016 Sep 16. [Epub ahead of print]
- Tamburin S, Lacerenza MR, Castelnuovo G, et al. Pharmacological and non-pharmacological strategies in the integrated treatment of pain in neurorehabilitation. Evidence and recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation. Eur J Phys Rehabil Med. 2016 Aug 31. [Epub ahead of print]
- Bartolo M, Chiò A, Ferrari S, et al. Assessing and treating pain in movement disorders, amyotrophic lateral sclerosis, severe acquired brain injury, disorders of consciousness, dementia, oncology and neuroinfectology. Evidence and recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation. Eur J Phys Rehabil Med. 2016 Aug 31. [Epub ahead of print]
- Paolucci S, Martinuzzi A, Scivoletto G, et al. Assessing and treating pain associated with stroke, multiple sclerosis, cerebral palsy, spinal cord injury and spasticity. Evidence and recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation. Eur J Phys Rehabil Med. 2016 Aug 31. [Epub ahead of print]
- Porro CA, Sandrini G, Truini A, et al. Diagnosing and assessing pain in neurorehabilitation: from translational research to the clinical setting. Evidence and recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation. Eur J Phys Rehabil Med. 2016 Aug 31. [Epub ahead of print]
- Sandrini G, Tamburin S, Paolucci S, et al. Time for a Consensus Conference on pain in neurorehabilitation. Eur J Phys Rehabil Med. 2016 Jul 12. [Epub ahead of print]
- Castelnuovo G, Giusti EM, Manzoni GM, et al. Psychological Considerations in the Assessment and Treatment of Pain in Neurorehabilitation and Psychological Factors Predictive of Therapeutic Response: Evidence and Recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation. Front Psychol. 2016 Apr 19;7:468.
- Castelnuovo G, Giusti EM, Manzoni GM, et al. Psychological Treatments and Psychotherapies in the Neurorehabilitation of Pain: Evidences and Recommendations from the Italian Consensus Conference on Pain in Neurorehabilitation. Front Psychol. 2016 Feb 19;7:115.
- Tamburin S, Paolucci S, Magrinelli F, Musicco M, Sandrini G. The Italian Consensus Conference on Pain in Neurorehabilitation: rationale and methodology. J Pain Res. 2016 May 30;9:311-8.
- La Cesa S, Tamburin S, Tugnoli V, et al. How to diagnose neuropathic pain? The contribution from clinical examination, pain questionnaires and diagnostic tests. Neurol Sci. 2015 Dec;36(12):2169-75..

Sin

XLVII CONGRESSO NAZIONALE
22-25 OTTOBRE 2016 – VENEZIA

WebPoster