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**ABOUT COVER**

Editor-in-Chief of *World Journal of Clinical Cases*, Bao-Gan Peng, MD, PhD, is Professor and Director of the Department of Orthopedics at The Third Medical Center of PLA General Hospital. Professor Peng's research interest is spinal surgery. His career work has generated a multitude of new academic viewpoints and theories, and more than 200 academic papers, published both at home and abroad. In practice, he has systematically elucidated the pathogenesis of discogenic low back pain and established a new minimally invasive treatment method: The intradiscal methylene blue injection. He also revealed and characterized a new pathogenesis of Schmorl's nodes, which is a now a famous concept. Finally, he was the first to discover that ingrowth of Ruffini corpuscles into degenerative cervical disc is related to dizziness of cervical origin. (L-Editor: Filipodia)

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## Editorial for the special issue of the Chinese Association for the Study of Pain

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### Abstract

The Ministry of Health of China officially issued a document, adding the first level diagnosis and treatment discipline "Algology" in the list of diagnosis and treatment subjects of medical institutions on July 16, 2007. As the most important pain academic organization in China, the Chinese Association for the Study of Pain has made outstanding contributions in promoting the development of pain discipline and in establishing pain standards and disease diagnosis and treatment guidelines. In this special issue, under the leadership of Yan-Qing Liu, Chairman of the 7<sup>th</sup> Committee of the Chinese Association for the Study of Pain, nine consensus and one guideline were included.

**Key Words:** Chinese Association for the Study of Pain; Algology; Pain; Consensus; Guidelines; Recommendations

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**Core Tip:** Pain medicine has developed rapidly in China and accumulated rich Chinese experience in the diagnosis and treatment of various pain diseases. Under the leadership of Yan-Qing Liu, Chairman of the 7<sup>th</sup> Committee of the Chinese Association for the Study of Pain, this special edition contains nine consensus and one guideline.

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## INTRODUCTION

On July 16, 2007, the Ministry of Health of China officially issued a document, adding the first level diagnosis and treatment discipline “Algology,” code: “27” in the list of diagnosis and treatment subjects of medical institutions. In the past 13 years, pain medicine has developed rapidly in China and accumulated rich Chinese experience in the diagnosis and treatment of various pain diseases. The Chinese Association for the Study of Pain (CASP) is the most important pain academic organization in China. In recent years, it has made outstanding contributions in promoting the development of the pain discipline and in establishing pain standards and disease diagnosis and treatment guidelines.

Under the leadership of Yan-Qing Liu, Chairman of the 7<sup>th</sup> Committee of CASP, this special edition contains nine consensus and one guideline.

## GUIDELINES

### **Expert panel’s guidelines on cervicogenic headache: The CASP recommendation<sup>[1]</sup>**

Cervicogenic headache was recognized as a unique form of headache that is difficult to diagnose and treat. Pharmacologic treatment is recommended as the first-line therapy for cervicogenic headache. C2-3 posterior medial branch radiofrequency (RF) intervention is conditionally recommended for patients with persistent cervicogenic headache. Imaging technologies (ultrasound, X-ray and computed tomography) are recommended to guide invasive therapies<sup>[2]</sup>.

## CONSENSUS

### **Chronic pain**

**Expert consensus of CASP on the diagnosis and treatment for lumbar disc herniation<sup>[3]</sup>:** Lumbar disc herniation is one of the most common and recurrent diseases. This consensus from CASP points out that: Individualized treatment regimen should be taken according to the course, clinical manifestations, the location of the disc herniation and the severity of the corresponding nerve root compression. The routine strategies used for lumbar disc herniation treatment include medicine, minimally invasive interventional therapy, surgery and rehabilitation<sup>[4]</sup>.

**Expert consensus of CASP on the diagnosis and treatment of myofascial pain syndrome<sup>[5]</sup>:** Myofascial pain syndrome refers to a type of chronic pain syndrome that recurs in muscles, fascias or related soft tissues and can be accompanied by obvious emotional disorders or dysfunctions. Acupuncture and moxibustion therapy are based on the theory of human meridians. The treatment of silver needle combined with heat conduction and acupotomy (a combination of Chinese acupuncture and Western surgery) are both effective methods for the treatment of persistent myofascial pain syndrome. Moreover, local anesthetic, corticosteroid and botulinum toxin, oxygen-ozone injection and RF therapy can relieve pain and remarkably improve function<sup>[6,7]</sup>.

**Expert consensus of CASP on chronic postsurgical pain<sup>[8]</sup>:** Although there are many improvements in surgical procedures, acute pain interventions and the application of multiple preventive measures, chronic postsurgical pain is still one of the most common surgery-related complications<sup>[9]</sup>. Optimized surgical procedure, multiple analgesia, psychological intervention and rehabilitation are the four most important factors. The people closely related to chronic postsurgical pain are surgeons, anesthesiologists and pain physicians. The cooperation among the three can maximize the patient’s benefit<sup>[10]</sup>.

### **Pharmacologic therapy**

Analgesics are the first choice in the treatment of pain. The guidance and suggestions of the expert consensus and guidelines should be followed to prescribe medicine safely

and effectively.

**Expert consensus of CASP on the non-opioid analgesics for chronic musculoskeletal pain<sup>[11]</sup>:** In recent years, the “opioid crisis” has been a topic of interest. More and more doctors realized that they should pay more attention to non-opioid analgesics. This special issue covers the use of non-opioid drugs in chronic musculoskeletal pain (CMP). CMP is a common occurrence in clinical practice<sup>[12]</sup>. The purpose of this consensus is to present the application of nonsteroidal anti-inflammatory drugs, noradrenaline reuptake inhibitor, serotonin and norepinephrine reuptake inhibitors, muscle relaxants and ion channel drugs in CMP. Drugs targeted to ion channels should be considered for CMP with neuropathic pain<sup>[13]</sup>.

**Expert consensus of CASP on the ion channel drugs for neuropathic pain<sup>[14]</sup>:** The treatment of neuropathic pain is also an important clinical problem. According to this expert consensus, the indications, contraindications, usage and adverse reactions of sodium channel blockers (such as carbamazepine, oxcarbazepine, lidocaine and bupivacaine) and calcium channel regulators (such as gabapentin and pregabalin) were elaborated upon<sup>[15,16]</sup>. The inhibitory effect of a sodium channel drug, bulleyaconitine A, was fully explored because it has excellent clinical effects.

**Expert consensus of CASP on pain treatment with a transdermal patch<sup>[17]</sup>:** Transdermal patch is one percutaneous delivery method that can deliver drugs through the skin and capillaries at a certain rate to achieve a systemic or local therapeutic effect in the affected area. Nonsteroidal anti-inflammatory drug transdermal patch is effective in the treatment of chronic skeletal muscle pain with few side effects and is recommended as the first choice for the treatment of CMP. When the efficacy of transdermal nonsteroidal anti-inflammatory drugs alone is not enough, it can be combined with other analgesic drugs. Opioid transdermal patches are effective in the treatment of chronic pain, but they should not be used as the initial treatment for chronic pain because of the potential addiction and adverse reactions<sup>[18,19]</sup>.

### **Interventional therapy**

Generally speaking, medicine and analgesics can offer 60%-70% of pain relief in pain disease. If conventional medicine cannot provide enough relief, minimally invasive interventional therapy is needed. It requires detailed assessment of the patient's situation and the benefit-and-risk ratio. In the past 3 years, CASP has developed a number of expert consensus on diagnosis and treatment standards of special minimally invasive interventional therapy.

**Expert consensus of CASP on the application of ozone therapy in pain medicine<sup>[20]</sup>:** Ozone, a strong oxidant, can be used in the treatment of pain diseases. Due to a variety of biological effects in the body, it can provide significant effects<sup>[21]</sup>. The purpose of this consensus was to help the rational application of ozone in pain treatment thereby improving its efficacy and safety and to reduce and prevent the potential adverse reactions and complications.

**Expert consensus of CASP on RF therapy technology in the department of pain<sup>[22]</sup>:** Evidence suggests that RF is effective for pain treatment, including discogenic pain, postherpetic neuralgia, chronic lumbosacral radicular pain and phantom limb pain<sup>[23,24]</sup>. RF therapy can be divided into standard RF (thermocoagulation) mode and nondestructive pulsed RF mode. RF therapy has no thermal coagulation damage, so it has a wider range of use in the treatment of chronic pain.

**Expert consensus of CASP on ultrasound-guided injections for the treatment of spinal pain in China (2020 edition)<sup>[25]</sup>:** Ultrasound-guided injections for the treatment of spinal pain are increasingly being applied in clinical practice. This clinical expert consensus described the purpose, significance, implementation methods, indications, contraindications and technique tips of ultrasound-guided injections. This consensus offered references for physicians to successfully implement ultrasound-guided injections for chronic spinal pain.

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## **CONCLUSION**

To sum up, this special issue is a summary of different consensus made by the 7<sup>th</sup> CASP in the past 3 years. Many pain and orthopedic experts have worked hard for this. We wish this special issue can bring reference and help for doctors and the

disciplines in the diagnosis of chronic pain, drug treatment and application of minimally invasive interventional therapy. This will help provide standards and criteria in daily clinical work.

## REFERENCES

- 1 **Xiao H**, Peng BG, Ma K, Huang D, Liu XG, Lv Y, Liu Q, Lu LJ, Liu JF, Li YM, Song T, Tao W, Shen W, Yang XQ, Wang L, Zhang XM, Zhuang ZG, Liu H, Liu YQ. Expert panel's guideline on cervicogenic headache: The Chinese Association for the Study of Pain recommendation. *World J Clin Cases* 2021; **9**: 2027-2036 [DOI: [10.12998/wjcc.v9.i9.2027](https://doi.org/10.12998/wjcc.v9.i9.2027)]
- 2 **Xiao H**, Peng B, Ma K, Huang D, Liu X, Lu Y, Liu Q, Lu L, Liu J, Li Y, Song T, Tao W, Shen W, Yang X, Wang L, Zhang X, Zhuang Z, Liu H, Liu Y. The Chinese Association for the Study of Pain (CASP): Expert Consensus on the Cervicogenic Headache. *Pain Res Manag* 2019; **2019**: 9617280 [PMID: [31065305](https://pubmed.ncbi.nlm.nih.gov/31065305/) DOI: [10.1155/2019/9617280](https://doi.org/10.1155/2019/9617280)]
- 3 **Cheng ZX**, Zheng YJ, Feng ZY, Fang HW, Zhang JY, Wang XR. Chinese Association for the Study of Pain: Expert consensus on diagnosis and treatment for lumbar disc herniation. *World J Clin Cases* 2021; **9**: 2058-2067 [DOI: [10.12998/wjcc.v9.i9.2058](https://doi.org/10.12998/wjcc.v9.i9.2058)]
- 4 **Brayda-Bruno M**, Tibiletti M, Ito K, Fairbank J, Galbusera F, Zerbi A, Roberts S, Wachtel E, Merkher Y, Sivan SS. Advances in the diagnosis of degenerated lumbar discs and their possible clinical application. *Eur Spine J* 2014; **23** Suppl 3: S315-S323 [PMID: [23978994](https://pubmed.ncbi.nlm.nih.gov/23978994/) DOI: [10.1007/s00586-013-2960-9](https://doi.org/10.1007/s00586-013-2960-9)]
- 5 **Cao QW**, Peng BG, Wang L, Huang YQ, Jia DL, Jiang H, Lv Y, Liu XG, Liu RG, Li Y, Song T, Shen W, Yu LZ, Zheng YJ, Liu YQ, Huang D. Expert consensus on the diagnosis and treatment of myofascial pain syndrome. *World J Clin Cases* 2021; **9**: 2077-2089 [DOI: [10.12998/wjcc.v9.i9.2077](https://doi.org/10.12998/wjcc.v9.i9.2077)]
- 6 **Saxena A**, Chansoria M, Tomar G, Kumar A. Myofascial pain syndrome: an overview. *J Pain Palliat Care Pharmacother* 2015; **29**: 16-21 [PMID: [25558924](https://pubmed.ncbi.nlm.nih.gov/25558924/) DOI: [10.3109/15360288.2014.997853](https://doi.org/10.3109/15360288.2014.997853)]
- 7 **Cho IT**, Cho YW, Kwak SG, Chang MC. Comparison between ultrasound-guided interfascial pulsed radiofrequency and ultrasound-guided interfascial block with local anesthetic in myofascial pain syndrome of trapezius muscle. *Medicine (Baltimore)* 2017; **96**: e6019 [PMID: [28151904](https://pubmed.ncbi.nlm.nih.gov/28151904/) DOI: [10.1097/MD.00000000000006019](https://doi.org/10.1097/MD.00000000000006019)]
- 8 **Liu YM**, Feng Y, Liu YQ, Lv Y, Xiong YC, Ma K, Zhang XW, Liu JF, Jin Y, Bao HG, Yan M, Song T, Liu Q. Chinese Association for the Study of Pain: Expert consensus on chronic postsurgical pain. *World J Clin Cases* 2021; **9**: 2090-2099 [DOI: [10.12998/wjcc.v9.i9.2090](https://doi.org/10.12998/wjcc.v9.i9.2090)]
- 9 **Schug SA**, Lavand'homme P, Barke A, Korwisi B, Rief W, Treede RD; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: chronic postsurgical or posttraumatic pain. *Pain* 2019; **160**: 45-52 [PMID: [30586070](https://pubmed.ncbi.nlm.nih.gov/30586070/) DOI: [10.1097/j.pain.0000000000001413](https://doi.org/10.1097/j.pain.0000000000001413)]
- 10 **Clarke H**, Katz J, Flor H, Rietschel M, Diehl SR, Seltzer Z. Genetics of chronic post-surgical pain: a crucial step toward personal pain medicine. *Can J Anaesth* 2015; **62**: 294-303 [PMID: [25471684](https://pubmed.ncbi.nlm.nih.gov/25471684/) DOI: [10.1007/s12630-014-0287-6](https://doi.org/10.1007/s12630-014-0287-6)]
- 11 **Huang D**, Liu YQ, Xia LJ, Liu XG, Ma K, Liu GZ, Xiao LZ, Song T, Yang XQ, Fu ZJ, Yan M. Expert consensus of Chinese Association for the Study of Pain on the non-opioid analgesics for chronic musculoskeletal pain. *World J Clin Cases* 2021; **9**: 2068-2076 [DOI: [10.12998/wjcc.v9.i9.2068](https://doi.org/10.12998/wjcc.v9.i9.2068)]
- 12 **Clauw DJ**. Diagnosing and treating chronic musculoskeletal pain based on the underlying mechanism(s). *Best Pract Res Clin Rheumatol* 2015; **29**: 6-19 [PMID: [26266995](https://pubmed.ncbi.nlm.nih.gov/26266995/) DOI: [10.1016/j.berh.2015.04.024](https://doi.org/10.1016/j.berh.2015.04.024)]
- 13 **Dworkin RH**, O'Connor AB, Audette J, Baron R, Gourlay GK, Haanpää ML, Kent JL, Krane EJ, Lebel AA, Levy RM, Mackey SC, Mayer J, Miaskowski C, Raja SN, Rice AS, Schmader KE, Stacey B, Stanos S, Treede RD, Turk DC, Walco GA, Wells CD. Recommendations for the pharmacological management of neuropathic pain: an overview and literature update. *Mayo Clin Proc* 2010; **85**: S3-14 [PMID: [20194146](https://pubmed.ncbi.nlm.nih.gov/20194146/) DOI: [10.4065/mcp.2009.0649](https://doi.org/10.4065/mcp.2009.0649)]
- 14 **Xiao H**, Ma K, Huang D, Liu XG, Liu TH, Liu Q, Liu GZ, Song T, Tao W, Wu DS, Wang YX, Yang XQ, Zhang XM, Liu H, Liu YQ. Expert consensus of the Chinese Association for the Study of Pain on ion channel drugs for neuropathic pain. *World J Clin Cases* 2021; **9**: 2100-2109 [DOI: [10.12998/wjcc.v9.i9.2100](https://doi.org/10.12998/wjcc.v9.i9.2100)]
- 15 **van Hecke O**, Austin SK, Khan RA, Smith BH, Torrance N. Neuropathic pain in the general population: a systematic review of epidemiological studies. *Pain* 2014; **155**: 654-662 [PMID: [24291734](https://pubmed.ncbi.nlm.nih.gov/24291734/) DOI: [10.1016/j.pain.2013.11.013](https://doi.org/10.1016/j.pain.2013.11.013)]
- 16 **Attal N**, Cruccu G, Baron R, Haanpää M, Hansson P, Jensen TS, Nurmikko T; European Federation of Neurological Societies. EFNS guidelines on the pharmacological treatment of neuropathic pain: 2010 revision. *Eur J Neurol* 2010; **17**: 1113-1e88 [PMID: [20402746](https://pubmed.ncbi.nlm.nih.gov/20402746/) DOI: [10.1111/j.1468-1331.2010.02999.x](https://doi.org/10.1111/j.1468-1331.2010.02999.x)]
- 17 **Ma K**, Jiang W, Wang YX, Wang L, Lv Y, Liu JF, Liu RG, Liu H, Xiao LZ, Du DP, Lu LJ, Yang XQ, Xia LJ, Huang D, Fu ZJ, Peng BG, Liu YQ. Expert consensus of the Chinese Association for the Study of Pain on pain treatment with the transdermal patch. *World J Clin Cases* 2021; **9**: 2110-2122 [DOI: [10.12998/wjcc.v9.i9.2110](https://doi.org/10.12998/wjcc.v9.i9.2110)]

- 18 **Pergolizzi JV Jr**, Coluzzi F, Taylor R Jr. Transdermal buprenorphine for moderate chronic noncancer pain syndromes. *Expert Rev Neurother* 2018; **18**: 359-369 [PMID: 29667437 DOI: 10.1080/14737175.2018.1462701]
- 19 **Fathima SA**, Begum S, Fatima SS. Transdermal Drug Delivery System. *Int J Pharm Clin Res* 2017; **9**: 35-43
- 20 **Zhuang ZG**, Lu LJ, Peng BG, Ma K, Cai ZY, Fu ZJ, Liu GZ, Liu JF, Liu WT, Li XH, Song T, Wu DS, Yao J, Yao P, Yu JS, Liu YQ. Expert consensus of Chinese Association for the Study of Pain on the application of ozone therapy in pain medicine. *World J Clin Cases* 2021; **9**: 2037-2046 [DOI: 10.12998/wjcc.v9.i9.2037]
- 21 **Re L**, Sanchez GM, Mawsouf N. Clinical evidence of ozone interaction with pain mediators. *Saudi Med J* 2010; **31**: 1363-1367 [PMID: 21136002]
- 22 **Liu JF**, Shen W, Huang D, Song T, Tao W, Liu Q, Huang YQ, Zhang XM, Xia LJ, Wu DS, Liu H, Chen FY, Liu TH, Peng BG, Liu YQ. Expert consensus of Chinese Association for the Study of Pain on the radiofrequency therapy technology in the Department of Pain. *World J Clin Cases* 2021; **9**: 2123-2135 [DOI: 10.12998/wjcc.v9.i9.2123]
- 23 **Wan CF**, Liu Y, Dong DS, Zhao L, Xi Q, Yu X, Cui WY, Wang QS, Song T. Bipolar High-Voltage, Long-Duration Pulsed Radiofrequency Improves Pain Relief in Postherpetic Neuralgia. *Pain Physician* 2016; **19**: E721-E728 [PMID: 27389115]
- 24 **Chua NH**, Vissers KC, Sluijter ME. Pulsed radiofrequency treatment in interventional pain management: mechanisms and potential indications-a review. *Acta Neurochir (Wien)* 2011; **153**: 763-771 [PMID: 21116663 DOI: 10.1007/s00701-010-0881-5]
- 25 **Wang Y**, Wang AZ, Wu BS, Zheng YJ, Zhao DQ, Liu H, Xu H, Fang HW, Zhang JY, Cheng ZX, Wang XR. Chinese Association for the Study of Pain: Experts consensus on ultrasound-guided injections for the treatment of spinal pain in China (2020 edition). *World J Clin Cases* 2021; **9**: 2047-2057 [DOI: 10.12998/wjcc.v9.i9.2047]



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