

World Journal of *Clinical Cases*

World J Clin Cases 2024 January 6; 12(1): 1-235



Contents

Thrice Monthly Volume 12 Number 1 January 6, 2024

OPINION REVIEW

- 1 Gut-targeted therapies for type 2 diabetes mellitus: A review
Xu TC, Liu Y, Yu Z, Xu B

MINIREVIEWS

- 9 Honeymoon phase in type 1 diabetes mellitus: A window of opportunity for diabetes reversal?
Mittal M, Porchezian P, Kapoor N

ORIGINAL ARTICLE

Retrospective Cohort Study

- 15 Evaluating combined bevacizumab and XELOX in advanced colorectal cancer: Serum markers carcinoembryonic antigen, carbohydrate antigen 125, carbohydrate antigen 199 analysis
Zhou DB, Cheng J, Zhang XH
- 24 Clinical value of precise rehabilitation nursing in management of cerebral infarction
Xu YN, Wang XZ, Zhang XR

Retrospective Study

- 32 Marker Ki-67 is a potential biomarker for the diagnosis and prognosis of prostate cancer based on two cohorts
Song Z, Zhou Q, Zhang JL, Ouyang J, Zhang ZY
- 42 Natural history of asymptomatic gallbladder stones in clinic without beds: A long-term prognosis over 10 years
Sakai Y, Tsuyuguchi T, Ohyama H, Kumagai J, Kaiho T, Ohtsuka M, Kato N, Sakai T
- 51 Clinical nursing value of predictive nursing in reducing complications of pregnant women undergoing short-term massive blood transfusion during cesarean section
Cheng L, Li LP, Zhang YY, Deng F, Lan TT
- 59 Effect of cardiac rehabilitation care after coronary intervention on cardiac function recovery and negative mood in patients with myocardial infarction
Yang M, Huang YT, Hu XW, Wu CL
- 68 Efficacy and safety of Nafamostat mesylate in patients with end-stage renal failure
Liu K, Li ZH
- 76 Nursing effect of narrative nursing intervention on postoperative patients with severe lung cancer
Wen B, Liu Y, Min XX, Wang AQ

Observational Study

- 86 Interaction between adolescent sleep rhythms and gender in an obese population
Wu NN, Yan GL, Zhang HY, Sun L, Hou M, Xu GM

SYSTEMATIC REVIEWS

- 95 Endoscopic submucosal dissection *vs* transanal endoscopic surgery for rectal tumors: A systematic review and meta-analysis
Huang LW, Zhong Y
- 107 Impact of frailty on outcomes of elderly patients undergoing percutaneous coronary intervention: A systematic review and meta-analysis
Wang SS, Liu WH
- 119 Nasogastric tube syndrome: A Meta-summary of case reports
Juneja D, Nasa P, Chanchalani G, Jain R

CASE REPORT

- 130 Erythrodermic mycosis fungoides: A case report
Xu WB, Zhang YP, Zhou SP, Bai HY
- 136 Azacitidine maintenance therapy for blastic plasmacytoid dendritic cell neoplasm allograft: A case report
Tao LL, Wen HT, Wang ZY, Cheng J, Zhao L
- 142 Congestive ischemic colitis successfully treated with anti-inflammatory therapy: A case report
Lee GW, Park SB
- 148 Subarachnoid hemorrhage misdiagnosed as acute coronary syndrome leading to catastrophic neurologic injury: A case report
Lin JM, Yuan XJ, Li G, Gan XR, Xu WH
- 157 Successful management of severe hypoglycemia induced by total parenteral nutrition in patients with hepatocellular injury: Three cases reports
Fang LZ, Jin HX, Zhao N, Wu YP, Shi YQ
- 163 Endophthalmitis in silicone oil-filled eye: A case report
Yan HC, Wang ZL, Yu WZ, Zhao MW, Liang JH, Yin H, Shi X, Miao H
- 169 Lung imaging characteristics in a patient infected with *Elizabethkingia miricola* following cerebral hemorrhage surgery: A case report
Qi PQ, Zeng YJ, Peng W, Kuai J
- 176 Gastric IgG4-related disease mimicking a gastrointestinal stromal tumor in a child: A case report
Lin HCA, Lee KF, Huang TH
- 180 Labial inverse dilaceration of bilateral maxillary central incisors: A case report
Wang JM, Guo LF, Ma LQ, Zhang J

- 188** Changes in macrophage infiltration and podocyte injury in lupus nephritis patients with repeated renal biopsy: Report of three cases
Liu SY, Chen H, He LJ, Huang CK, Wang P, Rui ZR, Wu J, Yuan Y, Zhang Y, Wang WJ, Wang XD
- 196** Primary acinic cell carcinoma of the breast: A case report and review of literature
Ding JS, Zhang M, Zhou FF
- 204** Acupuncture for cervical dystonia associated with anxiety and depression: A case report
Zhang YT, Zhang JJ, Zha BX, Fan YQ, Xu YB, Yang J, Zhang QP
- 210** Intestinal malrotation complicated with gastric cancer: A case report
Jia XH, Kong S, Gao XX, Cong BC, Zheng CN
- 217** Addison's disease caused by adrenal tuberculosis may lead to misdiagnosis of major depressive disorder: A case report
Zhang TX, Xu HY, Ma W, Zheng JB
- 224** Pleural empyema with endobronchial mass due to *Rhodococcus equi* infection after renal transplantation: A case report and review of literature
Liang GF, Chao S, Sun Z, Zhu KJ, Chen Q, Jia L, Niu YL

LETTER TO THE EDITOR

- 232** Chronic venous insufficiency, could it be one of the missing pieces in the puzzle of treating pain?
Chang MC

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Woon-Man Kung, MD, Associate Professor, Surgeon, Department of Exercise and Health Promotion, College of Kinesiology and Health, Chinese Culture University, Taipei 11114, Taiwan. nskungwm@yahoo.com.tw

AIMS AND SCOPE

The primary aim of *World Journal of Clinical Cases* (*WJCC*, *World J Clin Cases*) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

INDEXING/ABSTRACTING

The *WJCC* is now abstracted and indexed in Science Citation Index Expanded (SCIE, also known as SciSearch®), Journal Citation Reports/Science Edition, Current Contents®/Clinical Medicine, PubMed, PubMed Central, Reference Citation Analysis, China Science and Technology Journal Database, and Superstar Journals Database. The 2023 Edition of Journal Citation Reports® cites the 2022 impact factor (IF) for *WJCC* as 1.1; IF without journal self cites: 1.1; 5-year IF: 1.3; Journal Citation Indicator: 0.26; Ranking: 133 among 167 journals in medicine, general and internal; and Quartile category: Q4.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: *Si Zhao*; Production Department Director: *Xiang Li*; Editorial Office Director: *Jin-Lei Wang*.

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Thrice Monthly

EDITORS-IN-CHIEF

Bao-Gan Peng, Salim Surani, Jerzy Tadeusz Chudek, George Kontogeorgos, Maurizio Serati

EDITORIAL BOARD MEMBERS

<https://www.wjgnet.com/2307-8960/editorialboard.htm>

PUBLICATION DATE

January 6, 2024

COPYRIGHT

© 2024 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

<https://www.wjgnet.com/bpg/gerinfo/204>

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjgnet.com/bpg/GerInfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

<https://www.wjgnet.com/bpg/gerinfo/240>

PUBLICATION ETHICS

<https://www.wjgnet.com/bpg/GerInfo/288>

PUBLICATION MISCONDUCT

<https://www.wjgnet.com/bpg/gerinfo/208>

ARTICLE PROCESSING CHARGE

<https://www.wjgnet.com/bpg/gerinfo/242>

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjgnet.com/bpg/GerInfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>



Chronic venous insufficiency, could it be one of the missing pieces in the puzzle of treating pain?

Min Cheol Chang

Specialty type: Medicine, research and experimental

Provenance and peer review: Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0
Grade B (Very good): 0
Grade C (Good): C
Grade D (Fair): D
Grade E (Poor): 0

P-Reviewer: Gupta L, Indonesia;
Nagamine T, Japan

Received: November 16, 2023

Peer-review started: November 16, 2023

First decision: December 18, 2023

Revised: December 18, 2023

Accepted: December 20, 2023

Article in press: December 20, 2023

Published online: January 6, 2024



Min Cheol Chang, Department of Physical Medicine and Rehabilitation, Yeungnam University Hospital, Daegu 705-717, South Korea

Corresponding author: Min Cheol Chang, MD, Professor, Department of Physical Medicine and Rehabilitation, Yeungnam University Hospital, Daemyungdong, Namku, Daegu 705-717, South Korea. wheel633@gmail.com

Abstract

Pain is a common complaint among patients seeking medical care. If left untreated, pain can become chronic, significantly affecting patients' quality of life. An accurate diagnosis of the underlying cause of pain is crucial for effective treatment. Chronic venous insufficiency (CVI) is frequently overlooked by pain physicians. Moreover, many pain physicians lack sufficient knowledge about CVI. CVI is a common condition resulting from malfunctioning or damaged valves in lower limb veins. Symptoms of CVI, ranging from mild to severe, include pain, heaviness, fatigue, itching, swelling, skin color changes, and ulcers in the lower limbs. Recently, it has become more widely known that these symptoms can be attributed to CVI. Even slight or mild CVI can cause related symptoms. Pain physicians primarily consider neuromusculoskeletal disorders when assessing patients with leg pain, and often neglect the possibility of CVI. In clinical practice, when pain physicians encounter patients with unresolved leg pain, they must assess whether the patients exhibit symptoms of CVI and conduct tests to differentiate CVI from other potential causes.

Key Words: Pain; Chronic venous insufficiency; Diagnosis; Treatment; Vein

©The Author(s) 2024. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: Severe pain can interfere with activities related to daily living and work. To treat pain effectively, accurately diagnosing its underlying cause is crucial. However, the specialization of medical disciplines may lead pain physicians to only consider the nervous or musculoskeletal systems as the primary causes of pain. Often, they do not strongly consider the possibility of pain of vascular origin. Chronic venous insufficiency (CVI) is one of the most common venous disorders causing leg pain. Therefore, the possibility of CVI should be considered in patients with leg pain, potentially leading to resolution of chronic debilitating pain in these patients.

Citation: Chang MC. Chronic venous insufficiency, could it be one of the missing pieces in the puzzle of treating pain? *World J Clin Cases* 2024; 12(1): 232-235

URL: <https://www.wjgnet.com/2307-8960/full/v12/i1/232.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v12.i1.232>

TO THE EDITOR

We interestingly read Gao *et al*'s published review article[1]. The article provides a detailed overview of the treatment of chronic venous insufficiency (CVI), offering valuable insights for readers. I believe that physicians in the pain management field should be aware of this disorder. Here, I emphasize that CVI should be considered as a relevant condition when patients complain of leg pain.

The International Association for the Study of Pain defines pain as “an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage”[2]. It is primarily caused by tissue damage and inflammation[3]. Pain is a main complaint of patients visiting hospitals and clinics. If the pain is not properly treated, it becomes chronic and may be difficult to control[3]. Around 20% of adults are reported to suffer from chronic pain[3]. Severe pain can interfere with activities related to daily living or work. In addition, it can lead to psychiatric disorders such as depression and anxiety.

To treat pain effectively, accurately diagnosing its underlying cause is crucial. For this purpose, physical examinations, imaging studies, electrodiagnostic studies, and diagnostic blocks are used. In most cases, these tests lead to accurate diagnoses, but sometimes the underlying cause cannot be identified, or pain physicians miss the correct diagnosis. Currently, the medical field is divided into several parts, each of which is highly specialized. Therefore, medical doctors often lack sufficient knowledge in fields outside of their own expertise. Most pain physicians believe that the nervous or musculoskeletal systems are the primary cause of pain. They frequently do not strongly consider the possibility of pain of a vascular origin. Furthermore, even when it is considered, many pain physicians only associate vascular-origin pain with issues in the arteries, and not veins. However, venous problems can also cause pain[4]. CVI is one of the most common venous disorders causing leg pain[4]. With advancements in diagnostic technologies, the diagnosis of CVI has recently increased[5]. Therefore, the possibility of CVI should be considered in patients with leg pain.

CVI most commonly occurs because of malfunctioning or damaged valves in the veins of the lower limbs. This leads to a reverse flow of blood and increased pressure in the leg veins, resulting in symptoms such as leg pain, heaviness, fatigue, itching, swelling, skin color changes, and ulcers[6]. Recently, it has become widely known that symptoms attributed to CVI can occur even in cases with slight or mild severity [clinical classes of the Clinical-Etiology-Anatomy-Pathophysiology (CEAP) classification, C0 (no visible or palpable signs of venous disease) or C1 (telangiectasia or reticular veins)], and treatment of these cases can relieve patients' symptoms and improve their quality of life (Table 1) [7]. In 2022, Hong[7] reported that 43.8% of 1386 limbs with symptomatic and treated CVI were C0 or C1[7]. Currently, with advancements in ultrasound technology, the number of diagnoses of CVI with CEAP classification C0 or C1 has been increasing, including those which were previously overlooked due to previous imaging limitations[7].

CVI is a common condition; its prevalence has been reported to range from 25% to 40% and 10%-20% in women and men, respectively[8]. The annual incidence is 2%-6% in women and 1.9% in men. Leg pain in some patients is likely caused by CVI. However, when patients complain of leg pain in the clinic, pain physicians primarily consider lumbosacral radicular pain to be due to spinal disorders or diseases of the joints, ligaments, muscles, and tendons of the leg. Most pain physicians do not consider the possibility of CVI in patients with leg pain.

CVI can be diagnosed using a probe with a frequency of 4-7 MHz in both B-mode and Doppler modes[9]. By performing the Valsalva maneuver, increasing the intra-abdominal pressure in an upright position, applying pressure with the fingers to promote venous outflow, or rapidly releasing a pneumatic cuff (within 0.3 s), continuous retrograde blood flow can be observed to diagnose CVI in the deep and superficial veins. CVI is diagnosed when retrograde flow persists for more than 0.5 s in superficial veins, 1 s in deep veins, and 0.35 s in perforating veins.

As a conservative treatment, the use of compression stockings with ankle pressure of 20-30 mmHg for patients with symptomatic CVI is recommended[10]. In addition, sclerotherapy using foam or liquid agents such as polidocanol or sodium tetradecyl sulfate can be used to treat reflux in veins with small diameters, reticular veins, and telangiectasia[11]. In cases of CVI in veins with large diameters, laser or high-frequency closure ablation is used[12,13].

In clinical practice, patients with leg pain due to CVI are often misdiagnosed as having neuromusculoskeletal disorders, leading to the use of incorrect treatments, such as oral pain medication, various physical therapies, and steroid injections. Even if these treatments are ineffective, CVI is still not frequently considered an underlying condition by pain physicians, who may label patients' pain as untreatable refractory neuromusculoskeletal pain. When pain physicians

Table 1 Clinical classes of the clinical-etiology-anatomy-pathophysiology classification

Classification	
C0	No visible or palpable signs of venous diseases
C1	Telangiectasia or reticular veins
C2	Varicose veins
C3	Edema
C4	Skin changes due to venous diseases (pigmentation, venous eczema, and lipodermatosclerosis)
C5	Skin changes as defined above with a healed ulcer
C6	Skin changes as defined above with an active ulcer

encounter patients with unresolved leg pain, they need to assess whether the patient exhibits symptoms of CVI and conduct tests to differentiate CVI and other potential causes.

Based on my personal experience, patients with leg pain who have lumbar spinal stenosis are believed to have pain attributed to this condition. They usually undergo multiple transforaminal epidural steroid injections along with various oral pain medications. However, sometimes, the patients' pain does not respond to these treatments. In these cases, despite the lack of apparent gross vascular symptoms in the legs, positive findings are frequently identified during Doppler ultrasound examinations conducted for the purpose of confirming CVI. It was observed that several of these patients experienced a positive therapeutic effect after undergoing closure ablation of the great or small saphenous veins. The investigation into whether the application of compression stockings reduces a patient's pain prior to performing vein closure ablation can be beneficial in predicting the efficacy of the closure ablation treatment. In addition, confirming the lack of response to diagnostic lumbosacral nerve root block with lidocaine can aid in predicting the effectiveness of closure ablation therapy. Furthermore, the pain associated with CVI does not follow a dermatomal pattern and is frequently characterized by a sensation of heaviness in the legs[14]. Moreover, the leg pain persists regardless of whether the individual is standing, lying, or sitting. In contrast to the pain caused by spinal stenosis, walking often provides relief in many cases of CVI-associated pain[14].

In clinical practice, pain physicians sometimes encounter patients in which the cause of pain is unclear, and no treatment can alleviate the pain. In such cases, particularly in patients who exhibit symptoms related to CVI, pain physicians should consider the possibility of CVI. Perhaps the CVI could be a missing piece of the puzzle for treating patients with unresolved pain in the field of pain medicine.

FOOTNOTES

Author contributions: Chang MC designed the research study, performed the research, analyzed the data, and wrote the manuscript; Chang MC has read and approve the final manuscript.

Supported by The National Research Foundation of Korea Grant Funded by The Korea Government (MSIT), No. 00219725.

Conflict-of-interest statement: The author has no conflicts of interest to declare.

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>

Country/Territory of origin: South Korea

ORCID number: Min Cheol Chang 0000-0002-7629-7213.

S-Editor: Fan JR

L-Editor: A

P-Editor: Xu ZH

REFERENCES

- Gao RD, Qian SY, Wang HH, Liu YS, Ren SY. Strategies and challenges in treatment of varicose veins and venous insufficiency. *World J Clin Cases* 2022; **10**: 5946-5956 [PMID: 35949828 DOI: 10.12998/wjcc.v10.i18.5946]
- Raja SN, Carr DB, Cohen M, Finnerup NB, Flor H, Gibson S, Keefe FJ, Mogil JS, Ringkamp M, Sluka KA, Song XJ, Stevens B, Sullivan MD, Tutelman PR, Ushida T, Vader K. The revised International Association for the Study of Pain definition of pain: concepts, challenges, and

- compromises. *Pain* 2020; **161**: 1976-1982 [PMID: 32694387 DOI: 10.1097/j.pain.0000000000001939]
- 3 **Chang MC**. Conservative Treatments Frequently Used for Chronic Pain Patients in Clinical Practice: A Literature Review. *Cureus* 2020; **12**: e9934 [PMID: 32968595 DOI: 10.7759/cureus.9934]
- 4 **Orhurhu V**, Chu R, Xie K, Kamanyi GN, Salisu B, Salisu-Orhurhu M, Uruts I, Kaye RJ, Hasoon J, Viswanath O, Kaye AJ, Karri J, Marshall Z, Kaye AD, Anahita D. Management of Lower Extremity Pain from Chronic Venous Insufficiency: A Comprehensive Review. *Cardiol Ther* 2021; **10**: 111-140 [PMID: 33704678 DOI: 10.1007/s40119-021-00213-x]
- 5 **Shon S**, Kim H, Kim HC, Cho S, Lee SH, Joh JH. National trend of the treatment for chronic venous diseases in Korea between 2010 and 2020. *Ann Surg Treat Res* 2023; **104**: 27-33 [PMID: 36685771 DOI: 10.4174/astr.2023.104.1.27]
- 6 **Patel SK**, Surowiec SM. Venous Insufficiency. 2023 Jul 18. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan- [PMID: 28613694]
- 7 **Hong KP**. Correlation of Clinical Class with Duplex Ultrasound Findings in Lower Limb Chronic Venous Disease. *J Chest Surg* 2022; **55**: 233-238 [PMID: 35478179 DOI: 10.5090/jcs.22.010]
- 8 **Rodriguez Santos F**, Loson V, Coria A, Marquez Fossier C, Dotta M, Katsini R, Pared C, Bauzá Moreno H, Martínez H. Secondary Ablation of Recanalized Saphenous Vein after Endovenous Thermal Ablation. *Ann Vasc Surg* 2020; **68**: 172-178 [PMID: 32339689 DOI: 10.1016/j.avsg.2020.04.017]
- 9 **Labropoulos N**, Tiongsong J, Pryor L, Tassiopoulos AK, Kang SS, Ashraf Mansour M, Baker WH. Definition of venous reflux in lower-extremity veins. *J Vasc Surg* 2003; **38**: 793-798 [PMID: 14560232 DOI: 10.1016/s0741-5214(03)00424-5]
- 10 **Al Shammeri O**, AlHamdan N, Al-Hothaly B, Midhet F, Hussain M, Al-Mohaimeed A. Chronic Venous Insufficiency: prevalence and effect of compression stockings. *Int J Health Sci (Qassim)* 2014; **8**: 231-236 [PMID: 25505858]
- 11 **Kahle B**, Leng K. Efficacy of sclerotherapy in varicose veins-- prospective, blinded, placebo-controlled study. *Dermatol Surg* 2004; **30**: 723-8; discussion 728 [PMID: 15099314 DOI: 10.1111/j.1524-4725.2004.30207.x]
- 12 **Darwood RJ**, Theivacumar N, Dellagrammaticas D, Mavor AI, Gough MJ. Randomized clinical trial comparing endovenous laser ablation with surgery for the treatment of primary great saphenous varicose veins. *Br J Surg* 2008; **95**: 294-301 [PMID: 18278775 DOI: 10.1002/bjs.6101]
- 13 **Lurie F**, Creton D, Eklof B, Kabnick LS, Kistner RL, Pichot O, Sessa C, Schuller-Petrovic S. Prospective randomised study of endovenous radiofrequency obliteration (closure) versus ligation and vein stripping (EVOLVeS): two-year follow-up. *Eur J Vasc Endovasc Surg* 2005; **29**: 67-73 [PMID: 15570274 DOI: 10.1016/j.ejvs.2004.09.019]
- 14 **Yang DH**, Kim M, Yang JW, Cho JM, Park SJ, Kwon HD. Early-stage chronic venous disorder as a cause of leg pain overlooked for lumbar spinal disease. *Sci Rep* 2023; **13**: 18303 [PMID: 37880332 DOI: 10.1038/s41598-023-45623-0]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA

Telephone: +1-925-3991568

E-mail: bpgoffice@wjgnet.com

Help Desk: <https://www.f6publishing.com/helpdesk>

<https://www.wjgnet.com>

