Summary of evidence for the use of Chinese medicine nursing in symptom management of lung cancer patients

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Abstract

Objectives To search for and summarize the best evidence regarding traditional Chinese medicine nursing in symptom management for lung cancer patients, so as to provide a reference for healthcare professionals to implement traditional Chinese medicine characteristic symptom management for lung cancer patients.

Background Patients with lung cancer often experience treatment-related symptoms during treatment, which greatly reduces patients' quality of life and increases their treatment costs. Traditional Chinese medicine nursing technology plays a role in reducing adverse reactions, improving tumor complications, and enhancing quality of life.

Design An integrative review.

Methods A search was conducted for all evidence from guideline collaborative networks, professional association websites, and well-known domestic and international databases from the last 10 years. Literature quality appraisal tools were used to evaluate the quality of the included literature, and evidence was extracted from studies that met the quality criteria. The PRISMA checklist was used to evaluate the current study.

Results A total of 34 pieces of best evidence regarding the use of Chinese medicine nursing in symptom management for lung cancer patients were obtained. These covered three aspects: symptom management, emotions, and diet.

Conclusion The existing evidence shows that traditional Chinese medicine nursing demonstrates certain therapeutic effects in the symptom management of lung cancer patients. In order to promote the standardized application of tradi-

tional Chinese medicine nursing, more clinical research, systematic reviews, and other evidence are still needed in the future.

Relevance to Clinical Practice This study summarizes the evidence for the use of Chinese medicine nursing in symptom management for lung cancer patients and provides a basis for clinical decision-making for clinical nursing staff to implement traditional Chinese medicine nursing in the management of lung cancer symptoms.

Patient or Public Contribution/s There are no patient or public contributions to this study.

Full Text

Summary of Evidence for the Use of Traditional Chinese Medicine Nursing in Symptom Management of Lung Cancer Patients

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Abstract

Objective: To search for and summarize the best evidence regarding traditional Chinese medicine (TCM) nursing in the symptom management of lung cancer patients, thereby providing a reference for medical staff to implement TCM-based characteristic symptom management for this population.

Background: Patients with lung cancer frequently experience treatment-related symptoms that substantially reduce quality of life and increase treatment costs. Traditional Chinese medicine nursing technologies play an important role in reducing adverse reactions, improving tumor complications, and enhancing quality of life.

Methods: We systematically searched for evidence from guideline collaborative networks, professional association websites, and major domestic and international databases from the past 10 years. Literature quality evaluation tools were used to assess the quality of included studies, and evidence was extracted from those meeting the requirements. The PRISMA checklist was used to evaluate the current study.

Results: A total of 34 pieces of best evidence regarding the use of Chinese medicine nursing in symptom management of lung cancer patients were obtained, covering three aspects: symptom management, emotional care, and dietary care.

Conclusion: Existing evidence demonstrates that traditional Chinese medicine nursing has certain therapeutic effects in the symptom management of lung cancer patients. However, to promote the standardized application of TCM nursing, additional clinical research, systematic evaluations, and other forms of evidence are still needed in the future.

Relevance to Clinical Practice: This study summarizes the evidence for the use of Chinese medicine nursing in symptom management of lung cancer patients and provides clinical decision-making support for nursing staff to carry out TCM-based nursing in lung cancer symptom management.

Patient or Public Contribution: There are no patient or public contributions to this study.

Keywords: lung cancer; symptom management; summary; Traditional Chinese Medicine

Introduction

According to GLOBOCAN 2020 global cancer data, lung cancer is the second most common cancer worldwide[1]. In China, lung cancer ranks first in overall mortality among malignant tumors and represents the leading cause of cancer death[2]. Lung cancer treatment typically involves surgical intervention, chemotherapy, and radiotherapy, selected according to disease stage and type. During treatment, patients often experience treatment-related symptoms such as nausea and vomiting, diarrhea, rash caused by targeted drugs, and peripheral neuropathy caused by chemotherapy. These symptoms substantially reduce patients'quality of life and increase treatment costs, imposing a tremendous disease burden on patients and their families.

In recent years, high-quality evidence-based research has demonstrated the unique advantages of traditional Chinese medicine in lung cancer treatment, particularly in synergy with Western medicine to reduce adverse reactions and improve quality of life[3]. As an important component of TCM, TCM nursing is guided by TCM theoretical principles and based on holistic and dialectical nursing concepts. TCM nursing encompasses daily life care, dietary nursing,

emotional nursing, exercise nursing, and TCM nursing technologies. Among these, TCM nursing technology has formed relatively complete technical specifications, is widely used in clinical practice, and plays an important role in improving patient rehabilitation and prognosis[4]. Currently, evidence regarding TCM nursing in lung cancer symptom management is complex and scattered. This study systematically retrieved the latest and best evidence related to the application of TCM nursing in lung cancer symptom management and summarized this evidence to provide a reference for clinical departments both domestically and internationally.

Materials and Methods

Formulating Evidence-Based Questions

The PIPOST model from the JBI Evidence-Based Healthcare Center was used to construct evidence-based questions[5]:
- **P (Population):** Adult lung cancer patients
- **I (Intervention):** TCM nursing measures
- **P (Professional):** Clinical managers, nursing staff, patients, and caregivers
- **O (Outcome):** Remission rate of adverse symptoms such as vomiting, constipation, and diarrhea
- **S (Setting):** Hospital, community, or family
- **T (Type of Evidence):** Recommended practices, guidelines, standards, and systematic reviews

Search Strategy

According to the evidence-based "6S" evidence model[6], we conducted searches using terms including "lung cancer," "Chinese medicine nursing," "traditional Chinese medicine technology," "guidelines," "best practice," "evidence summary," and "systematic reviews." The search databases included UpToDate, BMJ Clinical Practice, Guidelines International Network (GIN), National Guidelines Clearinghouse (NGC), The Scottish Intercollegiate Guidelines Network (SIGN), The Canadian Medical Association (CMA), Registered Nurses of Ontario (RNAO), The New Zealand Guidelines Group (NZGG), Joanna Briggs Institute (JBI), Cochrane Evidence-Based Medicine Database, OVID Evidence-Based Database, Mosby' s Nursing Consultation, Elsevier, PubMed, Chinese Journal Full Text Database (CNKI), Wanfang Database, VIP, China Biomedical Literature Database (CBM), and the official website of Medlive. We also conducted supplementary searches of official websites of domestic and overseas Chinese medicine associations. Since guidelines are typically updated every five years, the database search period was set from July 2018 to July 2023, with publication languages limited to Chinese or English.

Inclusion and Exclusion Criteria

Inclusion criteria: (1) Study subjects were cancer patients diagnosed with lung cancer, aged $\geq$ 18 years; (2) Intervention measures were TCM nursing measures; (3) Publication language was Chinese or English.

Exclusion criteria: (1) Clinical practice guidelines, evidence summaries, and systematic evaluations with incomplete information; (2) Literature with only abstracts where full text could not be obtained.

Quality Evaluation Criteria

Guideline quality assessment: The quality of guidelines was independently evaluated using the British 2012 Clinical Guidelines for Research and Evaluation (AGREE II)[7].

Expert consensus: Evaluated using the text and opinion tool from the Australian JBI Evidence-Based Healthcare Center[8].

Systematic review: Evaluated for authenticity using tools from the Australian JBI Evidence-Based Healthcare Center[9,10].

Randomized controlled trials: Quality evaluation was conducted using the Cochrane risk of bias assessment tool[11].

Evidence Synthesis and Grading

Two researchers extracted data according to a pre-designed evidence extraction table and independently evaluated the evidence quality according to literature type. When conclusions from different sources were inconsistent or conflicting, the principles of prioritizing high-quality evidence, evidence-based evidence, and the most recent publication time were followed. The two researchers then synthesized recommendations according to three principles: consistent or complementary content, content conflict, and content independence[12]. In case of disagreement, a third researcher (a member of the evidence-based group) intervened through arbitration or negotiation to reach consensus.

Finally, the extracted evidence was graded using the JBI Evidence Recommendation Level System (2014 version)[13]. Researchers and clinical nursing experts discussed the level of evidence recommendation based on the precision, feasibility, applicability, and effectiveness of the evidence, dividing recommendations into strong recommendation (Level A) and weak recommendation (Level B).

Results

Literature Search Results

A total of 375 literatures were initially retrieved, with 66 remaining after deduplication. After reading titles and abstracts, 20 were removed, leaving 46. After full-text review, nine literatures were finally included: two clinical practice guidelines[14,15], two expert consensus documents[16,17], three systematic reviews[18-20], and two randomized controlled trials[21,22]. The basic information of the included literature is shown in Table 1 .

Quality Evaluation Results

Guideline evaluation results: Two clinical practice guidelines were included. The quality evaluation showed that one clinical practice guideline issued by the American Society of Clinical Oncology (ASCO) was recommended, and one clinical practice guideline issued by the Chinese Association of Integrative Medicine was recommended. The overall quality of the guidelines was good and suitable for inclusion. The standardized percentage and comprehensive evaluation of each domain are shown in Table 2 .

Expert consensus quality evaluation results: Two expert consensus documents were included: the TCM Nursing Plan for Lung Cancer issued by the National Administration of Traditional Chinese Medicine[16], and the Expert Consensus on the Diagnosis and Treatment of Lung Cancer by Integrated Traditional Chinese and Western Medicine jointly issued by The First Affiliated Hospital of Guangzhou University of Chinese Medicine and Sun Yat-sen University Cancer Center. The quality evaluation results are shown in Table 3 .

Systematic review quality evaluation results: Three systematic reviews were included, two from CNKI[18,19] and one from Wanfang[20]. The quality evaluation results are shown in Table 4 .

Randomized controlled trial quality evaluation results: Three randomized controlled trials were included, one from CNKI[21], one from PubMed[22], and one from Wanfang[23]. The quality evaluation results are shown in Table 5 .

Evidence Summary

Evidence extracted from symptom management, emotional care, and dietary care was summarized, yielding 34 pieces of evidence regarding TCM therapy in lung cancer symptom management, as shown in Table 6 .

Discussion

Traditional Chinese Medicine as Complementary and Integrative Medicine in Cancer Care

Traditional Chinese medicine has become a common treatment strategy in cancer treatment and rehabilitation. As the original medical science of the Chinese nation, TCM focuses on temporal evolution and holistic cognition, revealing the occurrence and development of human health and diseases from a macro and systematic perspective. As a complementary and integrative medicine (CAM), TCM is widely used internationally and has demonstrated good therapeutic effects. In the process of cancer treatment and rehabilitation, CAM has become a common coping strategy[24], with more than half of cancer patients worldwide reporting use of some form of CAM[25]. Cross-sectional survey results from the United States, South Korea, Sweden, and other countries indicate that CAM modalities should be considered in cancer treatment and nursing[26-28]. A systematic review of qualitative research found that cancer patients (regardless of disease stage) believe that complementary therapy can improve physical symptoms and psychological distress, with low cost and high safety[29].

Cancer patients' quality of life is compromised by adverse reactions after chemotherapy and disease-related fear. Studies have shown that implementing symptom management can provide patients with more refined and scientific nursing interventions[30]. The role of TCM treatment in lung cancer management cannot be ignored. Preliminary research has confirmed the effects of TCM therapies such as acupuncture and acupoint massage on lung cancer-related dyspnea, pain, fatigue, nausea, and vomiting[31]. To promote the application of TCM therapy in lung cancer symptom management by medical staff both domestically and internationally, this study used evidence-based methodology to summarize evidence, ultimately forming 34 pieces of best evidence regarding TCM therapy in lung cancer symptom management across three aspects: symptom management, emotional care, and dietary care. This evidence is scientific and practical, can improve clinical decision-making capacity for medical staff implementing TCM-based symptom management, and helps patients effectively relieve discomfort.

Implications for Clinical Practice of TCM-Based Lung Cancer Symptom Management

First, clinical TCM nurses need systematic and standardized training in TCM theory and skills to improve their understanding of TCM characteristic therapies, timely obtain the latest and best evidence, and master TCM therapeutic techniques. Second, appropriate nursing techniques should be selected according to specific symptoms. It is recommended that clinical medical staff combine the wishes of department managers and decision-makers before implementing TCM therapy for lung cancer patients, fully consider obstacles and facilitating factors in evidence application, and respect patient preferences when selecting

appropriate nursing technologies. Third, clinical research still needs to improve methodological quality. Due to limitations of current research conditions, included studies still have limitations and risk of bias, leading to degradation of evidence levels. Additionally, there are no clear standards for operational details of TCM therapy, such as frequency, acupoint selection, and course of treatment. Future multi-center, large-sample studies are still needed to further promote the formulation of relevant norms for TCM therapy in lung cancer symptom management.

Data Availability

All data generated or analyzed during this study are included in this published article.

Reporting Guidelines

PRISMA guidelines for "Summary of evidence for the use of Chinese medicine nursing in symptom management of lung cancer patients," Figshare: https://doi.org/10.6084/m9.figshare.25609509.v1[32].

Ethics Approval and Consent to Participate

Not applicable.

Consent for Publication

Not applicable.

Competing Interests

The authors declare that they have no competing interests.

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Authors' Contributions

JZ and LSP designed the experiments and wrote the article; JH collected and analyzed data and evaluated literature quality; LYL, YQM, and XMT provided work support and critical review of the intellectual content; BH and XXF proofread the article.

References

[1] Sung H, Ferlay J, Siegel RL, et al. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries[J]. CA Cancer J Clin, 2021, 71(3):209-249. DOI: 10.3322/caac.21660.

[2] Chen W, Zheng R, Baade PD, et al. Cancer statistics in China, 2015[J]. CA Cancer J Clin, 2016, 66(2):115-132. DOI: 10.3322/caac.21338.

[3] Yao JL, Jiao LJ, Xu L. Advances and reflections on the evidence-based practice of traditional Chinese medicine pharmacotherapy and non-pharmacotherapy in lung cancer[J]. World Clinical Drugs, 2021, 42(05):325-329. DOI: 10.13683/j.wph.2021.05.001.

[4] Zhang HM, Zhang ZX. Clinical application of traditional Chinese medicine characteristic nursing technology in respiratory diseases[J]. Clinical Journal of Chinese Medicine, 2023, 15(12):63-66. DOI: 10.3969/j.issn.1674-7860.2023.12.016.

[5] Munn Z, Lockwood C, Moola S. The Development and Use of Evidence Summaries for Point of Care Information Systems: A Streamlined Rapid Review Approach[J]. Worldviews Evid Based Nurs, 2015, 12(3):131-138. doi:10.1111/wvn.12094.

[6] Dicenso A, Bayley L, Haynes RB. Accessing pre-appraised evidence: fine-tuning the 5S model into a 6S model[J]. Evid Based Nurs, 2009, 12(4):99-101. doi:10.1136/ebn.12.4.99-b.

[7] Xie LM, Wang WY. A brief introduction to Appraisal of Guidelines for Research and Evaluation II (AGREE II) model[J]. J Integr Med, 2012, 10(2):160-165. DOI:10.3736/jcim20120206.

[8] The Joanna Briggs Institute. Critical Appraisal Checklist for Text and Opinion (JBI)[EB/OL]. (2017-11-24)[2021-08-03]. http://joannabriggs.org/research/critical-appraisal-tools.html.

[9] Hu Y, Hao YF. Evidence-based nursing[M]. 2nd ed. Beijing: People's Medical Publishing House, 2018:81-83.

[10] The Joanna Briggs Institute. Joanna Briggs Institute Reviewer' s Manual[EB/OL]. (2019-09-20)[2021-08-03]. https://joannabriggs.org.

[11] HIGGINS JPT, GREEN S. Cochrane Handbook for Systematic Reviews of Interventions Version 5.0.1[Z/OL]. (2008-09-01)[2023-11-20]. http://onlineLibrary.wiley.com/o/cochrane/clcentral/articles/375/CN-00871375/frame.html.

[12] Yan LJ, Qu C, Li XJ, et al. The exploration of evidence synthesis methodology in development of evidence-based clinical protocol[J]. Chin J Evid Based Cardiovasc Med, 2020, 12(9):1039-1042. DOI:10.3969/j.issn.1674-4055.2020.09.04.

[13] Wang CQ, Hu Y. JBI evidence pre-grading and evidence recommendation level (2014 Edition)[J]. Nurs Train, 2015, 30(11):964-967. DOI:10.16821/j.cnki.hsjx.2015.11.002.

[14] Mao JJ, Ismaila N, Bao T, et al. Integrative Medicine for Pain Management in Oncology: Society for Integrative Oncology-ASCO Guideline[J]. J Clin Oncol. 2022;40(34):3998-4024. doi:10.1200/JCO.22.01357.

[15] Chinese Association of Integrative Medicine. Guidelines for Diagnosis and Treatment of Lung Cancer with Integrated Chinese and Western Medicine[EB/OL]. (2023-05-31)[2023-11-22]. http://www.caim.org.cn/info_{content}.jsp?id=10322.

[16] National Administration of Traditional Chinese Medicine. Notification on the Publication of TCM Nursing Plan (Trial) for 13 Medical Conditions Including Stroke[EB/OL]. (2013-05-20)[2023-11-03]. http://yzs.satcm.gov.cn/gongzuodongtai/2018-03-24/2800.html.

[17] Lin LZ, Wang SY, Huang XW. Expert Consensus on the Diagnosis and Treatment of Lung Cancer by Integrated Traditional Chinese and Western Medicine[J]. Journal of Oncology Chinese Medicine, 2021, 3(6):1-17. DOI:10.19811/j.cnki.ISSN2096-6628.2021.06.001.

[18] Li XD, Hou FG, Zhang J. Meta-analysis of Efficacy of Acupoint Application of TCM in Arresting Vomiting after Chemotherapy for Malignant Tumors[J]. Shanghai Nursing, 2020, 20(01):12-18.

[19] Zhao R, Zeng L, Hou WG, et al. Meta-analysis of Randomized Controlled Trials of Acupoint Application for Opioid-induced Constipation[J]. Shanghai Journal of Acupuncture and Moxibustion, 2018, 37(11):1318-1326.

[20] Ma SY, Pan RF, Li TY, et al. Effect of moxibustion on quality of life in tumor patients: network Meta-analysis[J]. Chinese Acupuncture & Moxibustion, 2022, 42(04):473-480.

[21] Miu J. Effect of acupressure on chemotherapy-induced vomiting, quality of life, and anxiety in inpatients with lung cancer[D]. Nanjing Medical University, 2017.

[22] Lin L, Zhang Y, Qian HY, et al. Auricular acupressure for cancer-related fatigue during lung cancer chemotherapy: a randomised trial[J]. BMJ Support Palliat Care. 2021;11(1):32-39. doi:10.1136/bmjspcare-2019-001937.

[23] Pan XJ, Gu F, Huang LH, et al. Clinical study on transcutaneous electrical acupuncture for prevention of peripheral neuritis in patients with lung cancer undergoing chemotherapy[J]. Chinese Nursing Research, 2018, 32(20):3274-3277. DOI:10.12102/j.issn.1009-6493.2018.20.029.

[24] Frenkel M, Slater R, Sapire K, Sierpina V. Complementary and Integrative Medicine in Lung Cancer: Questions and Challenges[J]. J Altern Complement Med. 2018 Sep/Oct;24(9-10):862-871. doi:10.1089/acm.2018.0175.

[25] Horneber M, Bueschel G, Dennert G, Less D, Ritter E, Zwahlen M. How many cancer patients use complementary and alternative medicine: a systematic review and metaanalysis[J]. Integr Cancer Ther. 2012;11(3):187-203. doi:10.1177/1534735411423920.

[26] Sanford NN, Sher DJ, Ahn C, Aizer AA, Mahal BA. Prevalence and Nondisclosure of Complementary and Alternative Medicine Use in Patients With Cancer and Cancer Survivors in the United States[J]. JAMA Oncol. 2019 May 1;5(5):735-737. doi:10.1001/jamaoncol.2019.0349.

[27] Choi JY, Ji W, Choi CM, et al. Awareness and Use of Complementary and Alternative Medicine in Korean Lung Cancer Patients[J]. Tuberc Respir Dis (Seoul). 2021 Apr;84(2):105-114. doi:10.4046/trd.2020.0098.

[28] Wode K, Henriksson R, Sharp L, Stoltenberg A, Hök Nordberg J. Cancer patients' use of complementary and alternative medicine in Sweden: a cross-sectional study[J]. BMC Complement Altern Med. 2019;19(1):62. doi:10.1186/s12906-019-2452-5.

[29] Armstrong M, Flemming K, Kupeli N, et al. Aromatherapy, massage and reflexology: A systematic review and thematic synthesis of the perspectives from people with palliative care needs[J]. Palliat Med. 2019 Jul;33(7):757-769. doi:10.1177/0269216319846440.

[30] Ma XL, Ji L, Lu Y, et al. Application of symptom management theory intervention in patients with lung cancer[J]. Journal of Qilu Nursing, 2023, 29(5):152-154. DOI:10.3969/j.issn.1006-7256.2023.05.049.

[31] Ni XS, Li SN, Lou Y. Research Progress in Symptom Management on Patients with Cancer[J]. Shanghai Nursing, 2020, 20(5):53-57. DOI:10.3969/j.issn.1009-8399.2020.05.012.

[32] PRISMA. Figshare. (2024). Figure. Zhang J, et al. Summary of evidence for the use of Chinese medicine nursing in symptom management of lung cancer patients. https://doi.org/10.6084/m9.figshare.25609509.v1

Note: Figure translations are in progress. See original paper for figures.