

A critical review of Non- Pharmacological Cancer Pain Management in Multidisciplinary Approach

Parameswari¹ S Anbu JebaSunilson², Raja³ and B Sujeetha⁴

¹Nursing Tutor.,Department Of Nursing, Thanjavur Medical College, Thanjavur.

²Associate Professor, Department Of Siddha Medicine, Tamil University Thanjavur.

³Associate Professor, Department Of Oncology, Thanjavur Medical College Hospital, Thanjavur.

⁴Assistant Professor And Clinical Psychologist, Department Of Psychiatry, Thanjavur Medical College Hospital, Thanjavur.

ABSTRACT : Pain is the most distressing symptom of the individual, cancer related distressing symptoms precisely limits the once own forbearance. Cancer pain is the big burden which can be carried by the individual temporarily or throughout their treatment or end of life. Cancer related distressing symptom management is a very big challenge, which can be achieved in multidisciplinary and holistic approach. Review of literature was made by using the databases of MEDLINE and PUBMED of articles published between 2003 and 2019. Quality standard selected domains based on the cancer pain and cancer related distressing symptoms in non- pharmacological aspects. In order to manage the cancer related symptoms through multidisciplinary and holistic approach as “CASH. Along with pharmacological method and adjuvant therapy of non-pharmacological modalities gives the better opportunity to improve their QOL. Effective care achieved by update of knowledge and skill of the nursing personnel and application of the therapies in holistic approach to reduce the distressing symptoms and improve their health related quality of life.

Key Words: Cancer Pain, Distressing Symptoms, Pain Management, Non-Pharmacological Management, Multidisciplinary Approach, Quality of life.

INTRODUCTION

Pain is the most distressing symptoms of the individual, it also precisely limits the individuals once own forbearance, resilience. It challenges their ability to behave in a Coherent and consistent way of bad experience as an aversive sensation and distressing symptoms. Flare of pain rapidly increasing high intensity super imposed on persistent either spontaneous or continuous. Cancer related distressing symptoms of pain not only affect the individuals' physical health and also affect the mental health associated with deprivation in social functioning.

Cancer and Cancer related devastating impacts interfere with the individual physical, physiological, psychological wellbeing also gives more impacts on individuals family, friends and caregivers .It's an important predictor of survival and is considered to be pathogen and inhibits the facilitated progression of metastasis, and complex interaction between physiological , psychological, social , and cognition. In order to manage the cancer pain in pharmacological and non -pharmacological aspects as “CASH” (Comfort, Analgesics, Sedatives, Humanity and Holistic care. These techniques were reduced the cancer pain and cancer related distressing symptoms of the individuals and family and caregivers to improve the health related quality of life.

Cancer pain is the bag of burden which can be carried by the individual temporarily or throughout their treatment or end of life, which represent the unpleasant, heavy, burdened, feared consequences for the patient and their families. (Alexopoulos et al 2010).

Inadequate pain management is the multi -dimensional problem, is a very big challenge in individuals, families and Oncology department caregivers due to lack of knowledge in assessment of pain, distressing symptoms and management of symptoms in different settings especially poor socio -economic status, impaired facilities, unable to reach the treatment center, orphanages etc. pain is the 5th vital sign and depression is the 6th sign. Nurses are the key person to identify the problem as early as possible to minimize the pain to improve the quality of life of individuals by early effective assessment, planning of the intervention, effective implementation of planned intervention, and evaluation and reevaluation. The first choice is non-pharmacological measures that can be employed by the nurses by providing patient orientation, comfortable and protective position, calm environment, moral support emotional support, cognitive restructuring deep breathing exercises, relaxation therapy, Mild exercises, Yoga, Meditation, application of heat or cold , reading, drawing, hearing music to reduce the pain level and improve their quality of life, and also family members to include their care program and also reduce their distressing symptoms, fear of hospitalization , and treatment process.

Stanford healthcare organization explore the non- pharmacological pain management methods such as education, Hypnosis, Distraction, Relaxation, Comfort therapy Diversion therapy and Neuro stimulation.(Dr. Sean Mackey-2018]

According to American Pain Society the plan of pain management has both pharmacological and non- pharmacological, interventions, Health Care providers performing their care by “CASH ” Techniques have sustained interaction with patient and their families throughout their continuum of cancer care (APS-2005). Updated knowledge through education or training strategies which ruin their day today clinical practice and improve the quality of care also improve the quality of life of the individual.

Aim and objectives of the study to review and analyze the explored evidence based cancer pain management. The purposes of the study to identify the impacts on cancer pain and cancer

related distressing symptom management and also what are all the non-pharmacological methods used to reduce the cancer related distressing symptoms in multidimensional approaches and to interpret and evaluate the effectiveness of the intervention.

METHODOLOGY

Review of literature was made by using the electronic databases of MEDLINE and PUBMED of articles published between 2003 and 2019. Keywords used to search the articles for cancer pain, distressing symptoms, non-pharmacological management and multidisciplinary approach. Inclusion criteria of the study were research based, written in English, intervention based on cancer pain and related symptoms and non-pharmacological approach. Randomly assigned patients of aged between 18- 65 years. 20 articles were included with quantitative study.

REVIEW ANALYSIS

According to the international association for the study of pain “pain is an unpleasant and emotional experience associated with actual or potential tissue damage. The prevalence of pain in community dwelling above 65 year older adults the mean age of 66.75 and the implemented interventions were acupuncture, acupressure, guided imagery, periosteal stimulation and Tai-Chi. Numerical rating scale was used to assess the pain level, result shows suitable and sustainable pain reduction effect is adequate. [Shuk Kwan Tang- November-2019].

Non-pharmacological intervention in patients receiving chemotherapy to assess the effectiveness of guided imagery and progressive muscle relaxation technique for cluster of symptoms, a randomized controlled trial with 208 patients based on patients’ self-reported health related quality of life. Chi-square, Linear mixed model and t-test were used and the result shows the cluster of symptom management in non-pharmacological techniques enhances the Health related quality of life. [Andreas Charalambouset al.2016]

Worldwide burden of cancer related symptoms in all the stages worsen the psychological, social and emotional wellbeing and increases the distress level from the time of diagnosis, treatment or extended at the end of life. Psychosocial interventions have been proven the effectiveness of non-pharmacological therapies and medical cost offset of psychosocial care. Samples from 386 patients of 12 American cancer center, 508 from Turkish, 913 from Canadian cancer center. Result reveals the ongoing oncological care needs to meet the physical, physiological and psychosocial aspects thro effective psycho education, CBT, group supportive therapy, individual supportive therapy and medical cost offset of psychosocial care to promote a compassionate model for treating physical, emotional needs.[Linda E Carison&Barry D Buitz-2003].

Cancer pain is the highly detrimental to the quality of life of the affected individual and their family. It also contributed to the 6th vital sign of depression due to fear, anxiety related to their treatment process. There is a need for adjuvant therapy i.e. Non-pharmacological

interventions along with pharmacological therapy for the management of cancer related distressing symptoms to improve quality of the life of the individual. A quantitative study was carried out in St. John hospital. Music therapy was initiated. Numerical Rating Scale and Hamilton Anxiety Rating Scale were used to assess the distressing symptoms and analyzed with Studentt-test. Music therapy was found to have significant effect on cancer related distressing symptoms, especially the Indian traditional ragas of AnanthaBhairavi and Dharbari which gives therapeutic effect and reduce the depression and pain.[priyankasingh and Aditi Chaturvedi-2015]., [Priyadharsini.K and Shoba Nair-2016].

Cancer pain is a multidimensional hyper arousal state of nervous system which interferes with physical and mental health. Yoga is an excellent mind body therapy which will energize, relax, remodel and strengthen the body and psyche. Asana and pranayama harmonize the physical system and relaxation response in the neuro and endocrine system also helps to get rid of distressing symptoms and improve the quality of life. [Nandini vallath-2010].

Cluster of symptoms in cancer patients which hurt physical and mental health. Mind body interventions reduce the cancer related distressing symptoms of pain, fatigue and sleep disturbances.43 studies were addressing the need of mind body interventions such as relaxation therapy, guided imagery, progressive muscle relaxation therapy, cognitive behavior therapy, cognitive restructuring and behavior modification and hypnosis etc. Relaxation to gives better outcometo get rid of the symptoms, meditation and yoga to energize, relax and to improve the sleep pattern and reduce the fatigue level.[Kwekkeboom KL et al 2010].

Cancer pain is a complex burden of multidimensional impact has also been managed with non-pharmacological approach of [TENS] Transcutaneous Electrical Nerve Stimulation. A randomized controlled trial of 64 patients was included 5 point Oxford Quality Scale was used to assess the distressing symptoms. TENS was significantly powerful and like acupuncture. The study need further large multicenter level RCTs to asses and obtain the value of TENS in the management of cancer related pain.[Karen Robb, et al.,2009].

Cancer pain is a multidimensional hyper arousal state of nervous system which interferes with physical and mental health. Yoga is a very good therapy which will energize, relax, remodel and strengthen the body and psyche. Asana and pranayama harmonize the physical system and relaxation response in the neuro endocrinal system to get rid of the distressing symptoms and to improve the quality of life.[Nandinivallath. 2010].

Bodily Distress Syndrome or bodily stress is an empirically defined unifying various conditions of physical and mental illness. BDS is a major public health issue and patients are often stigmatized. The effective treatment is rarely delivered and the individuals are isolated themselves. There is a need for non -harming practical tools which enhance their ability to take responsibility for their own health and well- being. Mindfulness based cognitive therapy is a group program which employs mindfulness practice which alleviate physical, psychosomatic and

psychiatric disorders to improve the quality of life and symptoms. A randomized controlled trial in 119 patients with BDS at 15 months follows up. The mindfulness therapy produces greater and rapid improvement. Mindfulness based cognitive behavior therapy reflect real changes attributed to the interventions and also substantial socio economic benefits of health related benefit, disability pension benefit. Social and economic consequences of BDS are significant. MBCT gave a potential effect improve their social function and QOL and to prevent social decline and reduce the societal cost. [Fjor back Lo-2012].

Pain is a devastating symptom of cancer that affects the QOL of the individuals, family and caregivers. Cancer is a multidimensional symptom which includes physical, psychological emotional and spiritual components. Even though the advanced novel analgesics the pain has been still undermanaged. Inadequate pain management attributed to barriers related to health care professionals, patients and health care system. Professional barriers are poor knowledge, skill, and attitude. Patient related barriers are poor adherence to analgesics, poor socio economic status, unavailability of drugs, money and caregivers and barriers related to health care systems such as lack of skilled persons, equipment's, analgesics and the service centers far away and difficult to reach the interventional services. Effective pain control mandates multidisciplinary intervention from inter professional teams. Pain is a multidimensional symptom and frequently undermanaged due to barriers might be the reason for failure. A multidirectional interdisciplinary approach might be the best way to improve the cancer pain management by education provided to the health care professionals, all the medical schools, patients and caregivers and improve the health care system management to overcome the barriers in cancer pain management. [Jung Hye Kwon-2014].

Non-pharmacological methods for the pain management of cancer patients were aimed to determine the use of non -pharmacological interventions to reduce the pain. Descriptive study with 123 patients and verbal rating scale used to assess the pain level. Non-pharmacological methods of prayer massaging the painful area and the regular practice to read the Qur'an and breathing exercises are used to reduce the pain level and it was effective. [FatmaGenc et al.-2018].

Integrating conventional and complementary symptom management in cancer pain is a goal of oncology nursing is to help the patients to achieve the best possible quality of life. The quality of conventional care includes physical, psychological, emotional, spiritual and social. The perspective way is the harmony of body, mind and spirit to have a richer view and the accentuating the core of the individual values, beliefs and goals. The embarrassed integrated view of symptom management for patients and their families.[Mary Jane Ott. and Maureen Lyrich- 2012]

Use of comfort kits to optimize the cancer pain management. Pain is one of the feared in all symptoms for the cancer patients. Advances in improved pharmacological management the complementary therapies synergize medications to provide optimum pain relief while decreasing

side effects. Nurses can teach the patients and their family about the use of complementary therapies. Aim of the study to identify the complementary therapies which is implemented in easy way to supplement the pharmacological therapies. Comfort kits such as handheld massage, audiotape, CD player aromatherapy [Lavender oil, lemon, peppermint], acupressure wrist bands, pillows, stress balls. The quality study that would increases the pain management options for nurses and patients' satisfaction increases the autonomy in selection and implementation of CAM therapies. Which needs minimal training and inexpensive. Nursing always focuses on comfort to the patients and alleviates the symptoms in holistic manner and measures to enhance the comfort not on cure. [Lisa M. Black Burn et al-2019].

Cancer pain is an excruciating comprises of not only physical component but psychological, social, emotional and spiritual components as righteously described [Dame cicely sounders] the concept of 'total pain' which encompasses all the aspects and affect the patients perception of pain or pain threshold. The total pain in adults demonstrates their distinctive aspects of social, spiritual and psychological sufferings. Which is quite different from other groups? Physical symptoms relieved by pharmacological measures. Whereas psychosocial and spiritual concern addressed by counseling. Total cancer pain needs to be adequately addressed in a timely manner by the health care providers in holistic manner in a multidisciplinary approach and open communication and involvement of care and family members were the key element in managing these aspects. [AanchalSatija. Et. Al-2014].

CONCLUSION

Cancer related pain and distressing symptoms are still a heavy burden and feared consequences of the individuals, families and very big challenges to the health care providers. Effective pain management and distressing symptoms achieved through the adjuvant therapy of non- pharmacological approach along with patient education, applications of newer modalities, techniques and providing comfortable devices, diversion therapy, progressive muscle relaxation, guided imagery. Mindfulness therapy and conducive environment. The main contribution of non –pharmacological approaches of deep breathing exercise, relaxation therapy, CBT, music therapy, yoga and TENS are playing a vital role to reduce the symptoms and improve the quality of life. This can be achieved through CASH approach.

RECOMMENDATIONS

From this view, effective cancer pain management can be achieved by non-pharmacological approach and holistic approach. Even though the drug related complications were more or less, the distressing symptoms which will interfere with the individual family and community. Further study will also focus on the family members or caregivers.

REFERENCES

1. AanchalSatija, SurajPal. Singh., KomalKashyapAnd SushmaBhatnagar., Management Of Total Cancer Pain; Indian Journal Of Palliative Care-2014, May – August 20 [2]., 153-156.
2. Alexopoulos E.C., Koutsongiannou P., Moratis E., Messousi A. And Jelastopulu E. [2011] Pain In Cancer Patients, The Greek Experience, European Journal Of Oncology Nursing, 15, 442-446.
3. American Cancer Society [2013] [Http/Wwwcancer.Org/Treatment/Treatments AndSideeffects/ComplementaryandAlternativemedicine/Mindbody And Spirit/Hypnosis](http://www.cancer.org/treatment/treatments-and-side-effects/complementary-and-alternative-medicine/mind-body-and-spirit/hypnosis).
4. American Cancer Society And Cancer Facts And Figures, [2017] ACS.,Atlanta GA.
5. American Pain Society Guideline For The Management Of Cancer Pain In Adults And Children [2005].
6. Bilal S.H., Bad Naga, Evidence Based Standards For Cancer Pain Management Pharmacological And Non- Pharmacological Cancer Pain Management. Jordanian Nursing Council [2015].
7. ComplementaryTherapy – Yoga [2013] [[Www.Yogajournal.Com](http://www.yogajournal.com)].
8. Fjorback Lo Mindfulness And Bodily Distress- Danmed J. [2012] Nov -59 (11) B4547.
9. Fatma. Genc, CigdenKockar, FatosMuthu, MehtapBugdaci., Non- Pharmacological Methods For The Pain Management Of Cancer Patients. Journal Of Education And Research In Nursing [Vol-15, Issue-2].
10. Jung Hye Kwon, Overcoming Barriers In Cancer Pain Management, Journal Of Clinical Oncology 32-1727-1733 [2014].
11. Karan Robb, Stephen G.Oxyberry, Michael Bennett, Mark L. Johnson, Karen H. Simpson, Robert D. Searle. A CochraneSystemic Review Of Transcutaneous Electrical Nerve Stimulation For Cancer Pain.,JournalOf Pain And Symptom Management. 2009., Volume 37, Issue -4, Page 746-753.
12. Kwekkeboom KL, Cherwin CH, Lee JW, Wanta B., Mind Body Treatments For Pain Fatigue And Sleep Disturbance Symptom Cluster In Persons With Cancer. [2010] Pubmed- 39 [1]; 126-138; PMC-3084527.
13. Kwekkeboom KL, Kneip J, Pearson.L., A Pilot Study To Predict Success With Guided Imagery For Cancer Pain Management In Nursing. [2003]., 4, 112-113. Pubmed.
14. Linda E. CarisonAnd Barry D Buitz, Benefits Of Psychosocial Oncology Care Improved Quality Of Life And Medical Cost Offset, [2003], PMC155787.
15. Lisa M. Blackburn, Stephane Abel, Lori Green; Kristen Johnson, Shannon Panda. The Use Of Comfort Kits To Optimize Adult Cancer Pain Management. [2019] Vol-20; Issue-1; Page 25-31.
16. Mary Jane OttAnd Maureen Lynch; Integrating Complementary And Conventional Symptom Management In A Cancer Center – Pubmed [2002] Oncology Nursing Forum Jan- Feb- 29 (1); 25-7.

17. NandiniVallathPerspectives On Yoga Inputs In The Management Of Chronic Pain – Indian Journal Of Palliative Care- 2010, Jan- Apr-16 (1) 1-7 PMC 2936076.
18. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines In Oncology; Adult Cancer Pain 2011. [Http://Www.Nccn.Ong/ Index;Asp](http://www.nccn.org/index.asp).
19. National Cancer Institute 2012;
[Http://Www Cancer.Gov/Cancertopics/Pdq/Aromatherapy/ Patient/Page-2](http://www.cancer.gov/cancertopics/pdq/aromatherapy/patient/page-2).
20. PriyankaSingh And AditiChaturvedi; Complementary And Alternative Medicine In Cancer Pain Management, Indian Journal Of Palliative Care-2015; 21 (1) Page 105-115.
21. Priyadharshini.K And Shoba Nair; A Pilot Study To Assess The Effectiveness of Music Therapy For Cancer Patients Pain Management. [2016].Indian Journal of Palliative Care.
22. Shuk Kwan Tang, Effectiveness, Suitability And Sustainability Of Non-Pharmacological Methods of Managing Pain In Community-Dwelling Older Adults BMC- Public Health Volume 19.,Article No-1488 [2019].
23. Singh P. And Chaturvedi; A Complementary And Alternative Medicine In Cancer Pain Management. Indian Journal of Palliative Care; 2015; 21, Page 105-115.
24. Tim Regan, Janelle V. Levesque, Sylvie D. Lambert, Brain Kelly. A Qualitative Investigation Of Health Care Professional Issues And Related Interventions For Couples Coping With Cancer 2015/ 101371/ Journal Pone 0133837.
25. World Health Organization, Cancer Pain Relief And Palliative Care. WHO ; Geneva-1990.