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Review Article

Chronic Pain and Its Management

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ABSTRACT

Chronic pain symbolizes a substantial health and societal concern. Chronic pain usually leads to deficit of effective productivity, financial gaining potential, and decreased and disturbed life quality. Pain causes hindrance in daily professional and personal work, physical and mind comfort. If the element of the pain gets clear it become easy to provide immediate treatment for its cure but in most of the cases doesn't get clear. The major point of focus of the suffering individual or any health professional is to ease or to provide comfort by reducing pain, so that an individual could get back to their daily activities. Treatment plan or schedules can defer person to person and the intensity of the pain. There are few pain that are more adequate than others but it should be kept in mind that usually the chronic pain can't be treated completely in shorter span of time but it can be managed effectively to provide relief to certain extend. In this review we focused on very specific point about the chronic pain like identification and difference among the acute and chronic pain, few known reason for chronic pain onset, impact of chronic pain on physical and psychological; its diagnosis methods, its treat and self-management techniques which can effectively able to ease the pain.

Keywords: *Acute pain, chronic pain, self-management, Pain.*

INTRODUCTION

I. Concept about Pain: The term "pain" commence from the Latin word "poena" which illustrate its meaning that is a fine or a penalty. Pain is an obnoxious sensation that varies from mild, localized displeasure to anguish. The basic of pain is both body and mind. Pain intensity and severity is complex and it's a subjective phenomenon, henceforth its definition is an obstacle to construe it accurately. Mainly, this pain is arbitrated via peculiar nerve fibers which import impulses of pain to the brain where their attentive acknowledgement might get modified by several factors. In case of medical diagnosis pain is considered as symptoms of a concealed situation or illness. In most of developed countries pain is considered as common reason for consultation of physician. [1-2]

In some cases pain gets relief once the noxious stimulus is removed but in other cases it persists after removal of stimulus. Whereas, in few cases it has seen that pain generation occurs without presence of any identified triggers, disease or damage.

In 1994, the international Association for the Study of Pain (IASP) distinguishes pain bases on the specific characteristics to describe them accurately:

1. Pain occurrence duration and pattern
2. Pain site in body (e.g. abdomen, hand, head, lower limbs etc)
3. System whose dysfunction is the reason to cause pain (e.g., nervous, gastrointestinal)
4. Pain onset time and intensity

5 Reason or cause

However, Clifford J. Woolf and others criticized the above mentioned

system for guiding research and treatment. [3] Woolf suggests the major classes of pain:

- nociceptive pain,
- inflammatory pain which is associated with tissue damage and the infiltration of immune cells, and
- Pathological pain which is a disease state caused by damage to the nervous system or by its abnormal function (e.g. fibromyalgia, peripheral neuropathy, tension type headache, etc.). [4]

Generally, an arbitrary time interval from onset distinguishes acute pain which cured soon after onset and last for 30 days or less and chronic pain which persist for longer times like six months or more. Apart from acute and chronic pain the other type of pain is subacute pain which lasts for one to six months. Occasionally, a chronic pain classified as cancerous pain or as benign. [5-7]

II. Symptoms of Chronic Pain

Pain causes hindrance in daily professional and personal work, physical and mind comfort. If the element of the pain gets clear it become easy to provide immediate treatment for its cure but in most of the cases doesn't get clear. The chronic pain common sources are like headaches, injuries, backaches; joint pains might due to arthritis, sinus pain and many others. In several cases of advance cancers this chronic pain is the major features. An accompany symptoms of the chronic pain can rise as a straightforward outcome of the pain like insomnia (sleep disorder), irritability, depression and mood changes, anxiety, fatigue. Onset of pain causes muscle contraction which causes soreness or stiffness.

III. Diagnosis

Pain is very much subjective and personalized experience, hence, there is no perfect test is available to detect or measure the intensity or location accurately .Therefore most of time medical professional depends on the patient's explanation like type, location of pain and timing. Defining pain as sharp or dull, constant or on-and-off, or burning or aching may give the best clues to the cause of the pain. These descriptions are part of what is called the pain history, taken during the start of the evaluation of a patient with pain. The site of the chronic pain onset is not defined it might be at any site on body, therefore medical professional and patient's needs to handle the matter carefully to detect the pain reason, symptoms and its treatment. In today's date the technology advancement can help health profession upto some extent to diagnose the pain cause and can schedule the treatment plan to cure pain.

Apart from the professional medical treatment there is strong requirement to treat the patient emotionally hence the suffering individual and his/her loved ones needs to get involved in the treatment to provide emotional support. Generally, the diagnostic tests usually utilized to determine the pain reason are electrodiagnostic procedures such as electromyography (EMG), studies of nerve conduction and evoked potential (EP); magnetic resonance imaging (MRI) - imaging, neurological examination or X-rays.

IV. Treatment

The major point of focus of the suffering individual or any health professional is to ease or to provide comfort by reducing pain, so that an individual could get back to their daily activities. Treatment plan or schedules can defer person to person and the intensity of the pain. There are few pain that are more adequate than others but it should be kept in mind that usually the chronic pain can't be treated completely in shorter span of time but it can be managed effectively to provide relief to certain extend. The prevailing treatments methods for pain management are medications like analgesic pain relievers (aspirin, acetaminophen, and ibuprofen), acupuncture, electrical stimulation process, nerve blocks, surgery, less invasive psychotherapy, relaxation therapies, biofeedback, and behavior modification were practiced as a treatment regimen. These methods can be powerful and effective in some people whereas some

people find adding reciprocal or alternative medicine (CAM) access to get additional relief like tai chi, acupuncture, meditation, massage therapies, and other like anticonvulsants, antidepressants, migraine headache medicines, biofeedback, capsaicin, chiropractic, cognitive and behavioral therapy, counseling, COX-2 inhibitors, exercise, hypnosis, lasers, magnets, opioids, physical therapy, rehabilitation, R.I.C.E. -- Rest, Ice, Compression, and many other types of treatment methods are practiced.

The most efficient and effective way of managing chronic pain is self-management In self-management programs, the patient himself/ herself becomes an operating participant in their pain treatment-getting involve in problem-solving, pacing, decision-making, and taking actions to manage their pain. Although self-management programs can differ, they have some common features. Their approach is that the people existing with pain require assistance learning to think, feel, and do better, despite the persistence of pain. Developing communication with the healthcare provider is essential role of that empowerment.

The self-management programs contributed in reduction of many obstacles to efficient pain management and this is proven by NIH supported research. The suffering person who all has actively participated in following programs, the improvements have seen in them drastically to tackle and cope with chronic pain. Through the latest research it is found that the best self-management programs educate individuals in many distant directions of thought process about the pain and responses to pain, and in this way their effective action making them to get better relief.

As the definition of self-management defines the association of health, psychological behavior and associated processes that an individual and their loved once are engaged to care and carefully handle the chronic condition. [8] The intervention of Self-management interventions for chronic pain educates individuals with a combination of disease-specific awareness, strategies to endure with symptoms. Apart from self-management a social support also provide assistance with improvements in pain and functioning. [9-10]

The self- management unavailability in certain geographical area makes it difficult its access. The other barriers are limited trained professional availability, expenses associated with treatment. [11-13] In order to enhance the availability of this treatment procedure to maximum people, a considerable improvement has been done so far through virtual delivery techniques like online, mobile, web technologies. Using this technologies the adequate information were provided to all the individuals whoever are seeking this kind of information. [14-26] Recent research reveals that the geographical constraint can be easily resolved and can be accessible 24 hours by online interventions, and this is one of the effective direct self-management therapies that are well structured, interactive and self-guided. [27-31]

V. Initiative Programs

The Ministère de la Santé et des Services sociaux (MSSS) of Quebec initiated the protection and management of chronic diseases a majority through developing and disseminating a plan or concept for the prevention and management at the provincial level to all health and social services agencies (ASSS) and by mobilizing the Fonds de recherche Québec-Santé (FRQS), the provincial health research funding agency for peer-review competitions. The distended objective was to identify and backing strongly for best practices and their amalgamation into a continuum of services, and to mobilize all stakeholders concerned with chronic diseases around the following objectives and outcomes:

(1) Reducing the risk factor that associated and contribute to chronic disease;

(2) Decreasing or eliminating chronic diseases complications;

(3) Avoiding upto an extent or reducing the chronic disease suffering patient's hospitalizations and emergency stays;
(4) Development in the use of drugs;
(5) Enhance patients' quality of life and satisfaction with chronic disease prevention and management programs as well as the satisfaction of those who care for them;
(6) Managing individuals with self-management support;
(7) Enhancement professionals satisfaction in their daily clinical practice; and
(8) Enhancing the population's health. [32]
In 2011, the Pfizer-FRQS-MSSS initiative for the prevention and management of chronic disease established and supported the innovative projects, driven by local health and social services in collaboration with health researchers. [33]

VI. CONCLUSION

Chronic pain is a primary care, and the largest numbers of individuals with chronic pain are managed in primary care. Currently, a high quality of guidelines is present, and few trials provide an encouraging outcome for application of pharmacological and non-pharmacological interventions in the integrated management for chronic pain suffering patients. In near future there is requirement of the high-quality primary care-focused research, depth- knowledge and latest managing techniques about the chronic pain to ensure that care being delivered is as efficient, effective and evidence-based as possible. Effectively integration of management programs is complex, hence a comprehensive, consolidated theoretical framework for implementation with better consulting research is required. In addition, mechanisms are needed to optimize access to chronic disease management programs and to rule out services duplication.

The geriatric, pediatric, and substance abuser populations represent groups with ambitious to manage chronic pain. The therapeutic approach in each group should be multimodal, but include components that meet the unique patient's urgency. Further research is required to fully understand how chronic pain develops and evolves in every individual group of patients. In particular, as our understanding of the physiological and genetic system concealed chronic pain in these understudied populations enhances, advances in treatment options will also improve. Undoubtedly, treatment will still continue to utilize a multimodal approach and cooperative efforts between all healthcare professionals involved in the pain management team.

Chronic pain facts and awareness

- Needs to understand the difference between acute and chronic pain;
- Needs to know the severity, cause, time and intensity of the pain because not all severe pain is chronic pain;
- No test can measure the intensity of pain, no imaging device can show pain, and no instrument can locate pain precisely, only patient's own description of the type, duration, and location of pain may be the best aid in diagnosis.
- Common diagnostic tests utilize to detect the reason of pain include electrodiagnostic procedures such as electromyography (EMG), nerve conduction studies, and evoked potential (EP) studies; imaging, especially magnetic resonance imaging (MRI); neurological examination; or X-rays.
- The most common treatments for pain include analgesic pain relievers like aspirin, acetaminophen, and ibuprofen, acupuncture, anticonvulsants, antidepressants, migraine headache medicines, biofeedback, capsaicin, chiropractic, cognitive and behavioral therapy, counseling, COX-2 inhibitors, electrical stimulation, exercise, hypnosis, lasers, magnets, nerve blocks, opioids, physical therapy and rehabilitation, R.I.C.E. -- Rest, Ice, Compression, and Elevation, surgery and many more.
- Suffering patients could be any age, gender, severity and duration is not

definite and particular depends on person to person.

- Chronic pain cause is not always identifiable. Fibromyalgia, a common chronic pain condition, usually starts with physical trauma and then develops into a chronic pain.
- It's important to remain active and exercise, even if you have chronic pain.
- Chronic pain is pain that lasts more than 6 months. It may be constant, or it may come and go.
- Chronic pain is often treated with a multi-disciplinary approach that may include physical therapy, medications, psychology, and exercise.
- Mind-body therapies, such as meditation, can help control chronic pain.

Key points should be taken into the consideration while treating chronic pain

- The developmental status and genetic background of the patient should be considered during chronic pain treatment
- Pediatric, geriatric, and drug abuser patients have unique demands for pain management
- A multimodal treatment approach should be utilized for pain management

Abbreviations

EMG: electrodiagnostic procedures such as electromyography (EMG)
EP: evoked potential (EP) studies
MRI: magnetic resonance imaging (MRI)
MSSS: The Ministère de la Santé et des Services sociaux (MSSS)
FRQS: Fonds de recherche Québec-Santé (FRQS)
ASSS: all health and social services agencies (ASSS)

Conflict of Interest

The authors declare that they have no competing interests.

REFERENCES

1. Debono, D. J., Hoeksema, L. J., Hobbs, R.D. (2013). "Caring for Patients with Chronic Pain: Pearls and Pitfalls". Journal of the American Osteopathic Association. 113 (8): 620–627. PMID 23918913.doi:10.7556/jaoa.2013.023.
2. Turk, D. C., and Dworkin, R.H. (2004). What should be the core outcomes in chronic pain clinical trials?. Arthritis Research & Therapy. 6(4):151–4. doi:10.1186/ar1196
3. Woolf, C. J., Bennett, G. J., Doherty, M., Dubner, R., Kidd, B., Koltzenburg, M., Lipton, R., Loeser, J. D., Payne, R., Torebjork, E. (1998). Towards a mechanism-based classification of pain?. Pain. 77(3):227–9. doi:10.1016/S0304-3959(98)00099-2. PMID 9808347
4. Woolf ,C. J. (2010). What is this thing called pain?. Journal of Clinical Investigation. 120(11):3742–4. doi:10.1172/JCI45178. PMID 21041955
5. Hagerstwon, M. D., Lippincott, Williams., and Wilkins. (2001). Bonica's management of pain. ISBN 0-683-30462-3. Pain terms and taxonomies of pain.
6. Edinburgh: Churchill Livingstone. (2000). Pain management: an interdisciplinary approach. General considerations of acute pain. ISBN 0-443-05683-8.
7. Hardy J. (2002). Pain Management—a Practical Guide for Clinicians. Journal of the Royal Society of Medicine, 95(9), 470–471.
8. Modi A. C., Pai, A.L., Hommel, K. A., et al. (2012). Pediatric self-management: A framework for research, practice, and policy. Pediatrics. 129:e473–e485.
9. Palermo, T.M., Eccleston, C., Lewandowski, A.S., Williams, A.C., Morley, S. (2010). Randomized controlled trials of psychological therapies for management of chronic pain in children and adolescents: An updated meta-analytic review. Pain. 148:387–97.
10. Eccleston, C., Williams, A., Morley, S. (2009). Psychological therapies for the management of chronic pain (excluding headache) in adults. Cochrane Database Syst Rev., (2):CD007407.
11. Peng, P., Choinière, M., Dion, D., et al. (2007). Challenges in accessing multidisciplinary pain treatment facilities in Canada. Can J Anaesth., 54:977–84.
12. Lynch, M.E., Campbell, F., Clark, A.J., et al.(2008). A systematic review of the effect of waiting for treatment for chronic pain.Pain. 136:97–116.

13. Stinson, J.N., Isaac, L., Campbell, F., et al. (2013). Understanding the information and service needs of young adults with chronic pain: Perspectives of young adults and their providers. Clin J Pain., 29:600–12.
14. Ritterband, L., Gonder-Frederick, L., Cox, D., Clifton, A., West, R., Borowitz, S. (2003). Internet interventions: In review, in use, and into the future. Prof Psych Res Prac., 34:527.
15. Nguyen, H.Q., Carrieri-Kohlman, V., Rankin, S.H., Slaughter, R., Stulbarg, M.S. (2004). Internet-based patient education and support interventions: A review of evaluation studies and directions for future research. Comput Biol Med., 34:95–112.
16. Wantland, D.J., Portillo, C.J., Holzemer, W.L., Slaughter, R., McGhee, E.M.(2004) The effectiveness of Web-based vs. non-Web-based interventions: A meta-analysis of behavioral change outcomes. J Med Internet Res., 6:e40.
17. Murray, E., Burns, J., See, T.S., Lai, R., Nazareth, I. (2005). Interactive health communication applications for people with chronic disease. Cochrane Database Syst Rev., CD004274.
18. Runge, C., Lecheler, J., Horn, M., Tews, J., Schaefer, M. (2006). Outcomes of a Web-based patient education program for asthmatic children and adolescents. Chest. 129:581–93.
19. Spek, V., Cuijpers, P., Nyklicek, I., Riper, H., Keyzer, J., Pop, V. (2006). Internet-based cognitive behaviour therapy for symptoms of depression and anxiety: A meta-analysis. Psychol Med., 37:319.
20. Palmqvist, B., Carlbring, P., Andersson, G. (2007). Internet-delivered treatments with or without therapist input: Does the therapist factor have implications for efficacy and cost? Expert Rev Pharmacoecon Outcomes Res., 7:291–7.
21. Cuijpers, P., van Straten, A., Andersson, G. (2008). Internet-administered cognitive behavior therapy for health problems: A systematic review. J Behav Med., 31:169–77.
22. Stinson, J.N., Wilson, R., Gill, N., Yamada, J., Holt, J. (2009). A systematic review of Internet-based self-management interventions for youth with health conditions. J Pediatr Psychol., 34:495–510.
23. Palermo, T.M., Wilson, A.C. (2009). eHealth applications in pediatric psychology. In: Roberts M, Steele R, editors. Handbook of Pediatric Psychology.4th edn. New York: Guildford Press; 227–37.
24. Macea, D.D., Gajos, K., DagliaCalil, Y.A., Fregni, F. (2010). The efficacy of Web-based cognitive behavioral interventions for chronic pain: A systematic review and meta-analysis. J Pain.,11:917–29.
25. Velleman, S., Stallard, P., Richardson, T. (2010). A review and meta-analysis of computerized cognitive behaviour therapy for the treatment of pain in children and adolescents. Child Care Health Dev., 36:465–72.
26. Bender, J.L., Radhakrishnan, A., Diorio, C., Englesakis, M., Jadad, A.R. (2011). Can pain be managed through the Internet? A systematic review of randomized controlled trials. Pain. 152:1740–50.
27. Nguyen, H.Q., Carrieri-Kohlman, V., Rankin, S.H., Slaughter, R., Stulbarg, M.S. (2004). Internet-based patient education and support interventions: A review of evaluation studies and directions for future research. ComputBiol Med., 34:95–112.
28. Griffiths F, Lindenmeyer A, Powell J, Lowe P, Thorogood M. Why are health care interventions delivered over the internet? A systematic review of the published literature. J Med Internet Res. 2006;8:e10.
29. Palmqvist B, Carlbring P, Andersson G. Internet-delivered treatments with or without therapist input: Does the therapist factor have implications for efficacy and cost? Expert Rev Pharmacoecon Outcomes Res. 2007;7:291–7.
30. Hicks CL, von Baeyer CL, McGrath PJ. Online psychological treatment for pediatric recurrent pain: A randomized evaluation. J Pediatr Psychol. 2006;31:724–36;
31. Stinson, J. N., Lalloo, C., Harris, L., Isaac, L., Campbell, F., Brown, S., … Karim, A. (2014). iCanCope with PainTM: User-centred design of a web- and mobile-based self-management program for youth with chronic pain based on identified health care needs. Pain Research & Management : The Journal of the Canadian Pain Society, 19(5), 257–265.
32. Ministère de la santé et des services sociaux .Stratégie de préventionet de gestion des maladies chroniques et Plan d'action 2008–2013: Mieuxsoutenir les personnesatteintes,

les milieuxcliniques et les communautés (document de travail) Québec: MSSS; 2008
33. Fonds de recherche du Québec-Santé. Fonds Pfizer-FRQS-MSSS sur les maladies chroniques, Fiche du programme; 2010–2013.

8 Myths and Facts about Chronic Pain

Questionnaires	Facts	Myths
Weather can influence Pain	Studies shows a mixed outcomes, changes in air pressure can lead to pain in some people ,specifically in patients who are suffering from arthritis	Weather has direct effect on pain onset
Lots of Rest Is Good For Back Pain	Patients need an active involvement in limited exercise and other physical activity.	An adequate rest is required but remain bed ridden is not good.
Losing Weight Can Ease Pain	If you're overweight, losing some of it means less pressure on your joints and back. Need to maintain the ideal weight to avoid discomfort.	Losing weight only cannot ease the pain
You Can Overlook Minor Pain	Even if the ache gets better when you take over-the-counter pain medications, see your doctor if it's severe, lasts more than a week or two, gets worse over time, or makes it hard to do your daily activities.	Many people believe that pain is something they have to live with, but you should never ignore it.
Your Attitude Can Affect Pain	You don't want to ignore your pain. Don't push yourself beyond your capacity to accomplish any task or work .This can worsen the situation. Instead, keep looking for solutions. Always consult a doctor for right treatment	Pain could be avoided and ignored.
No Pain, No Gain	Don't push yourself beyond your capacity to accomplish any task or work .	Although it's OK to push yourself when you work out, it's important to know when to stop. Pain is your body's way of telling you that something is wrong. You should never feel pain when exercising. If you do, stop and take a break. To stay safe, learn what your limits are and stay within them.
Pain Is Part of Aging		Chronic pain is not like gray hair and wrinkles. You might not feel like you used to when you were young. But if you're in pain every day, talk with your doctor to help you find relief. At any age, you shouldn't settle for feeling bad.
Pain Killers Lead to Addiction		When you take them as directed, prescription pain medications rarely cause addiction. Don't use more than what's prescribed, and don't take them more often than what's recommended. If you aren't getting the pain relief you need, talk it over with your doctor. Don't change the dosing on your own, and never use someone else's prescription.

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