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Preventive Strategies and Methods for Chronic Pain of Multiple Etiologies: A Perspective

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Abstract

This short communication paper was aimed to provide a perspective viewpoint on the chronic pain preventive strategies and methods from an evidence-informed search of PubMed database. There were studies on whiplash associated disorder, low back pain, post-operative (inguinal hernia surgery), and therapeutic adjunct to cognitive-behavioral therapy, all of which proved acceptable results in favor of preventive interventions targeted against development of chronic pain. Future studies are recommended on multidimensional multidisciplinary interventions in prevention of multifactorial presentation of chronic pain along a biopsychosocial model.

Keywords: Chronic pain; Pain-related disability; Primary prevention; Secondary prevention.

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Whiplash-Associated Disorder (WAD)

Ferrari1 described the use of biopsychosocial model for using new ways of treating and preventing of the chronic disability in WAD since this model takes into account of the mechanism by which acute pain becomes chronic pain, and how this can be prevented. Patient-focused education and treatments encourage a positive health behavior after whiplash injury that is conducive to more rapid recovery, and provides the whiplash patient with insight into the mediators of chronic pain to facilitate and encourage effective coping strategies.

Sullivan *et al*[2] studied adjunctive role of a 10-week psychosocial intervention- Progressive Goal Attainment Program (PGAP), improved return-to-work rates beyond those associated with participation in a functional restoration-based physical therapy intervention in 60 subjects who received the functional restoration physical therapy intervention who were compared with a sample of 70 subjects who received PGAP in addition to physical therapy. As expected, participation in PGAP plus physical therapy resulted in a higher return-to-work rate (75%) than participation in physical therapy alone (50%).

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Low Back Pain

Kendall[3] listed the role of psychosocial factors in acute musculoskeletal pain: the onset of pain; the seeking and receiving of health care and income support; and the development of chronic pain-related disability and work loss. Psychosocial factors (recognized as 'yellow flags') were usually responsible for the chronicity, and that many of the learned behaviours in chronic pain states begin in acute stages.

Rehabilitation counseling during acute stage addressed the impact of psychological reactions to acute injury on the 'tagging' of individuals at risk for chronic back pain problems, and subsequent recovery at 6 months for preventing long-term disability.[4]

Post-operative Chronic Pain

Intra-operative nerve injury was commonly observed in surgical procedures like amputations and thoracotomy, which lead to chronic postoperative pain which presented as persistent postsurgical neuropathic pain.[5]

A group of nine hernia surgery experts developed a consensus statement during a conference in Rome and it was published as International guidelines for prevention and management of post-operative chronic groin pain following inguinal hernia surgery. The recommendations include: identification and preserving all three inguinal nerves during open inguinal hernia repair to reduce the risk of chronic groin pain, and elective resection of a suspected injured nerve. Surgical treatment (for all three nerves) should be suggested for patients who do not respond to conservative pain-management treatment for at least 1 year from the previous herniorraphy.[6]

Johner *et al*[7] in their systematic literature review aimed to investigate the influence of ilioinguinal nerve excision on the development of chronic pain after inguinal hernia repair and identified four high-quality randomized controlled trials which upon pooled meta-analysis showed that neurectomy was associated with decreased pain (with development of altered sensation in the area) 6-months post-operatively.

Bittner *et al*[8] evaluated the preventive role of transabdominalpreperitoneal patch plasty (TAPP)on the occurrence of chronic pain and sexual dysfunction in 276 hernia patients. The authors performed Mesh fixation with glue for 212 patients and with clip for 64 patients. 42% of patients experienced disabling chronic pain prior to surgery, and it reduced to 8.3% after TAPP. 78% of patients became painfree 6-months after TAPP, also with decreased frequency of sexual dysfunction.

Therapeutic Adjunct

Naylor et al9 developed the Therapeutic Interactive Voice Response (automated, telephone-based tool) for maintenance enhancement following group cognitive-behavioral therapy (CBT) for chronic pain reduction and relapse prevention. The 51 with chronic musculoskeletal pain who completed 11 weeks of group CBTwere randomized to one of two study groups. Twenty-six subjects participated in 4 months of TIVR, while a control group of 25 subjects received standard care alone.The study demonstrated that TIVR can be used to decrease pain, improve coping and decrease likelihood of relapse into pain behavior.

There were studies on whiplash associated disorder, low back pain, post-operative (inguinal hernia surgery), and therapeutic adjunct to cognitive-behavioral therapy, all of which proved acceptable results in favor of preventive interventions targeted against development of chronic pain. Future studies are recommended on multidimensional multidisciplinary interventions in prevention of multifactorial presentation of chronic pain along a biopsychosocial model.

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