

Overview of Chronic Pain Management in Family Practice

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Abstract: We aimed in this study to observe and evaluate the role of family physicians in management of pain especially chronic pain in primary care setting, also to review the literature of this topic from different perspectives, such awareness and attitude of physicians in primary care about prescribing medications that for pain management. We searched MEDLINE, Cochrane Database, Cochrane Central Register of Controlled Trials, and CINAHL from inception through December 2016, using the following terms: “pain” “chronic pain” and “primary care” OR “family practice”. We limited the electronic searches to human subjects and to English language. We attempted to identify additional studies through hand searches of reference lists. Medical care physicians are frequently the first to see a patient with pain, and this group represents the largest population of physicians dealing with these pain patients. PCPs are in a unique position to improve pain management. Without appropriate training, unwillingness to recommend pain medications in the medical care setting is reasonable. These clinicians routinely address complicated and incurable chronic conditions, such as heart disease or diabetes in senior patients. Pain management is intricate and needs knowledge, PCPs can establish the abilities to successfully manage pain.

Keywords: chronic pain, physicians dealing, PCPs.

1. INTRODUCTION

Chronic pain is common in medical care settings and is frequently connected with significant special needs and distress ^(1,2). Depending on the source population, frequency quotes for chronic non-malignant pain range from 5% to 33% in primary care settings ^(1,2). The expenses associated with chronic pain are considerable and include patient discomfort, decreased quality of life, and increased use of health services ^(1,2,3,4). Chronic pain enforces a major clinical, financial and social concern, affecting an approximated 100 million Americans in health care and lost worker performance ⁽⁵⁾. Because of the restricted number of pain expert physicians, primary care clinicians supply much of the health care systems' pain care. Primary care physicians report frustration when taking care of patients with chronic pain, much which relates to issues about opioid misuse, abuse, and diversion ^(6,7,8). Additionally, primary care physicians typically have minimal training in pain care ⁽⁹⁾ and practical time constraints ^(10,11). As the adoption of health information technology multiplies, well-designed clinical decision support can assist medical care physicians effectively acquire and utilize the appropriate, accurate, and prompt details needed to prescribe opioids or alternate pain treatments effectively ⁽¹²⁾. A range of non-pharmacologic and pharmacologic treatments are administered typically to patients with chronic pain. Chronic pain is a extensive and difficult problem for medical care physicians and family physicians, particularly in patients with nonmalignant pain syndromes, who represent a growing proportion of chronic pain diagnoses ⁽¹³⁾. For patients with moderate to severe acute or chronic pain, non-opioid analgesics may not suffice to achieve adequate analgesia. Historically, using opioids to handle pain has actually oscillated from broad indiscriminate use a century back to directly limited use in subsequent years that left a lot of people without sufficient analgesia. More just recently, several forces have owned the increased use of strong opioids in the management of pain, including a progressing regulative outlook and increasing acceptance from the scientific community ⁽¹⁴⁾.

We aimed in this study to observe and evaluate the role of family physicians in management of pain especially chronic pain in primary care setting, also to review the literature of this topic from different perspectives, such awareness and attitude of physicians in primary care about prescribing medications that for pain management.

2. METHODOLOGY

We searched MEDLINE, Cochrane Database, Cochrane Central Register of Controlled Trials, and CINAHL from inception through December 2016, using the following terms: “pain” “chronic pain” and “primary care” OR “family practice”. We limited the electronic searches to human subjects and to English language. We attempted to identify additional studies through hand searches of reference lists.

3. RESULTS

○ Assessment of patient with chronic pain:

Assessing patients with chronic pain in medical care requires an organized method that encompasses the pathophysiologic, as well as the mental and social aspects of the condition⁽¹⁵⁾. Determining the pain as nociceptive (tissue injury), neuropathic (a neurologic reaction to neural or nonneural injury), or combined; and, if possible, quantifying the pain using visual analog scales will assist in treatment choices. A comprehensive social and psychiatric history may alert the physician to problems, such as current or previous drug abuse, developmental history, depression, anxiety, or other factors, that might disrupt achieving treatment objectives⁽¹⁵⁾.

Assessment of pain is a crucial action to offering great pain management. In a sample of physicians and nurses, Anderson and colleagues⁽¹⁶⁾ found absence of pain evaluation was among the most troublesome barriers to attaining great pain control. There are lots of recommendations and standards for what constitutes a sufficient pain evaluation; however, lots of suggestions appear unwise in acute care practice. Nurses dealing with hospitalized patients with acute pain should pick the appropriate components of assessment for the existing medical situation. The most critical element of pain assessment is that it is done regularly (e.g., when a shift, every 2 hours) using a standard format⁽¹⁷⁾. The assessment criteria should be explicitly directed by medical facility or unit policies and procedures^(17,18). To fulfill the patients' needs, pain needs to be reassessed after each intervention to examine the result and identify whether adjustment is needed. The time frame for reassessment also ought to be directed by medical facility or unit policies and procedures⁽¹⁷⁾.

○ Prescribing Opioid by family physicians:

Applications for opioids are also being established in new areas such as neuropathic pain, which is pain brought on by a central or peripheral nerve system deficit resulting in alterations in sensory transmission that may continue after recovery has taken place^(18,19). Up until recently, it was believed that opioids were inadequate against neuropathic pain, however the results of several recent randomized controlled trials indicate that opioids can provide remedy for neuropathic pain^(20,21). Research studies of the varying responses of persons to pain have generated new interest in determining whether women and males have the exact same responses to analgesics, and whether there are gender-based distinctions in opioid-activated endogenous pain-modulating circuits⁽²²⁾.

Prior research has taken a look at physicians' difficulties during encounters including opioids^(23,24), patient and doctor qualities connected to opioid prescribing^(25,26) and physician mindsets towards opioids^(24,27,28,29). Research study has not more carefully identified physicians' usage of info and choice processes when choosing whether or not to recommend opioids. This understanding is needed so information systems designers, policymakers, and administrators can create helpful and usable systems of care. Some U.S.-based scientific standards^(30,31) suggest that physicians gain access to and use specific information, such as opioid risk assessment screeners^(32,33), urine drug screening, standardized pain scales, and prescription drug tracking databases. However, evidence recommends physicians do not commonly use these tools^(34,35). As is often the case with systems that suffer from poor adoption, physician's failure to use guideline-recommended info might originate from uncertain value of the info as well as an useful absence of time and resources^(36,37). Hence, there is a need for a detailed understanding of physicians' information needs and clinical decision making processes. With this understanding, new systems, such as choice assistance tools, might be better developed with the physicians' unique work needs in mind. As soon as implemented, such tools may assist clinicians overcome typical barriers, such as absence of information or time restrictions, to the shipment of guideline-based chronic opioid and chronic pain management⁽³⁷⁾.

When prescribing or advising opioid treatment, it is necessary to think about the possibility of drug-drug interactions. The pharmacokinetic or pharmacodynamic profiles of lots of medications, including opioids, might be altered by other medications that are being taken concurrently. The majority of marketed drugs are metabolized in different ways by the cytochrome P450 (CYP450) system⁽³⁸⁾. When it comes to many opioids, metabolism takes place primarily through the CYP3A4 and/or CYP2D6 pathways. Making use of concomitant medications connecting with CYP3A4 or CYP2D6

(Table 1) may affect the plasma levels of the opioid or of other concomitant medications, leading to minimized analgesia or adverse events^(38,39). For example, phenothiazines can decrease the result of oral anticoagulants, and thiazide diuretics can emphasize the orthostatic hypotension that may occur with phenothiazines; for this reason, prochlorperazine should be utilized with care in patients taking other phenothiazines, oral anticoagulants, or thiazide diuretics⁽⁴⁰⁾.

Table 1: Opioids and Other Medications Metabolized by CYP2D6 and CYP3A4 Enzymes^(57,58)

| Enzymes | Opioids | Popular Medications/ Substrates |
|---------|------------------|---------------------------------|
| CYP2D6 | Codeine | Carvedilol |
| | Dextromethorphan | Propafenone |
| | Dihydrocodeine | Amitriptyline |
| | Oxycodone | Paroxetine |
| | Tramadol | Risperidone |
| | | Thioridazine |
| | | Fluoxetine |
| | | Lidocaine |
| | | Nortriptyline |
| | | Propranolol |
| | | Tamoxifen |
| CYP3A4 | Buprenorphine | Clarithromycin |
| | Fentanyl | Erythromycin |
| | Methadone | Alprazolam |
| | Oxycodone | Cyclosporine |
| | | Chlorpheniramine |
| | | Diltiazem |
| | | Lovastatin |
| | | Hydrocortisone |
| | | Buspirone |
| | | Caffeine |
| | | Nifedipine |
| | | Verapamil |
| | | Diazepam |

○ **Treatment options of chronic pain in primary care:**

Sharp pain of mild-to-moderate strength represents one of the most frequent problems encountered by primary care physicians (PCPs) and accounts for approximately 40% of patient check outs⁽⁴¹⁾. Numerous of these cases are brief term and only need brief pharmacologic treatment, pain can end up being intractable and constant⁽³⁾.

Pain occurs from a variety of sources, making proper pain management a main goal of medical care⁽¹²⁾. The prompt, effective treatment of acute pain is crucial to patient relief^(1,22). Pain negatively affects activities of daily living, as well as psychological and mental health, productivity, and the use of healthcare resources^(11,21,36). In addition to the consequences of acute pain itself, unmanaged sharp pain may contribute to the development of a chronic pain condition that persists long after the preliminary injury or health problem deals with^(4,6). Clinicians should recognize that acute pain requires suitable treatment to help avoid chronic pain.1 Routine treatment of moderate-to-severe pain consists of prescription opioids as part of a thorough pain-management strategy^(11,16). However, the increasing use of prescription opioids accompanies the increasing aberrant usage, abuse, and diversion of these medications^(17,18). Thus, PCPs might be reluctant to initiate opioid treatments or might recommend these agents at suboptimal levels, leading to the under treatment of pain^(17,21). Regardless of potential clinician pain with opioid treatment, a great deal of patients with pain dealt with in the medical care setting receive opioid prescriptions⁽²¹⁾. Primary care physicians must end up being supporters for

appropriate pain management and guarantee that all patients with pain are dealt with appropriately ⁽²²⁾. A recent position paper from the American Academy of Pain Medicine (AAPM) figured out the total quality of pain management stays inappropriate for countless United States patients with relentless or severe pain ⁽⁴²⁾. Under-recognition and under-treatment of pain are a specific issue in primary care ^(43,44). These clinicians face dual obstacles from the emerging upsurges of undertreated pain and prescription opioid abuse ⁽¹⁷⁾.

Numerous classes of medication are readily available to manage pain and they are frequently applied in a progressive method (**Figure 1**) ^(45,46). Initially designed to address pain in patients with cancer, the World Health Organization analgesic ladder describes a step-by-step use of analgesics, consisting of opioids, based on pain strength ^(45,46). A growing consensus that opioid therapy is appropriate for a wide range of patients with pain is emerging, and this therapy represents a legitimate medical need in many cases ^(47,48). The 2009 scientific standards just recently released by the American Pain Society (APS) and the AAPM comprehensively review the best offered proof for the effective and safe use of opioids in patients with chronic pain ^(47,48). This expert panel concluded these medications can be a reliable therapy for thoroughly chosen and monitored patients. Patients ideal for opioid therapy include those with moderate-to-severe pain and pain with an unfavorable influence on function or lifestyle, too patients in whom the potential therapeutic advantages exceed potential harm ⁽⁴⁷⁾. Based on the growing agreement on the advantages of pain management, opioid prescribing by US PCPs has increased over the past years ^(49,50). The recently published Trends and Risks of Opioid Use for Pain (TROUP) research study analyzed opioid usage in both national commercially insured and state-based openly insured patients over the 6-year period from 2000 to 2005 ^(49,51). The TROUP research study reported significant boosts in opioid usage across compensation models and pain site, a trend reported for the previous 2 decades. Of specific note, the TROUP research study documented the growing long-lasting use of opioids amongst patients with pain ⁽⁵¹⁾. Scientific practice treatment choices must stabilize the advantages of enhanced pain management through the increased use of opioids with the threats connected with opioid treatment.

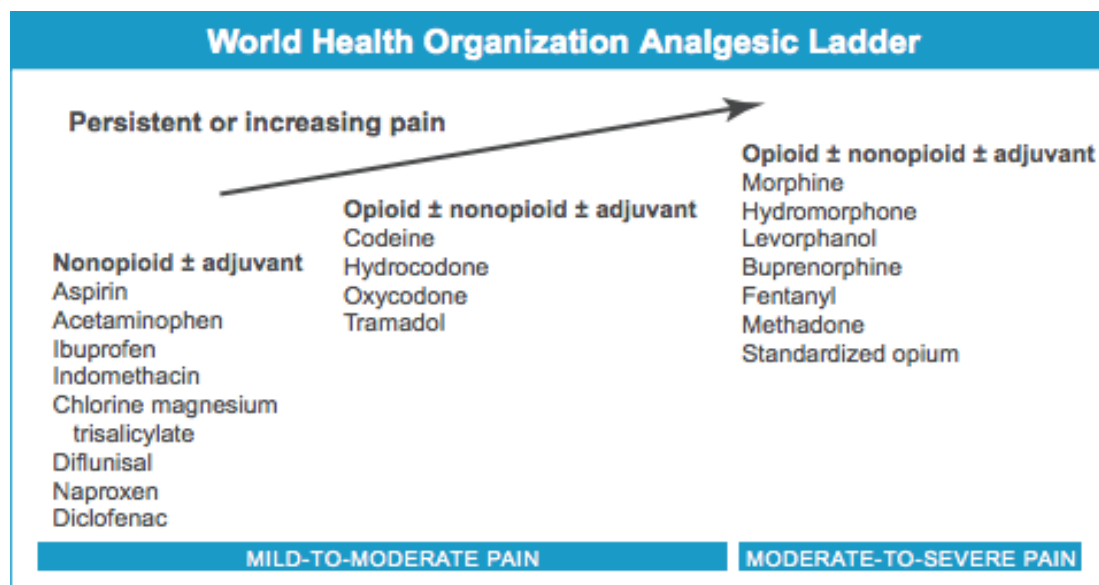


Figure 1: World Health Organization Analgesic Ladder ⁽⁴⁵⁾

4. CONCLUSION

Medical care physicians are frequently the first to see a patient with pain, and this group represents the largest population of physicians dealing with these pain patients. PCPs are in a unique position to improve pain management. Without appropriate training, unwillingness to recommend pain medications in the medical care setting is reasonable. These clinicians routinely address complicated and incurable chronic conditions, such as heart disease or diabetes in senior patients. Pain management is intricate and needs knowledge, PCPs can establish the abilities to successfully manage pain. The unfavorable impact of undertreated pain on patient quality of life and public health expenses, combined with growing evidence on the effective use of opioid analgesics, supply a strong reasoning for PCPs to find out best practices for pain management. We recognized and richly explained physicians' battles to deliver high quality care as they seek and make decisions based upon a selection of insufficient, conflicting, and typically untrusted info about their patients.

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