MANAGING UNDERTREATED CHRONIC CANCER PAIN AND NON CANCER PAIN IN HUSM MULTIDISCIPLINARY CHRONIC PAIN SERVICE (MCPS)

By:

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ABBREVIATIONS

ASA	American Society of Anesthesiologist
HUSM	Hospital Universiti Sains Malaysia
MCPS	Multidisciplinary Chronic Pain Service
VAS	Visual Analogue Score
RMD	Rolland & Morris Disability Questionnaire
MRMD	Modified Rolland & Morris Disability Questionnaire
HPT	Hypertension
DM	Diabetes Mellitus
IHD	Ischaemic Heart Disease

BP	Blood Pressure
BW	Body Weight
BMI	Body Mass Index

ABSTRAK

Latar Belakang

Kesakitan kronik adalah masalah yang serius di dalam masyarakat. Di kalangan pesakit yang mendapatkan rawatan di HUSM, ramai pesakit yang dimasukkan ke wad-wad di HUSM bagi masalah kesihatan yang pelbagai mengalami kesakitan yang berpanjangan walaupun rawatan bagi melegakan kesakitan di sediakan dan ini menjurus kepada ketidak puasan hati di kalangan pesakit. Kesakitan kronik boleh ditafsirkan sebagai rasa sakit pada anggota badan yang berpanjangan dan biasanya melebihi satu hingga tiga bulan. Kesakitan kronik secara kasarnya boleh dibahagikan kepada dua jenis utama, iaitu kesakitan berpanjangan yang berpunca daripada kanser dan yang bukan berpunca daripada kanser. Adalah penting untuk mengenal pasti punca sakit dan jenis sakit yang dominan di hidapi oleh pesakit bagi memastikan rawatan yang berkesan. Dalam kajian ini, kami ingin mendapatkan gambaran tahap keseriusan bagi rawatan yang tidak tepat(undertreatment) bagi kedua-dua jenis kesakitan kronik dan mengenal pasti factor penyumbang yang menjadi punca kepada masalah ini. Pada masa yang sama, kami juga ingin menilai keberkesanan rawatan yang disediakan oleh unit multi disiplinari pengurusan kesakitan kronik HUSM dalam menangani kes kesakitan kronik yang berpunca daripada kanser dan juga bukan kanser.

Objektif

Objektif penyelidikan 'prospective cohort' ini adalah bagi mendapatkan peratusan kes kesakitan kronik yang mendapat rawatan di bawah tahap standard (undertreated) bagi kesakitan kronik yang berpunca daripada kanser dan juga bukan kanser semasa mendapatkan rawatan di wad-wad onkologi dan surgeri. Faktor-faktor penyumbang yang menyunbang kepada kejadian rawatan di bawah tahap standard akan cuba ditentukan dan cadangan untuk menanganinya akan dibentangkan dihujung kajian ini. Kaitan taburan demografi dengan kejadian kes rawatan kesakitan di bawah tahap standard (undertreated) juga akan ditunjukkan. Objektif yang terakhir adalah untuk menilai keberkesanan rawatan yang di sediakan oleh unit rawatan kesakitan kronik HUSM.

Kaedah

Seramai seratus tiga pesakit kesakitan kronik yang berpunca daripada kanser dan empat puluh tujuh yang berpunca bukan daripada kanser di perlukan bagi kajian ini dengan kuasa kajian sebanyak 80%. Semua pesakit tersebut mestilah yang dimasukkan ke wad onkologi ataupun wad pembedahan(surgical based wards) di HUSM. Kumpulan pesakit akan dibahagikan kepada dua; kumpulan kesakitan kronik kanser dan kumpulan kesakitan kronik bukan kanser. Kedua-dua kumpulan akan di nilai dan diberikan rawatan oleh unit rawatan kesakitan kronik yang di ketuai oleh pakar rawatan kesakitan kronik HUSM.

Berdasarkan kritiria yang ditetapkan, pesakit akan di kategorikan sebagai mendapat rawatan dibawah tahap standard(undertreated) ataupun tidak. Peratusan pesakit yang

mendapatkan rawatan dibawah tahap standard akan ditentukan bagi kedua-dua kumpulan. Kemudian, semua pesakit akan diberikan rawatan mengikut kesesuaian penyakit oleh pakar rawatan kesakitan kronik dan respon kepada rawatan akan di rekodkan. Respon terhadap rawatan yang diberikan akan dinilai menggunakan skor tahap kesakitann (visual analogue score) dan skor ketidakupayaan 'Rolland and Morris'(MRMD). Bagi kawalan kesakitan, skor empat dan keatas daripada sepuluh skor di ambil sebagai kawalan kesakitan yang tidak baik manakala skor kesakitan tiga dan ke bawah diambil sebagai kawalan kesakitan yang baik. Semua pesakit akan dirawat secara berkala sehingga skor kesakitan menjadi tiga atau kurang. Kemajuan dalam skor ketidakupayaan(MRMD) akan dinilai pada masa skor kesakitan adalah tiga atau kurang. Keberkesanan rawatan yang diberikan oleh unit rawatan kesakitan kronik HUSM akan dinilai berdasarkan masa yang di perlukan untuk mengurangkan skor kesakitan menjadi tiga atau kurang dan juga kemajuan dalam skor ketidakupayaan(MRMD). Tempoh masa maksimum bagi setiap pesakit untuk dirawat adalah selama enam bulan. Pesakit yang memerlukan masa yang melebihi enam bulan untuk mendapatkan skor kesakitan tiga atau kurang akan diketegorikan sebagai mengalami kesakitan kekal(refractory pain).

Keputusan

Seramai seratus tiga orang pesakit kanser kronik dan empat puluh tujuh pesakit kronik yang tidak berpunca daripada kanser terlibat dalam kajian ini. Daripada jumlah tersebut, 92 daripada 103 pesakit (89.3%) daripada pesakit kanser kronik adalah dalam kategori mendapat rawatan di bawah tahap optimum(undertreated). Manakala bagi kesakitan kronik yang tidak berpunca daripada kanser seramai 44 daripada 47 orang pesakit

(93.6%) telah mendapat rawatan dibawah tahap standard bagi kesakitan yang di alami. Perbezaan ini adalah tidak signifikan dengan nilai P (p value) 0.550. Dari segi taburan gender, pesakit perempuan lebih cenderung untuk mendapat rawatan di bawah tahap standard(65.08%) berbanding pesakit lelaki(35.92%). Manakala bagi kes kesakitan kronik yang tidak berpunca daripada kanser, kejadian rawatan di bawah tahap standard lebih seimbang bagi kedua-dua gender yang mana perempuan mendapat 51.06% dan lelaki mendapat 48.94%. walau bagaimanapun, kejadian rawatan di bawah tahap standard bagi pesakit kronik kanser dan tidak kanser tidak berbeza secara signifikan dari segi perbezaan gender dengan nilai p 0.131.

Faktor penyumbang kepada masalah rawatan yang tidak optimum yang paling kerap ditemui adalah salah dalam diagnosa jenis sakit yang dihidapi oleh pesakit kesakitan kronik. Pemerhatian ini adalah serupa bagi kedua-dua kategori pesakit dalam kajian ini yang mana kesakitan kronik kanser mendapat 80.58% dan kesakitan kronik bukan kanser mendapat 78.72% dengan nilai p adalah 0.792. Respon kepada rawatan diberikan oleh unit rawatan kesakitan kronik HUSM dalam penurunan skor kesakitan juga tidak berbeza untuk hari pertama sehingga hari ketiga bagi kedua-dua kategori pesakit dengan nilai p melebihi 0.050. Kebanyakkan pesakit mendapat penurunan skor kesakitan kepada tiga atau kurang dalam masa satu minggu. Kemajuan dalam skor ketidakupayaan(MRMD) dengan membandingkan MRMD pada hari rujukkan dan pada hari skor kesakitan diturunkan kepada tiga atau kurang juga tidak signifikan bagi pesakit kesakitan kronik kanser. Pesakit kesakitan kronik yang bukan kanser telah menunjukkan kemajuan yang signifikan dalam skor ketidakupayaan(MRMD) yang mana majoriti daripada mereka telah mendapat kemajuan melebihi 50% apabila skor kesakitan dapat diturunkan kepada tiga atau kurang. Perbezaan dalam kemajuan skor

ketidakupayaan ini adalah signifikan bila dibandingkan bagi kedua-dua kumpulan pesakit ini dengan nilai p 0.001.

Kesimpulan

Masalah rawatan kesakitan di bawah tahap standard bagi pesakit yang di masukkan ke wad-wad onkologi dan pembedahan HUSM adalah serius. Antara factor penyumbang utama adalah kesilapan dalam mendiagnosa jenis sakit yang dialami oleh pesakit yang seterusnya menyebabkan rawatan ang diberikan tidak tepat. Rawatan yang disediakan oleh unit rawatan kesakitan kronik HUSM adalah sangat berkesan dalam mengawal skor kesakitan yang mana majotiti pesakit mendapat skor kesakitan tiga atau kurang dalam masa satu minggu sahaja. Mengawal kesakitan seberapa cepat yang boleh dan selama yang boleh membuatkan pesakit berasa lebih selesa dan menjalani kehidupan yang lebih berkualiti.

ABSTRACT

Background

Chronic pain is a serious problem in the community. Among patients received treatment in HUSM, many patients that had been admitted into the wards for various primary conditions had continuous pain despite of treatments given which causing poor satisfaction among patients. Chronic pain can be defined as prolonged pain sensation at any body part and usually lasting for more than one to three months. Chronic pain can be broadly classified into two main types, chronic cancer pain and non cancer pain. It is paramount important to identify the source of pain and dominant type of pain in order to give a precise and effective treatments. In this research, we want to have a picture regarding the seriousness of the incidence of undertreated for both chronic cancer pain and non cancer pain and to identify the possible contributing factors that lead to it. At the same time, we want to evaluate the effectiveness of HUSM MCPS in providing treatment for the undertreated chronic cancer pain and non cancer pain patients.

Objectives

This a Prospective Cohort Study that is aiming to get an overall percentage of undertreated chronic cancer pain and non cancer pain among patients admitted into oncology and surgical based wards. The possible contributing factors that may lead to the undertreatment among cancer pain patients and non cancer pain patients will be determined and recommendations to overcome the identified problem will be presented at the end of this research. The relationship between demographic data and the occurrence of the undertreated among chronic cancer pain and non cancer pain also will

be presented. The last objective is to evaluate the effectiveness of treatment provided by HUSM MCPS.

Method

A total of one hundred and three chronic cancer pain patients and fourty seven chronic non cancer pain patients were required in order to get power of study with 80% confidence interval. All the patients involved were those admitted into oncology and surgical based wards in HUSM. The cohorts was divided into two, chronic cancer pain and non cancer pain. Both groups were assessed and treated by HUSM MCPS headed by a pain specialist.

Based on criteria predetermined, both categories of patients were categorized as undertreated or not undertreated. The percentage of undertreated was determined for both groups of patients. All the undertreated patients were received treatments by HUSM MCPS according to their pain diagnosis given by pain specialist and responses toward treatment given were recorded. The responses were assessed in term of improvement in pain score using visual analogue score (VAS) and disability score using Modified Rolland & Morris Disability score (MRMD). For pain score, any score of four and above was considered as poor pain control and score three and below was considered as good pain control. All patients were treated and periodically seen until their pain score become three or less. The improvement in MRMD score is taken when the pain score is at three or less. The effectiveness of treatment given by HUSM MCPS was evaluated based on time taken to reduce pain score to three or less and how much the improvement in disability guided by score of MRMD. The maximum time for each patient followed up was six months. Any patient that requires time longer than six

months to reduce his or her pain score to three or less was considered having refractory pain.

Results

A total of 103 chronic cancer pan patients and 47 chronic non cancer pain patients involved in this study. Out of these numbers, 92 out of 103 patients (89.3%) were belongs to undertreated chronic cancer pain. For chronic non cancer pain 44 out of 47 93.6%) patients were undertreated for their pains. This difference was statistically not significant with the p value was 0.550. In term of gender distribution, female scored a much higher percentage for chronic cancer pain in which 65.08% for female and 35.92% for male. Whereas for chronic non cancer pain, the distribution was fairly balanced. Female had 51.06% and male scored 48.94% for chronic non cancer pain. However, when compare between cancer and non cancer patient, the difference in gender distribution was not significant with a p value of 0.131.

The most frequent contributing factor that responsible to the undertreated chronic cancer pain and non cancer pain was wrong pain diagnosis. The similar results were obtained for both undertreated chronic cancer pain (80.58%) and non cancer pain (78.72%). This produced a non significant result when compared between undertreated cancer and non cancer patients with a p value of 0.792. The responses to the treatment given by HUSM MCPS in term of improvement in pain score was not significantly difference between chronic cancer and non cancer patients for day 1 to day 3 of started treatments as p value were more than 0.050. However majority of patients in both groups of patients had pain score 3 and less by I week.

Improvement in disability score by measuring MRMD at time of referral and when pain had been adequately controlled (VAS ≤ 3) was not significantly improve for chronic cancer pain patients. Chronic cancer pain patients showed a slow response in improvement in MRMD score and majority of them did not get 50% improvement by the time VAS 3 or less. On the other hand, undertreated chronic non cancer pain patients showed a significant improvement in MRMD score and most of them had 50% improvement by the time pain was adequately controlled. This difference in term of improvement in MRMD score was very significance with a p value of 0.001.

Conclusion

The undertreated chronic cancer pain and non cancer pain was a very serious in HUSM for warded patients in oncology and surgical based wards. The most common contributing factor associated with undertreated chronic cancer and non cancer pain was wrong pain diagnosis which consequently leads to inappropriate treatments. Treatment provided by HUSM MCPS was very effective in controlling the pain score and most of the patients had pain score 3 or less within 1 week following referral to HUSM MCPS. It is very important to control the pain as soon as possible and as longer as possible in chronic pain patients in order to provide them a better quality of life.

CHAPTER 1: INTRODUCTION

Pain is the most common symptom that brings patients to see a physician and nearly always manifests a pathological process (G. Edward Morgan et al, 2006). There are various definitions, but the most accepted definition is by the International Association for The Study of Pain. The International Association for The Study of Pain defines pain as an unpleasant sensory and emotional experiences associated with actual or potential tissue damage, or describe in term of such damage. Acute pain can be defined as pain that is caused by noxious stimulation due to injury, a disease process, or the abnormal function of muscle or viscera. Whereas, chronic pain is defined as pain that persist beyond the usual course of an acute disease or after a reasonable time for healing to occur. This period can vary from 1 to 6 months.

The most common forms of chronic pain include those associated with musculoskeletal disorders, chronic visceral disorders, lesions of peripheral nerves, nerve roots, or dorsal root ganglia (including diabetic neuropathy, causalgia, phantom limb pain, and post herpetic neuralgia), lesion of the central nervous system (stroke, spinal cord injury and multiple sclerosis) and cancer pain. Pain of most musculoskeletal disorder (eg. rheumatoid arthritis and osteoarthritis) is primarily nociceptive, whereas pain associated with peripheral or central neural disorders is primarily neuropathic. Pain that are associated with some disorders, such as cancer and chronic back pain (particularly after surgery), are often mixed.

The Institute of Medicine defines medical error as "the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim" (Sherwood G et al, 2004). Although undertreatment of pain can fits this definition, it has remained a hidden error because it does not result in direct adverse consequences. Rather, the effects of

inadequate pain management are far more insidious, including not only unnecessary human suffering, but delayed healing, interference with activities of daily living, and increased costs of extended or repeat hospitalizations. Studies continue to reveal that patients experience moderate to severe pain in acute care institutional settings despite guidelines from various national groups delineating evidence-based components of effective pain management (Gordon DB et al, 2002).

Over three decades of a myriad of traditional approaches to improving pain management based on education, policy development, and regulatory mandates have failed to produce any permanent change in provider's practice that results in effective management outcomes. A new approach is essential to solve the problem of pain mismanagement. Investigation of alternative avenues, such as examining acts of omission and the identification of safety errors in pain management, is warranted.

Although chronic pain is well recognized, it still often undertreated and underdiagnosed for variety of reasons. Many chronic pain patients had seen numerous medical providers and are given numerous medications but still suffer from pain. These ultimately cause patients to become frustrated with the medical system and physician in general. Undertreatment of pain is a serious worldwide problem that can lead to patient anger, frustration, depression, low self-worth, anxiety, mistrust, isolation, or even suicide (Fishbain et al, 1998).

1.1 OBJECTIVES

Objectives of this study were:

1) To determine the proportion (percentage) of undertreated chronic cancer pain and non cancer pain patients referred to HUSM MCPS.
2) To determine the contributing factors that responsible to undertreated in both chronic cancer and non cancer pain patients
3) To compare demographic data between undertreated chronic cancer pain and non cancer pain patients.
4) To compare response to treatment in term of VAS and MRMD score between undertreated chronic cancer pain and non cancer pain patients following treatment by HUSM MCPS.

CHAPTER 2: LITERATURE REVIEW

2.1 Human Rights

Every person has the right to be healthy. This is not a legal right but rather a human right. Although in Malaysia we have developed a medical system that grants most medical care to privileged individuals, we are continually faced with the difficult task of providing care to those who are under privileged. Health is a fundamental human right, which it is the requisite entitlement for all other human rights. Every human being is entitled to maintain the highest possible standard of health that is conducive to living a life in dignity (Covenant on Economic, Social and Cultural Rights (CESCR), 2000).

Internationally, pain is recognized as an impediment to health and dignity. Alleviating pain and helping to maintain dignity, especially during the terminal phases of illness, is recognized as a necessity (Sherwood G et al, 2004). Understanding this and knowing that it is proper to help in relieved pain, it is hard to understand why little emphasis is placed on the education of our medical students and residents in training regarding pain and its management.

In Malaysia the treatment of pain creates anxiety and frustration among physicians. The usual and customary approaches to managing low back pain, for instance, have proven themselves to be limited at best and debilitating at worst. Surgeries and surgical techniques have developed and have been refined over the years but for some patients surgery often leads to additional pain due to altered mechanics (Charles C Thomas, 1958). With its varied causes, pain management has been a nuisance to physicians due to relatively limited tools, medicines, therapies and treatments modalities available (Heffeman JJ, 2001).

In America over 75 millions suffers serious pain on a yearly basis. Annually 50 million endure serious chronic pain lasting 6 months or more (National Pain Survey, 1999) Headache, low back pain, arthritis and other joint pain, and peripheral neuropathy are the most common forms of chronic pain and they are also the most common presenting complaints in a physician's office (Pain in America, 1998). Over 26 million adults experience frequent back pain and 2/3 of Americans will have back pain during their lifetime (Dionne et al, 1999). In the United States, 1 out of every 6 Americans suffers from arthritis. In Malaysia these data are still lacking and appropriate research to address this issue are needed

Chronic pain has been recognized as a public health issue. A recent survey to see just who was stricken with chronic pain in the United States was performed and it was found that there was an increased burden of unrelieved pain in children, the elderly, minorities, and patients with active addiction or history of substance abuse, those with developmental disabilities, and those with serious chronic diseases (American Chronic Pain Association, 2004). Out of these, 61% are women and the majority of these people were 51 years of age or older. Seventy-two percent of American's surveyed stated they have had pain for more than 3 years, which includes 34% who have had chronic pain for over 10 years. Seventy-six percent of people with chronic pain experience their pain daily. A staggering 48% of those who experienced pain daily say this pain is ever present. Fifty-nine percent of those patients with ever-present chronic pain say their pain is not under control (American Chronic Pain Association, 2004).

2.2 Chronic Pain Impact on the Individual

Chronic pain impacts many aspects of a person's life. Fifty-one percent of employed people who have pain, state that it adversely affects their productivity at work. Forty-one percent of these patients are unable to complete a full day's work. This translates into lost productivity and increased expense for industry in the United States. In addition to lost productivity, 45% of those in chronic pain state their personal relationships suffer due to their condition. These relationships are with a spouse or partner, a child or grandchildren, or even with a close friend (American Chronic Pain Association, 2004). These figures may be different with Malaysian population, but the effect of chronic pain on individuals is similar.

2.3 Quality of Life Impact

More than 50% of people in chronic pain are unable to perform normal activities of daily living. Seventy-five percent of people in pain state that their chronic pain impacts their sleep and their ability to play sports or exercise (American Chronic Pain Association, 2004). This has particular impact on younger patients with chronic pain in that the ensuing de-conditioning of the musculoskeletal system puts them at risk for developing new and more extensive pain issues. As stated above, chronic pain impacts women more than it does men. Seventy-three percent of women with pain state that it prevents them from doing household chores, as compared to 57% of men who state their household chores are affected. In addition, the emotional state of women is affected more than men with chronic pain. Seventy percent of women develop stress and 55% lose desire and motivation to perform activities of daily living, or pleasurable events. Thirty-nine percent have decreased coping ability, and 36% have decreased