Review

Study of Pain Medicine Usage in Mongolian Hospices

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Abstract

We provided cross-sectional study within 170 patients with cancer, hospitalized in hospices of Mongolia and conducted evaluation of pain and its treatment by WHO recommendation. Mongolian hospices used mild opioids more (55.5%), than severe opioids (24.7%), and NSAIDs (19.8%). 91% of patients used oral pain medicine. In Mongolian hospices 81.8% of patients had no pain after treatment according the WHO recommendation, and just 16.5% of patients still had mild pain and 1.7% of patients had moderate pain. We found out that Mongolian hospices manage the pain appropriately to the WHO recommendation.

Key words: Pain; Cancer; Palliative Care; Morphine; Opioids

Introduction

56 million people die in the World every year and 40 million of these patients die with need of palliative care[1]. The population in Mongolia is about 3 million. 16494 people died in Mongolia in 2014, 60% of them (9897) died with need of palliative care [2]. 5483 new cases of cancer registered in 2014 and 3536 patients died because of cancer [3]. Cancer patients need palliation of pain in all stage of diseases. One third of cancer patients had mild to moderate pain in early stage of disease, but in the late stage of cancer two third of patients had severe pain [4,5].

Cancer caused chronic pain syndrome and decreased quality of life of palliative care patients. Treatment of pain by WHO recommendation, 5 principles and three ladders allows palliating cancer pain in 70-90% of cancer patients. WHO recommends using the pain medicine by mouth, by clock, by ladder, by individual needs, and by considering all details? WHO recommends using oral pain killers to 80-90% of cancer patients [4,5,6,7,8,9]. In Mongolia we have 90 % of essential drug from the list of essential for palliative treatment [10]. In 2014, the five leading types of cancer in men were: liver, stomach, lung, esophagus, and pancreatic; and in women: liver, stomach, cervix, esophagus, and breast [11]. But we don't know how many patients have mild, moderate and severe pain and how many patients need mild, moderate and strong pain medicine. For this reason we decided to study treatment of pain in Mongolian hospices and, compliance our treatment with recommendation of WHO.

Materials and Methods Of Study

We provided cross-sectional study within 170 patients with cancer, hospitalized in hospices of Ulaanbaatar: 55 patients in palliative care department of NCC, 31 patients in Hope Hospice, 64 patients in Green home Hospice, 20 patients in Grace Hospice. We provided assessment of pain severity by Wong Baker pain scale. We conducted evaluation of pain and its treatment with correlation with WHO recommendation.

Results of study were statistically analyzed by the SPSS 19 and Excel program.

Results of Study

In our study we included patients with different cancer. 41.8% were patients with liver cancer, 14.1% - patients with stomach cancer, 12.4%- cervical cancer, 8.2% - lung cancer, 3.5%- esophageal cancer. The frequency of main 5 cancers in our study was similar to the frequency of cancer in Mongolia.
### Table 1: Cancer diagnosis within palliative care patients with pain

<table>
<thead>
<tr>
<th>Cancer</th>
<th>Number and % of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver</td>
<td>71</td>
</tr>
<tr>
<td>Stomach</td>
<td>24</td>
</tr>
<tr>
<td>Cervix</td>
<td>21</td>
</tr>
<tr>
<td>Lung</td>
<td>14</td>
</tr>
<tr>
<td>Esophagus</td>
<td>6</td>
</tr>
<tr>
<td>Breast</td>
<td>3</td>
</tr>
<tr>
<td>Colon</td>
<td>3</td>
</tr>
<tr>
<td>Pancreas</td>
<td>6</td>
</tr>
<tr>
<td>Kidney</td>
<td>2</td>
</tr>
<tr>
<td>Ovarian</td>
<td>4</td>
</tr>
<tr>
<td>Bone</td>
<td>3</td>
</tr>
<tr>
<td>Prostate</td>
<td>1</td>
</tr>
<tr>
<td>Brain</td>
<td>4</td>
</tr>
<tr>
<td>Nasopharyngeal</td>
<td>1</td>
</tr>
<tr>
<td>Lymphatic</td>
<td>1</td>
</tr>
<tr>
<td>Rectal</td>
<td>3</td>
</tr>
<tr>
<td>Caposi</td>
<td>1</td>
</tr>
<tr>
<td>Leukemia</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>170</strong></td>
</tr>
</tbody>
</table>

All cancer patients with pain included in our study had chronic pain (100%). 80% of cancer patients had constant pain and 11.8% of them had breakthrough pain.

### Graphic 1: Frequency of constant, resistant and breakthrough pain within cancer patients

### Graphic 2: Severity of pain within cancer patients

15.3% of cancer patients had mild pain, 57.1% had moderate pain, 27.6% had severe pain.

### Graphic 3: Methods of usage of pain medicine

Hospices in Mongolia used pain medicine orally in 90% of cancer patients, which is consistent with the WHO recommendation.

### Graphic 4: Usage of NSAIDs, mild and severe opioids for cancer patients

Mongolian hospices used mild opioids more (55.5%), than severe opioids (24.7%), and NSAIDs (19.8%). Hospices use injectable form of severe opioids more frequently (24%), than injectable forms of mild opioids (0.9%) and NSAIDs (5.5%). 29.4% of cancer patients in hospices had neuropathic pain, 32.4% of patients had mixed pain, and had bone pain. For this reason, hospices used adjuvants – co-analgesics like Dexamethasone, Gabapentine, Amitriptilline, Clodronate.

### Graphic 5: Usage of adjuvant co-analgesics for patients with cancer pain

### Graphic 6: Usage of adjuvant for treatment of side effects of pain killers
Patients with early referral and earlier started treatment in our study lived longer than patient with late stage diagnosis and late referral, which is approved statement of Hong Kong Buddhist Hospital research.

1213 breakthrough pain events treated by IV Morphine in hospices and Jeonnam Regional Cancer Center, Republic of Korea [15], and the mean number of events per patient was 13.6 (95% confidence interval (CI) 10.5-15.4). The mean dose of IV Morphine was 13.9mg (95% CI 12.5-14.5mg, range 3-90mg) and was equivalent to 7.1% of the total daily opioid dose. For each episode, pain intensity and opioid-related symptoms were recorded at the base (T0) and within 30 minutes after (T1). Pain intensity decreased from a mean of 5.1(on a 0-10 numeric scale) at base to 1.8 at T1. A decrease in pain of more than 30%, 50% and 70% was observed in 1179 (97.2%), 958 (78.9%) and 460 (37.9%) BTP events, respectively. In 21 episodes, no changes in pain intensity were observed and a further dose of IV-M was given [15].

Doses of more than 10mg, 30mg and 50mg of IV-M were given for 456 (37.6%), 200 (16.5%) and 104 (8.6%). No differences in age, sex and pain location were found. Adverse effects were uncommon, moderate nausea/vomiting in 32 episodes, drowsiness in 15 episodes, and confusion in one episode [14]. In our study in Mongolian hospices for palliation of breakthrough pain 31% of patients used injection of Morphine, 50% of patients used oral Morphine, 9.5% of patients used injectable Tramadol, and 9.5% of patients used oral Tramadol.

The mean dose of Morphine for breakthrough pain was 6.6 mg, mean dose of Tramadol for breakthrough pain was 71.6 mg.
Conclusion

1. Mongolian hospices used mild opioids more (55.5%), than severe opioids (24.7%), and NSAIDs (19.8%). 91% of patients used oral pain killers.

2. In Mongolian hospices 81.8% of patients had no pain after treatment according the WHO recommendation, and just 16.5% of patients still had mild pain and 1.7% of patients had moderate pain.

3. Pain management of Mongolian hospices appropriate to recommendation of WHO.

References


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