Background: Recently, there has been an increase in the amount of prescription narcotics used in Taiwan. Despite the possibility that patients suspected of abusing opioids are visiting emergency departments (EDs) to collect drugs, only few studies have assessed the attitudes of ED staff toward these fabricating drug seekers and narcotics prescription. Both issues are crucial in identifying fabricating drug seekers and for pain management.

Purpose: The aims of this study were to investigate the attitudes of ED staff toward fabricating drug seekers and narcotics prescription, and to understand the characteristics of patients suspected to be fabricating drug seekers.

Methods: From January 1, 2008 to December 31, 2008, 174 staff members of four EDs completed questionnaires to review their perceptions for patients with fabricated drug-seeking behaviors and their attitudes toward prescribing narcotics. The staff members were also requested to report the characteristics of those patients suspected of fabricating a need for narcotics.

Results: According to the ED staff’s clinical practice, the three most commonly fabricated drug-seeking behaviors were insistence on specific medications, frequent ED visits, and over-reporting of symptoms. Most medical personnel would choose non-narcotic analgesics as their first-line remedy. A total of 14 patients were reported as fabricating drug seekers.

Conclusion: The fabricated drug-seeking behavior patterns described by the ED staff were similar to the descriptions mentioned in the literature and their attitudes toward prescribing narcotics were conservative. However, more interventions to overcome staff’s opiophobia are needed to improve pain management. Reported fabricating drug seekers usually complain of abdominal pain, while parenteral meperidine was the most sought-after drug.

Keywords: Emergencies; Opioid; Substance-related disorders

1. Introduction

In Taiwan, the control of narcotics is very strict. Import, export, manufacture, selling, and purchase of addictive narcotics and psychotropic drugs are sternly regulated under the Controlled Drugs Act. In addition, drug abuse or dependence is judged as a criminal behavior; repeated illicit drug use may be punished with a life sentence under the Narcotic Exclusion Act enacted in 1955. Within this atmosphere of stringent control, the amount of prescription narcotics used is low. The amount of average daily morphine consumption per million people in Taiwan was only one-twelfth of that in the United States (US) from 1987 to 2002.1

Recently, there has been a greater emphasis globally on pain management for better quality of life, and the amount of prescription narcotics used in the US has been increased.2 Although one study has shown that the increasing medical use of opioids did not increase the reported opioid-related problems,3 another recent study had the opposite conclusion.4 In addition, the
number of patients suspected of opioid abuse by staff of emergency departments (EDs) in the US increased by 135% from 1995 to 2002.5 Like in the US, the amount of narcotics prescribed has also been increased in Taiwan. For example, the consumption of morphine was increased by 20.5-fold from 1987 to 2002. However, the cost of an ED visit in Taiwan is low. A patient covered by National Health Insurance spends only around US$ 15–25 per visit. As of 2009, over 99% of Taiwan’s population were enrolled in the National Health Insurance program. Furthermore, due to the short-time interaction between the ED physicians and patients, ED physicians may be less aware of the addict status of such patients, and therefore are more likely to prescribe narcotics. Hence, patients addicted to opioids in Taiwan may show up in EDs for narcotics.

Because patients addicted to opioids may visit EDs for narcotics, it is worthwhile to understand the concepts of fabricating drug seekers perceived by ED staff, as those concepts may affect the ability to identify patients abusing prescriptions. The present study aims to understand such concepts held by the ED staff in Taiwan, assessing their attitudes toward prescribing narcotics in clinical practice, as well as reviewing the characteristics of patients suspected to be fabricating drug seekers.

2. Materials and methods

The study period was from January 1, 2008 to December 31, 2008. A total of four EDs in different parts of Taiwan were involved. Among them, one was a tertiary hospital in a metropolitan setting, with 110,000–120,000 annual ED visits (Hospital A). The second was a regional hospital, which had 70,000–80,000 ED visits per year (Hospital B). The third was a regional hospital with 45,000–55,000 ED visits per year (Hospital C). The last was a tertiary hospital with 80,000–90,000 ED visits per year (Hospital D).

2.1. Questionnaires

A two-part questionnaire was designed. Section 1 (with 9 questions) was intended to understand the concepts of fabricating drug seekers held by the ED staff and their experience in dealing with patients suspected of fabricated drug-seeking behaviors. Section 2 consisted of 15 questions about attitudes toward prescribing narcotics. Respondents were allowed to give multiple responses to each question in Section 1. The questions in Section 2 utilized a 5-point Likert response format, ranging from “highly disagree” to “highly agree,” with a score of 1–5 before applying statistics.

Initially, we proposed 30 questions. Six experts were invited to evaluate the content validity index (CVI) of each question. Our expert panel consisted of two clinical toxicologists, two emergency physicians, one psychiatrist, and one ED nurse. Each expert was expected to provide opinions about whether a question was appropriate and relevant to our study purposes with two choices, yes or no. They were also requested to express some suggestions on how to revise the content of each question. If the CVI of a question reached lower than 0.83, the question was then discarded. Our final questionnaire consisted of 24 questions, with CVIs ranging from 0.83 to 1.0. Demographic data of the staff, including age, gender, position, years of work in ED, and affiliated hospital, were also included. We pretested five ED staff for clarity and comprehension, and then another 10 ED staff for internal consistency of the questionnaire checked using the Cronbach α coefficient. The total Cronbach α coefficient was 0.8235. If any one question was deleted, the Cronbach α coefficient would be less than 0.8235, therefore all the remaining questions were preserved.

The questionnaire was distributed on 4 random days during the study period to the four participating EDs. The ED staff members in the four hospitals were asked to complete the questionnaire after informed consent was obtained. This study was approved by the institutional review board of the National Taiwan University Hospital.

2.2. Reporting sheets for patients suspected of fabricated drug-seeking behaviors

We developed a reporting sheet that gathered medical and demographic information about patients suspected of fabricated drug-seeking behaviors, as defined by each ED staff’s individual criteria. If an ED staff suspected a patient to be a fabricating drug seeker, the patient was reported using the above-mentioned sheet. In addition to information such as age and gender, the number of ED visits in previous month, complaints requiring analgesics, and behaviors presented were also recorded.

2.3. Statistical analysis

We calculated the frequency of each response for each question, and then applied the demographic data of the participants for subgroup analysis to see whether there was any difference among subgroups in answering the same question. Statistical methods including the Kruskal–Wallis test, Wilcoxon rank-sum test, and Chi-square test were used for differential impact among demographic groups. SAS software (version 9.2; SAS Institute Inc., Cary, NC, USA) was used in statistic analysis. A p value less than 0.05 was considered to be statistically significant.

3. Results

3.1. The image of fabricating drug seekers and ED staff’s attitudes

Of all the four participating hospitals, 286 copies of questionnaires were sent to 61 attending physicians, 52 residents, and 173 nurses. A total of 177 questionnaires were returned, three of which were incomplete and were therefore excluded (Table 1). Among the completed 174 questionnaires, 62 were from males and 112 were from females. Total response rate was 60.8% (174/286); 32.2% (56/174) of the questionnaires were from tertiary hospitals; 40.2% were from physicians and
the rest were from nurses. Median length of working years in ED was 6 (range: 1–29).

Most ED staff (93.7%) were aware of fabricated drug-seeking behaviors, and 93.1% had experiences dealing with patients suspected to be fabricating drug seekers. Abdominal pain and cancer pain were the two most common complaints made by these suspected drug seekers (Fig. 1). The three most common behavior patterns described by ED staff about fabricating drug seekers were insistence on specific medications, frequent ED visits, and over-reporting of symptoms (Fig. 2). Many respondents (65.5%) chose an initial prescription of non-narcotic drugs to relieve pain for suspected patients; however, 67.2% reported being threatened by such patients when they did not comply with their requests. About 74.7% of the participants agreed that non-narcotic drugs were usually effective for pain control; 74.1% said they only gave narcotics when non-narcotics failed (Table 2). Surprisingly, 52.3% felt that doctors underestimated the pain complained by patients in clinical practice, with more physicians than nurses holding this opinion (75.7% vs. 35.6%, \( p < 0.0001 \)). Nevertheless, only 31.6% believed that doctors prescribed too few narcotics, again more in the physician subgroup than in the nurse subgroup (50% vs. 18.3%, \( p = 0.001 \)). One hundred and two patients suspected of fabricated drug-seeking behaviors were reported (Table 3). Among them, five visited Hospital A and nine visited Hospital C. Twelve (85.7%) patients were male, and the median age was 44.5 years (range: 32–51). The median number of ED visits within 1 month before this recorded visit was eight (range: 3–30). Abdominal pain was the most common (78.6%) chief complaint; all patients had a history of acute and/or chronic pancreatitis, confirmed by their medical charts. Other complaints were back pain, facial pain, and multiple pains. All the 14 patients had previously received meperidine to relieve pain in the hospital setting, and they all insisted on treatment with parenteral meperidine while refusing other parenteral narcotics. Most (85.7%) demonstrated high tolerance by asking for a higher dosage, whereas nine (64.3%) patients asked for a repeated dose after a brief interval and 10 (71.4%) refused oral analgesics.

### 3.2. Characteristics of patients suspected of fabricated drug-seeking behaviors

A total of 14 patients suspected of fabricated drug-seeking behaviors were reported (Table 3). Among them, five visited Hospital A and nine visited Hospital C. Twelve (85.7%) patients were male, and the median age was 44.5 years (range: 32–51). The median number of ED visits within 1 month before this recorded visit was eight (range: 3–30). Abdominal pain was the most common (78.6%) chief complaint; all patients had a history of acute and/or chronic pancreatitis, confirmed by their medical charts. Other complaints were back pain, facial pain, and multiple pains. All the 14 patients had previously received meperidine to relieve pain in the hospital setting, and they all insisted on treatment with parenteral meperidine while refusing other parenteral narcotics. Most (85.7%) demonstrated high tolerance by asking for a higher dosage, whereas nine (64.3%) patients asked for a repeated dose after a brief interval and 10 (71.4%) refused oral analgesics.

### 4. Discussion

Some fabricated drug-seeking behavior patterns have been cited in the literature, such as insistence on specific medications or route of administration, faked intractable pain, “doctor shopping,” and multiple excuses of lost, stolen, or damaged medications.8–11 In our study, according to the images of fabricating drug seekers perceived by the participants, insistence on specific medications, frequent ED visits, and over-reporting of symptoms to request for a larger dosage were
the three most common behavior patterns that drug seekers may present. The images of fabricated drug-seeking behaviors perceived by our participants were similar to those in the literature.8–13

A majority of participants chose to give non-narcotics first for pain control, regardless of whether the patients were suspected of fabricating drug seekers or not, and even if they were threatened by such medication-abusing patients. Approximately 40% of participants were still concerned with the addictive effect of narcotics even when treating cancer pain. These findings reveal that ED staff are rather conservative in the administration of narcotics to patients with pain. Such conservative attitude may compromise the pain management of cancer patients, although there was no patient with cancer pain reported as a suspected drug seeker in our study. Nevertheless, cancer pain was scaled as the second most common complaint made by patients suspected to be fabricating drug seekers. ED staff may not believe in the legitimacy of complaints for cancer pain when a patient fits into their idea of fabricating drug seekers; thus, they may underestimate the suffering of cancer patients.

Responses also showed that ED staff provided inadequate pain control to patients. More than half of the participants believed that physicians tended to downplay the severity of patients’ pain. However, only about 30% agreed that too few narcotics were prescribed by doctors. We inferred that the participants viewed that doctors ought to take pain complaints more seriously and provide more non-narcotics for pain relief.

The findings again showed ED staff’s conservative attitudes toward narcotics administration. The percentage in the physician subgroup agreeing with the above two opinions was higher than that in the nurse subgroup. The reason may be that the nursing staff in Taiwan tend to trust physicians more than doctors themselves and thus have no doubt that doctors will give the patients the best care.

Reviewing the low level of prescription morphine consumption in Taiwan,1 it seems that “opiophobic” attitudes toward narcotics administration are prevalent among all medical staff in Taiwan, and not just only among the study group. Similar situations of low morphine prescription were also found in other Asian countries, such as South Korea, Singapore, and Hong Kong.1 The fear of narcotics impedes the delivery of ideal pain management. More education and greater efforts are urgently needed to eliminate undiscovered fears and misconceptions about narcotics use in Taiwan.14

Reports published before our study revealed that chronic back pain and musculoskeletal pain were the main complaints of patients engaged in drug-seeking behaviors.15,16 The most common drug requested by these patients was oral oxycodone hydrochloride.17 Our study results were much different. According to our respondents, abdominal pain was the most common complaint by the fabricating drug seekers. All the 14 suspected patients complained of abdominal pain. Instead of oral oxycodone hydrochloride, they demanded parenteral meperidine and refused other parenteral medications. The differences between the other studies and ours may stem from underreporting of fabricated drug-seeking behaviors. More than 90% of our participants had experiences dealing with patients suspected of prescription drug seeking. Nevertheless, only 14 patients were reported as fabricating drug seekers, and only from two participating hospitals. Medical education on the addictive properties of meperidine may help medical staff to pay more attention and identify patients with possible meperidine abuse. In Taiwan, meperidine is frequently administered to relieve the pain of acute and/or chronic pancreatitis because it is supposed to induce less spasm of the sphincter of Oddi as recommended by some experts.18,19 Thus, medical staff monitor patients with abdominal pain who ask for meperidine injection. Although patients abusing

<table>
<thead>
<tr>
<th>Questions</th>
<th>Highly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Highly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-narcotics can usually (&gt;60%) suppress pain effectivelya</td>
<td>0 (0%)</td>
<td>7 (4.0%)</td>
<td>37 (21.3%)</td>
<td>102 (58.6%)</td>
<td>28 (16.1%)</td>
</tr>
<tr>
<td>Use narcotics only after non-narcotics fail to relieve pain</td>
<td>0 (0%)</td>
<td>9 (5.2%)</td>
<td>36 (20.7%)</td>
<td>106 (60.9%)</td>
<td>23 (13.2%)</td>
</tr>
<tr>
<td>Physicians underestimate the severity of pain</td>
<td>2 (1.1%)</td>
<td>18 (10.3%)</td>
<td>63 (36.2%)</td>
<td>77 (44.3%)</td>
<td>14 (8.0%)</td>
</tr>
<tr>
<td>Physicians are too conservative with regard to administering enough narcotics</td>
<td>2 (1.1%)</td>
<td>39 (22.4%)</td>
<td>78 (44.8%)</td>
<td>48 (27.6%)</td>
<td>7 (4.0%)</td>
</tr>
<tr>
<td>We should give enough pain-relieving drugs for cancer pain without considering the addictive effect</td>
<td>2 (1.1%)</td>
<td>33 (19.0%)</td>
<td>37 (21.3%)</td>
<td>71 (40.8%)</td>
<td>31 (17.8%)</td>
</tr>
<tr>
<td>We should give enough pain-relieving drugs for chronic noncancer pain without considering the addictive effect</td>
<td>11 (6.3%)</td>
<td>85 (48.9%)</td>
<td>46 (26.4%)</td>
<td>27 (15.5%)</td>
<td>5 (2.9%)</td>
</tr>
</tbody>
</table>

a The definition of “effectively” was that it reduced suffering by more than 60%.

Table 3
Characteristics of the 14 patients suspected of fabricated drug-seeking behavior.

<table>
<thead>
<tr>
<th>Age in years—median (range)</th>
<th>44.5 (32–51)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>12 (85.7%)</td>
</tr>
<tr>
<td>Number of ED visits within previous month, median (range)</td>
<td>8 (3–30)</td>
</tr>
<tr>
<td>Behaviors</td>
<td></td>
</tr>
<tr>
<td>Insistence on specific medications, n (%)</td>
<td>14 (100%)</td>
</tr>
<tr>
<td>Self-asserted high tolerance, n (%)</td>
<td>12 (85.7%)</td>
</tr>
<tr>
<td>Repeated dose for shorter duration, n (%)</td>
<td>9 (64.3%)</td>
</tr>
<tr>
<td>Refuse to use oral analgesics, n (%)</td>
<td>10 (71.4%)</td>
</tr>
</tbody>
</table>

ED = emergency department.
meperidine can be identified, patients abusing other prescription medications may be missed. More studies are needed to understand the state of prescription abuse in Taiwan.

A majority (71%) of suspected patients refused oral analgesics before leaving the ED. At the four participating EDs, six parenteral opioids, including meperidine, morphine, nalbuphine, tramadol, codeine, and fentanyl, were available. These EDs also had many oral opioids, including codeine, morphine, tramadol, and buprenorphine. This may suggest that drug seekers are not interested in nonpreferred medications.

There are some limitations to this study. First, because our study population was a group of ED staff, there may be some selection bias. In addition, reporting of a suspected drug seeker was based on the participants’ personal experiences, and therefore some fabricating drug seekers may be overlooked. Second, only four hospitals were involved in our study, and thus the results may not represent conditions in all the hospitals in Taiwan. Nevertheless, the four hospitals were located in different parts of Taiwan with different levels of patient care, and therefore we believe that this should somehow reduce the possibility of selection bias.

5. Conclusion

According to the images of fabricating drug seekers perceived by the ED staff, the most common behavior patterns were insistence on specific medications, frequent ED visits, and over-reporting of symptoms. These behavior patterns are similar to those mentioned in the literature. The attitudes of our participating health-care providers in prescribing narcotics were conservative, and more interventions to overcome staff’s opiophobia are needed to improve pain management and the quality of medical practice. Suspected fabricating drug seekers in Taiwan usually visit the ED complaining of abdominal pain. Parenteral meperidine was the most sought-after drug by such patients.

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References