Psychosocial, Functional and Quality of Life Status Associated with Opioid Risk

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Background & Objective

Opiate therapy for noncancerous pain has been in widespread use since the 1980's and continues to be controversial. Questions remain regarding their efficacy and side effects. Misuse, abuse, and overdoses related to chronic opioid use have been identified as a public health problem.[1,2] It has been recommended that clinicians utilize one of several screening tools that have been developed to help mitigate the risks of chronic opioid therapy.[3,4] In an effort to screen patients, Michigan Pain Consultants (MPC) has used the Opioid Risk Tool (ORT) developed by Lynn Webster, MD and used with permission as part of a comprehensive care management system.[5]

The goal is to present a multidimensional view of three distinct populations of patients in pain, based on low, moderate and high opioid risk scores. With more knowledge about pain patients from a whole person perspective we will be able to target treatments to obtain the best therapeutic results with the least risk.

Study Methods

Clinical Setting and Patient Selection

The study was conducted at MPC, an interdisciplinary community-based pain medicine practice, based in Grand Rapids, MI established in 1984. The practice has 7 clinical locations covering a service area of 6 counties in West Michigan. The data was collected using the PRISM™ patient management system, a digital toolbox, containing among other components, the Pain Health Assessment (PHA), a patient reported health outcomes tool. The information is routinely gathered from chronic pain patients in the practice using IRB approved language in the consent forms.

A Pearson correlation was conducted on de-identified data comparing the clinical and demographic questions in the PHA assessment and the ORT scores, as well as comparing the individual questions of the ORT to patient history and symptoms questions.

Pain Health Assessment (PHA)

The PHA is a multidimensional questionnaire completed by patients on an iPad prior to seeing the physician for the appointment. The PHA assesses disease presence, pain characteristics, physical function (e.g. self-care, mobility) and psychosocial function (e.g. emotional and social health dimensions of depression, anxiety, life control and social support). Questions from the SF-36 and the ORT are included. Responses were coded on an 11 point scale.

Factors Considered in the Opioid Risk Tool

Family History of Substance Abuse	Age
Personal History of Substance Abuse	Depression
History of Female Preadolescent	Sexual Abuse
Other Psychological Diseases	

Low Risk 0-3; Moderate Risk 4-7; High Risk ≥ 8

Results

The study sample was comprised of 7,477 unique patients seen for their initial visit between 7/21/2011 and 9/14/2012. This data was then cross-referenced with the prescribing data of MPC. From this information, the sample was divided into six subgroups; subjects were stratified into low, moderate, and high risk, based on their ORT score, than further divided into those prescribed opiates and those not prescribed opiates.

Table 1: Patient Populations

	Total	Not Prescribed Opioids (%of risk tier)	Prescribed Opioids (% of risk tier)
Total	7477 (100)	6693 (89.5)	784 (10.5)
Low Risk	5980 (80.0)	5368 (89.8)	612 (10.2)
Moderate Risk	1152 (15.4)	1013 (87.9)	139 (12.1)
High Risk	345 (4.6)	312 (90.4)	33 (9.6)

Table 2: Significant Positive (r>0.3) Psychosocial and Functional Correlations Unique to Moderate and High Risk Tiers

PHA Question *(Scale: 0 = good; 10=poor)*	Moderate ORT Risk	High ORT Risk
Have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious): Have you accomplished less than you would like…	0.3225	0.3561
Have you been a nervous person…	0.3201	0.3044
Did you have trouble with your memory or concentration….	0.3548	-
In general, would you say your health is …	-	0.3161
Have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious): Were you limited in work or other activities …	-	0.3219
Physical/emotional problems interfering with social activities (like visiting friends, relatives)	-	0.3119

Table 3: Significant Associations (r>0.3) to History, Diagnosis, and Symptoms in the High Risk Population on Opiates

Risk Factor	History	Diagnosis	Symptom
High ORT Score	Health worse than a year ago	Abdominal Pain Irritable Bowel Syndrome	Self-reported health (1-10) Pain worsens with activity
Personal History of Alcohol Abuse	Limited by physical health Nervousness Lack of control over pain	Abdominal Pain	Average pain Pain worsens with activity
Psychological Disease	Limited by physical health Nervousness	Abdominal Pain	
Family History of Illegal Drug Abuse	Not being happy	Irritable Bowel Syndrome	
Family History of Alcohol Abuse			High level of 'current' pain
Age (≤ 45 years old)	Lack of control over pain		

Key Points:

- 10.5% of the patient population were prescribed opiates.
- 20% of the patient population fell into the moderate or high risk tier.
- 11.5% of moderate to high risk patients were prescribed opiates.
- The male and female distributions in the tiers were comparable.
- Asking a longer series of questions can lead to more accurate reporting of symptoms. Symptoms are good predictors of moderate to high opioid risk.
- Internal depression scales correlated with ORT scores supporting the use of the ORT as a risk assessment tool.
- In the high risk population on opiates, eleven factors were identified that were associated with increased risk. *(See Table 3)*

Discussion and Conclusions

Opiate abuse potential is a factor that needs to be considered in all fields of medicine. This study supports the use of the ORT to assist in risk stratification. However, no single tool has proven to be 100% effective. A flaw in risk tools that rely on patient reporting is that those at risk for abuse might tend to underreport. Tools such as the PHA that encompass a wider range of patient dimensions may help mitigate the reporting bias present in short-form questionnaires. Studies of actual observed behavior would complement self-reporting tools.

Recommendations:

- Use multimodal approach to understand the patient for effective assessment and to increase the accuracy of risk stratification.
- Target individual symptom dimensions, as well as diagnoses, to help decrease the reporting-bias of the patients.
- Conduct studies correlating the individual risk-granting factors on current risk tools with observed aberrant behavior.

References

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