

# Fibromyalgia: Comorbidity or a Psychosomatic Symptom of Depression Leading to the Abuse of Opioids?

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## ABSTRACT

**Introduction:** We conducted a retrospective study at the Wayne County Medical Examiner Office, which examined decedents diagnosed with Fibromyalgia, a disorder of unknown etiology characterized by widespread chronic musculoskeletal pain, concomitant with fatigue, sleep disturbances, and psychological distress.

**Material & Methods:** Over a seventeen year period a total of 54 cases from our database met this criterion. Other criteria in the study included cause and manner of death, post-mortem toxicology results, major autopsy findings, and medical history.

**Results:** Our study revealed that the cause of death in approximately two-thirds of the cases was due to drug intoxication. The most frequent post-mortem toxicology finding was Opioids, such as Morphine, Hydrocodone, Oxycodone, Fentanyl, and Codeine. The most common manner of death was accident. Almost 90% of the decedents were Caucasian females, which contrasted with the demographic diversity of Wayne County, Michigan. Additional findings revealed that the average age was 47 years, and the average Body Mass Index (BMI) could be categorized as obese. Nearly 67% of the cases had a medical history of depression.

**Conclusion:** Our findings suggest that Fibromyalgia might be a psychosomatic symptom of depression rather than comorbidity. Therefore, physicians should further inquire about, and consider treating, depression in patients with chronic musculoskeletal pain while completely avoiding the use of opioids, for opioids have a greater risk of being abused and resulting in death in such patients, as found in our study.

## INTRODUCTION

Fibromyalgia is defined as a disorder characterized by widespread chronic musculoskeletal pain concomitant with fatigue, sleep disturbances, and psychological distress. The etiology of the condition is unknown; however, the condition has substantial overlap with many rheumatologic disorders and other clinical disorders especially depression. The term "Fibromyalgia" was coined during the 1970s. In 1990, a diagnostic criteria was presented by the American College of Rheumatology (ACR). The criteria

considered widespread chronic pain as occurring for three months on both sides of the body as well as above and below the waist. Pain in the axial skeleton had to be present and a certain amount of digital force had to be applied and elucidate pain to at least 11 out of 18 areas on the body. In 2010, the diagnostic criteria for fibromyalgia was changed and further modified in 2011. The criteria eliminated the tender point examination by the physician which was substituted with patient self-reporting scales. This revision, in our opinion, confounds and complicates the process of establishing a correct diagnosis.

Through the years at the Wayne County Medical Examiner Office we have observed that it is not unusual to find decedents with a past medical history of fibromyalgia. The purpose of this retrospective study was to ascertain the cause and manner of death in fibromyalgia cases, and further examine the relationship between fibromyalgia, depression, and

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the abuse of opioids. Our proposed question was: Given the high rate of depression and abuse of narcotics reported in fibromyalgia cases and the ongoing debate within the medical community regarding the validity of fibromyalgia as a stand-alone diagnosis, should fibromyalgia be considered a psychosomatic symptom of depression rather than a comorbidity of depression?

### MATERIALS AND METHODS

From 1997 to 2014, the Wayne County Medical Examiner’s Office in Detroit, Michigan, retrospectively identified from our database 54 cases which had a diagnosis of fibromyalgia. Additional criteria included the following: cause and manner of death, post-mortem toxicology results, major autopsy findings, and medical history.

### RESULTS

Fifty four cases were identified with a verifiable medical history of fibromyalgia. The most common cause of death in these cases was drug-related (Table 1), 64.8 % died as a result of single or multiple drugs. The most common group of drugs was opiates: Morphine, codeine, oxycodone, hydrocodone and codeine. Benzodiazepines and antidepressants were also found (Figure 1).

The remainder of the causes of death included the following: arteriosclerotic cardiovascular disease (ascvd) or other heart-related diseases, diabetes mellitus, pneumonia, pulmonary embolism a self-inflicted gunshot wound. The most common past medical history and co-morbidity included alcohol use and diabetes mellitus, respectively (Figure 2 and 3).

The most common manner of death was accident (67%) followed by natural (32%) and one suicide. (Figure 4) The average age was 47 and the average BMI was 32.6

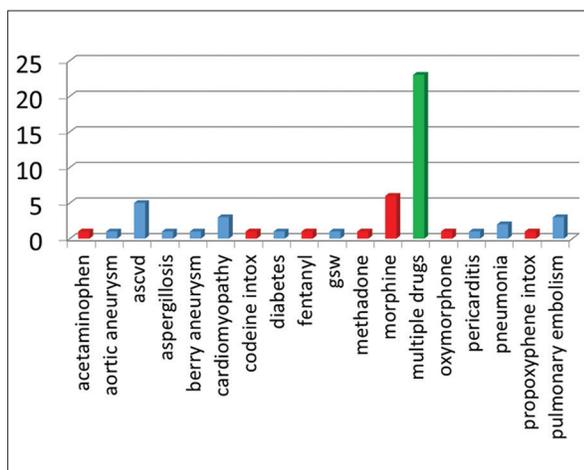


Table 1: Causes of death related to drugs

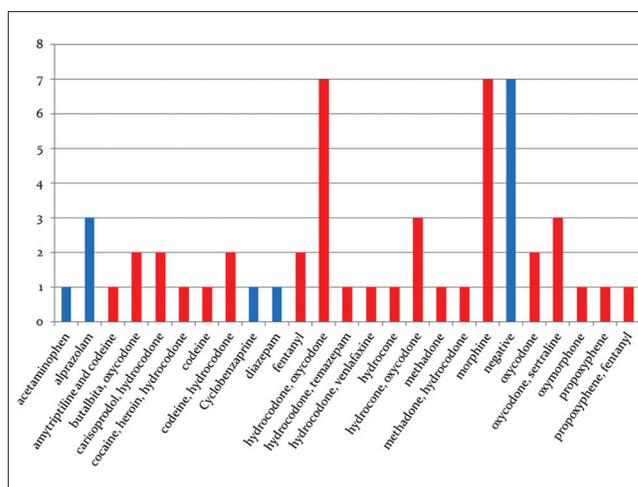


Figure 1: Toxicology Findings

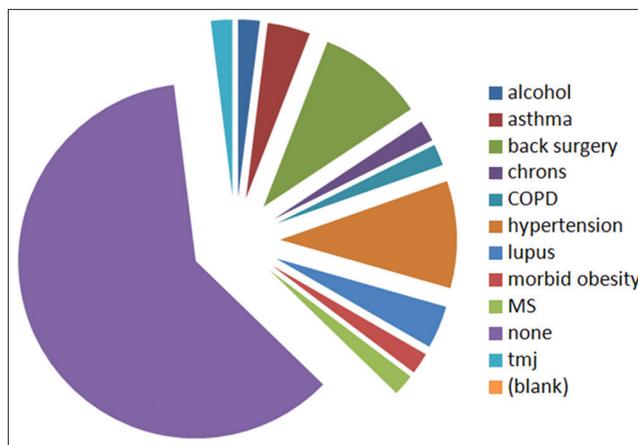


Figure 2: Past medical history

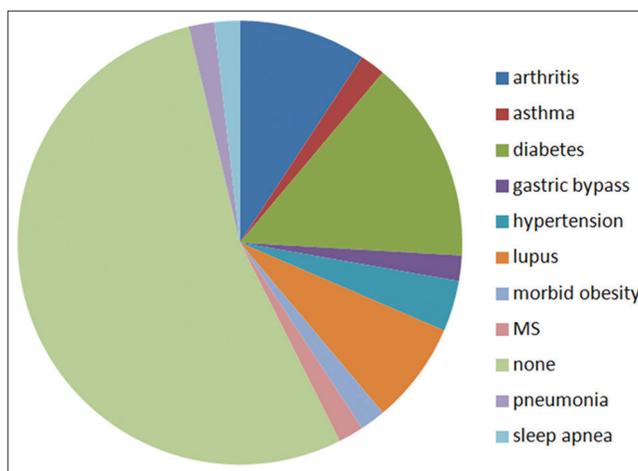


Figure 3: Co-Morbidities

and 90 % of the decedents were female and Caucasian. (Figures 5 and 6).

In the majority of the cases, 64.8% (35 out of 54 cases, decedent’s had a psychiatric history of depression (Figure 7).

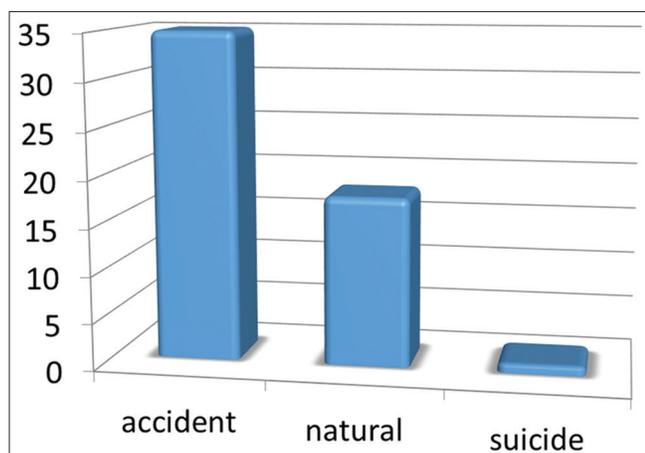


Figure 4: Manner of Death

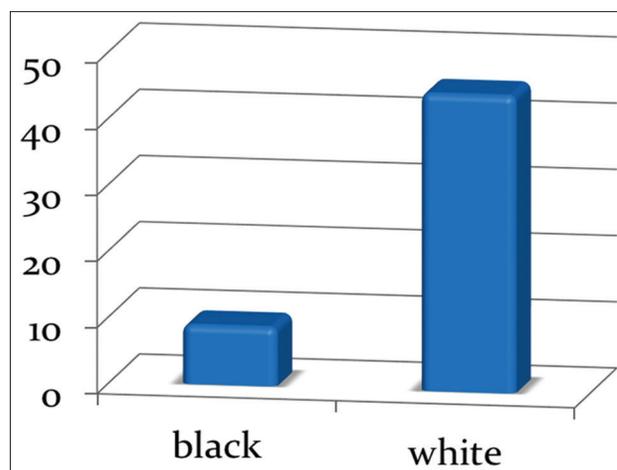


Figure 6: Race

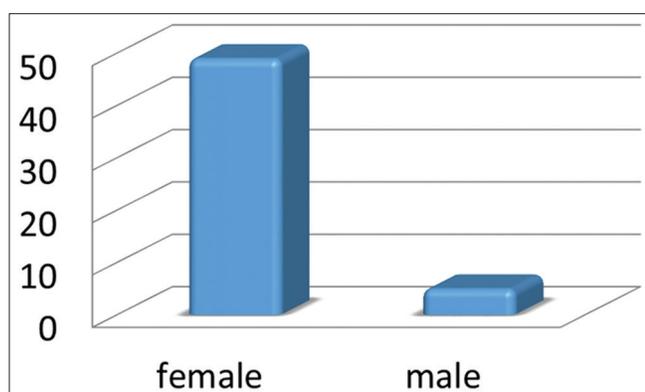


Figure 5: Gender

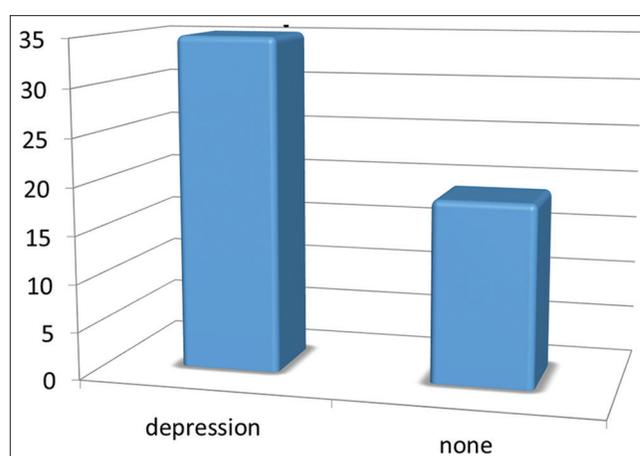


Figure 7: Psychiatric history of depression

## DISCUSSION

Fibromyalgia in clinical practice should be suspected in patients having multifocal pain not fully explained by injury or inflammation.<sup>1</sup> The prevalence rate is approximately 2-8% of the population depending on the diagnostic criteria used.<sup>2</sup> The American College of Rheumatology criteria for diagnosis of fibromyalgia were published in 1990.<sup>3</sup>

Those criteria required that the patients had widespread pain as well as tenderness in 11 or more 18 possible "tenderness" points.<sup>3</sup> In 2011 a new set of criteria was introduced.<sup>4</sup> This new criteria does not take in to account the "tender points" and relies solely on symptoms including fatigue, sleep disturbances and mood disorders.

Patients diagnosed with fibromyalgia are more likely to have psychiatric disorders<sup>1</sup> including depression, anxiety and obsessive compulsive disorder. Those conclusions were corroborated by our cohort in which 35/54 patients had a clinical history of depression. Family members of patients diagnosed with fibromyalgia also may have a history of chronic pain disorder.<sup>5</sup> Certain type of infections has been associated with fibromyalgia such as Q fever, EBV and

Lyme disease.<sup>6</sup> Other rheumatologic entities such as osteoarthritis, rheumatoid arthritis and lupus usually co-exist with fibromyalgia.<sup>7</sup> Treatment of fibromyalgia include, among others, patient education,<sup>8</sup> cognitive behavioral therapy,<sup>9</sup> tricyclic compounds,<sup>10</sup> Serotonin reuptake inhibitors,<sup>11</sup> Nonsteroidal anti-inflammatory drugs<sup>1</sup> and opiates.<sup>1</sup> However there is increasing evidence that opiates are less effective for treating chronic pain and their risk-benefit profile is worse than other classes of analgesics.<sup>1</sup>

Vast majority of our cohorts were female and Caucasian in a population such as Wayne County, Michigan that has great ethnic diversity and contrasting with the assertion that fibromyalgia can develop at any age and the prevalence is similar in different countries, cultures and ethnic groups.<sup>12</sup>

Fibromyalgia is a relatively new diagnostic entity with a new set of diagnostic criteria and known psychological and nosological associations. From the point of view of this study it represents another Variance in the general theme of drug abuse.

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