

**ORIGINAL RESEARCH** 



# Evolutive Pattern of Major Depressive Disorder among Young Patients

Andreea Sălcudean<sup>1</sup>, Elena-Gabriela Strete<sup>1</sup>, Monica Kiss<sup>2</sup>, Maria-Dorina Pașca<sup>1</sup>, Cristina-Raluca Bodo<sup>3</sup>, Maria-Melania Cozma<sup>1</sup>, Andreea-Georgiana Nan<sup>4</sup>, Marius-Cătălin Cosma<sup>5</sup>, Răzvan-Andrei Teslaru<sup>6</sup>

<sup>1</sup> "George Emil Palade" University of Medicine and Pharmacy, Science and Technology, Târgu Mureş, Romania

- <sup>2</sup> Department of Psychiatry, City Hospital, Odorheiu Secuiesc, Romania
- <sup>3</sup> Second Department of Psychiatry, Clinical County Hospital, Târgu Mureș, Romania
- <sup>4</sup> First Department of Psychiatry, Clinical County Hospital, Târgu Mureş, Romania
- <sup>5</sup> Department of Pediatric Cardiology, Institute of Cardiovascular Diseases and Cardiac Transplantation, Târgu Mureș, Romania
- <sup>6</sup> Clinic of Cardiology, Emergency County Hospital, Târgu Mureş, Romania

#### CORRESPONDENCE

#### Andreea-Georgiana Nan

Str. Gheorghe Marinescu nr. 38 540139 Târgu Mures, Romania Tel: +40 754 576 181 E-mail: nandree96@yahoo.com

#### **ARTICLE HISTORY**

Received: March 9, 2022 Accepted: March 25, 2022

Andreea Sălcudean • Str. Gheorghe Marinescu nr. 38, 540139 Târgu Mureș, Romania. Tel: +40 265 215 551, E-mail: andreea.salcudean@yahoo.com

**Elena-Gabriela Strete** • Str. Gheorghe Marinescu nr. 38, 540139 Târgu Mureș, Romania. Tel: +40 265 215 551, E-mail: gabrielabuicu@yahoo.com

Monica Kiss • Str. Bethlen Gábor nr. 72, 535600 Odorheiu Secuiesc, Romania. Tel: +40 266 212 186, E-mail: gheorghita.monica@yahoo.com

Maria-Dorina Paşca • Str. Gheorghe Marinescu nr. 38, 540139 Târgu Mureş, Romania. Tel: +40 265 215 551, E-mail: mdpasca@vahoo.com

Cristina-Raluca Bodo • Str. Gheorghe Marinescu nr. 38, 540139 Târgu Mureş, Romania. Tel: +40 265 215 551, E-mail: cristina.bodo@gmail.com

Maria-Melania Cozma • Str. Gheorghe Marinescu nr. 38, 540139 Târgu Mureş, Romania. Tel: +40 265 215 551, E-mail: melaniacozma76@gmail.com

Marius-Cătălin Cosma • Str. Gheorghe Marinescu nr. 50, 540136 Târgu Mureș, Romania. Tel: +40 372 653 122, E-mail: cosma.mariuscatalin@yahoo.com

Razvan-Andrei Teslaru • Str. Gheorghe Marinescu nr. 1, 540103 Târgu Mureș, Romania. Tel: +40 265 230 000, E-mail: r.teslaru@yahoo.ro

#### ABSTRACT

Background: Major depressive disorder (MDD) in young patients represents a real public health problem, with a concerning increase in its prevalence. Aim of the study: To observe and to document relevant information regarding the particularities and the evolutive clinical patterns of MDD in young patients (18–50 years). Material and methods: We conducted a retrospective cross-sectional descriptive study on 68 patients diagnosed with MDD, aged 18-50 years, admitted to the First Department of Psychiatry of the Clinical County Hospital of Târgu Mures, Romania between January 1, 2019 and September 30, 2020. Data regarding the patients' psychiatric evaluation (primary and secondary diagnosis, relapses, associated personality disorders, autolytic attempts, treatment options, evolution, comorbidities) and psychological evaluation (HAM-D, HAM-A, GAF) were analyzed. Results: The highest prevalence of MDD was found in the 41–50 years age group (66%), followed by the 31–40 years age group (24%). Regarding the GAF and HAM-D scales, 90% of patients had scores in the range of 41–50 and >20 respectively. We found a high prevalence of personality disorders (75%), the most common being borderline personality disorder (27%). Younger patients (18–35 years) tended to recover quicker, with an average of 8.15 hospitalization days compared to older patients (36–50 years) who had an average of 12 days. Relapses were present in 55% of cases, being more frequent in women, and there was a 50% rate of relapse in subjects with no social support network. Autolytic attempts were present in 25% of cases and insomnia in 92%. Conclusions: MDD has a major impact on the patients' global functionality and their quality of life. In our study, women were more vulnerable to develop MDD, while younger adults were less prone to develop MDD and they recovered more quickly.

Keywords: major depressive disorder, disability, quality of life

#### INTRODUCTION

Major depressive disorder (MDD) in young patients represents a real public health problem, with a concerning increase in its prevalence. This has a strong negative impact on every aspect of individual life, and especially on one's cognitive, psychological, and social development.<sup>1–3</sup> Currently, the number of patients with MDD is estimated to 322 million,<sup>4</sup> the real number almost certainly being higher. Even though depressive disorder has an important genetic component, studies have shown that 40–50% of cases are caused by external stress and unwanted life events.<sup>5</sup>

"There is no health without mental health." The World Health Organization (WHO) has described mental health as "a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community".<sup>6</sup>

MDD can occur at any age, but it has a higher prevalence in puberty. Its incidence shows a peak at the age of 20, although occurrence at an older age is not unusual. The evolution of the disorder is variable; some patients can experience little to no remission, while others can have multiple episodes separated by years.<sup>7</sup> Chronic depressive symptoms substantially increase the probability of associated disorders such as anxiety, bipolar disorder, personality disorders, and the use of harmful substances that lower the chances of a successful treatment.<sup>8</sup>

The risk of relapse is higher in patients who have had a severe depressive episode, in adolescents, and in patients with multiple previous episodes. Also, the persistence of even a minor symptom in the remission period is a strong sign of recurrence.<sup>9</sup>

Treatment options for MDD include pharmacological, psychotherapeutic, interventional, and lifestyle-changing strategies. The initial treatment of MDD consists in medication or/and psychotherapy. Combined treatment, including both medication and psychotherapy, has been shown to be more effective than just one treatment option alone. Furthermore, recent studies have found that biores-onance can decrease the severity of depression in patients with recurrent depressive disorder.<sup>10</sup>

Some patients may exhibit suicidal behavior during major depressive episodes. The most important factor is an unsuccessful history of suicidal attempts, but it should be remembered that the majority of successful attempts have no history of previous attempts.<sup>11</sup>

The aim of our study was to observe and document relevant information regarding the particularities and

the evolutive clinical patterns of MDD in young patients (18–50 years).

# **MATERIAL AND METHODS**

We conducted a retrospective cross-sectional descriptive study on 68 patients, aged between 18 and 50 years, who were admitted to the First Department of Psychiatry of the Clinical County Hospital of Târgu Mureş, Romania between January 1, 2019 and September 30, 2020 for MDD according to Diagnostic and Statistical Manual of Mental Disorders V criteria. The study consisted in the retrospective evaluation of clinical charts, psychiatric evaluations, and psychological examinations, as well as interdisciplinary assessments and discharge papers. The analysis included evaluation of: (1) demographic data (name, age, marital status, days of hospitalization etc.); (2) data regarding the psychiatric evaluation (primary and secondary diagnosis, relapses, associated personality disorder, autolytic attempts, treatment options, evolution, comorbidities); (3) data regarding the psychological evaluation (Hamilton Depression Rating Scale [HAM-D], Hamilton Anxiety Rating Scale [HAM-A], and Global Assessment of Functioning [GAF] scale). The statistical analysis was conducted using Microsoft Excel 2013 (Microsoft Corporation, Redmond, WA, USA), the Statistical Package for Social Sciences (SPSS), and GraphPad Prism 8 (GraphPad Software, San Diego, CA, USA). The statistical significance was set at a p value of 0.05.

The study was approved by the local ethics committee, and written informed consent was obtained from the subjects (or their guardians) before the commencement of the study.

### RESULTS

#### **Patient characteristics**

The evaluation of gender distribution revealed that 81% of patients were women and 19% were men. The highest prevalence of depressive disorder according to age distribution showed that MDD was most frequent in the 41–50 years age group (66%), followed by the 31–40 years age group (24%).

Regarding the GAF and HAM-D scores, 90% of the patients (n = 61) had scores in the range of 41–50 and >20 respectively, indicating a serious social and professional/ educational disfunction accompanied by a moderate to severe depression.

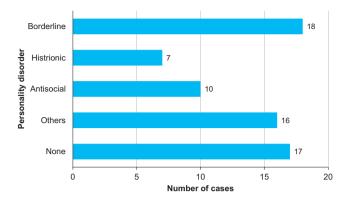


FIGURE 1. Distribution of personality disorders

There was a high prevalence of personality disorders (75%), the most common being borderline personality disorder (27%) (Figure 1).

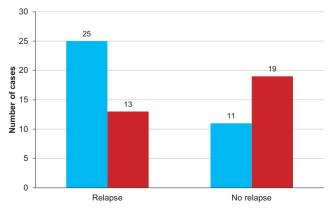
Regarding the number of hospitalization days, younger patients (18–35 years) recovered quicker with an average of 8.15 hospitalization days, compared to the older age group (36–50 years) which had an average of 12 days (Figure 2).

Relapse was present in 55% (n = 38) of patients, being more frequent in women (28 women vs. 10 men). Furthermore, female patients who were living by themselves had the highest risk of relapse (Figure 3) and also the highest rate of associated anxiety.

Autolytic attempts were present in 25% of cases. There was a 50% rate of relapse in patients with an impaired social support network. In total, 92% of subjects presented insomnia.

## Treatment

The evaluation of treatment options showed that most patients were prescribed benzodiazepines (49%), followed





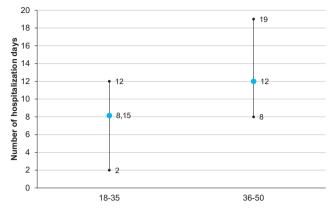


FIGURE 2. Distribution of hospitalization periods by age groups

by antidepressants (selective serotonin reuptake inhibitors [SSRIs] and atypical antidepressants, 42%) and neuroleptics (9%). The evolution under treatment was favorable overall, with only 12% of patients remaining in a stationary phase.

## DISCUSSIONS

Major depressive disorder was recently ranked as the second cause of global disability in young people, and its rising prevalence is a serious concern. Furthermore, evidence suggests that it will represent the number one cause of disability by 2030.

Data from the literature show that the prevalence of MDD is almost double in women compared to men. In our study population, we also observed an important difference between genders, with a significantly higher prevalence in women. The highest prevalence of MDD was in the 41–50 years age group; thus, younger adults were less affected. Also, they tended to have a quicker recovery, with less hospitalization days.

The global functionality of the patients included in our study was moderately affected, with GAF scores in the range of 41–50. It is widely recognized that MDD diminishes psychosocial functioning, consequently reducing the quality of life and the social or professional integration of the patients.<sup>12</sup>

Another important aspect observed in our study is that the majority of patients had higher HAM-D scores, indicating moderate to severe depression. The HAM-D has been the most frequently used rating scale for depression severity.<sup>13</sup> Previous studies have noted that cognitive dysfunction, age, the presence of psychotic elements, unemployment, and suicide ideation are indicators of depression severity.<sup>13</sup>

The results of our study also indicated a high prevalence of personality disorders, the most common being borderline personality disorder. Various studies concluded that the latter commonly co-occurs with MDD and can often include depressive symptoms; thus, it is sometimes a challenge to distinguish between the two psychiatric conditions. Treatment can raise difficulties in these cases because the comorbid personality disorder does not respond as well to antidepressant therapy as MDD alone.<sup>14</sup>

Treatment adherence and the prevention of relapses is highly influenced by the presence of a social support network. Even though in our study relapses were frequent, we observed that patients who lived by themselves presented an increased risk of relapse compared to patients living with family. Studies have suggested a strong link between social support networks and mental health issues. Social support (including emotional, instrumental, informational, and appraisal concepts) plays a crucial role in maintaining a good mental health, and in preventing and recovering from mental health conditions.<sup>15</sup>

Our study also revealed that women had a higher risk of developing anxiety disorders. Studies have shown that patients with comorbid anxiety and depression are more likely to be female, unemployed, with short education history, and severe depression. Previous reports also indicated that depressive patients with comorbid anxiety also had more frequent episodes of major depression and a higher risk of suicidal attempts compared to those with depression alone.<sup>16</sup>

The treatment options in our study group included benzodiazepines, antidepressants (especially SSRIs), and neuroleptics, medication which proved to be effective in 87% of cases.

Anxiety frequently co-occurs with depression and adding benzodiazepines to antidepressant therapy is common practice nowadays. Combined antidepressant and anxiolytic therapy has been shown to be more effective compared to antidepressants alone in improving depressive symptoms and disease severity, response and remission in the early phases. However, the efficacy of this combined therapy must be evaluated clinically, taking into consideration the summing of both drugs' adverse reactions.<sup>17</sup>

SSRIs were the most frequently prescribed antidepressants in our study group. These medications block the reuptake of serotonin in neurons, thus improving neurotransmission,<sup>18</sup> and were designed to be safer and more tolerable than previously used antidepressants. The different SSRIs have many similarities, but differ in pharmacokinetics and the way they influence the CYP450 system.

As described above, psychosis elements can represent an indicator for depression severity. We observed that 9% of patients were prescribed antipsychotic medications. Psychosis may accompany mood disorders of different severity, and treatment options should take into consideration adding an antipsychotic drug such as aripiprazol, risperidone, olanzapine, or quetiapine. Each medication presents different side effects and clinical efficacy, but atypical antipsychotics are generally better tolerated than typical antipsychotics.<sup>19</sup>

Personalized treatment should take into consideration comorbid psychiatric and somatic disorders in order for the patient to benefit from the best outcome with maximal efficacy and minimal side effects. Bioethical aspects, such as empathy and respecting confidentiality, should guide medical judgement when managing a psychiatric case.<sup>20</sup>

Changes in the circadian rhythm represent a key element in the diagnosis of MDD, and we observed that an alarming number of patients in our study developed insomnia. Several studies have discovered that insomnia, rather than being just a symptom of depression, is a medical condition itself. Epidemiological studies have shown that insomnia can lead to depression, and sometimes common factors can underlie both conditions. Therefore, the introduction of polysomnography in psychiatry has led to the identification of a disturbance in sleep continuity in patients with depression, confirming a decrease in slow wave sleep and an increase in the overall REM sleep time. Treatment approaches for co-occurring insomnia and depression include behavioral management of sleep combined with a sedative antidepressant alone, co-prescription of two antidepressants, or an antidepressant with a hypnotic drug.<sup>21</sup>

# CONCLUSIONS

Our study found that women were more vulnerable to develop major depressive disorder. The highest prevalence of MDD was between 41-50 years. This indicates that younger adults are less prone to develop MDD, and they also tend to recover quickly requiring less hospitalization. The majority of patients presented an associated personality disorder, most often borderline personality disorder. MDD has a major negative impact on the patients' social, educational, and professional functionality, as well as their quality of life. Depression severity should take into consideration the risk for suicide attempts, treatment resistance, and the frequency of relapses. Insomnia, a key element of depression and a frequent comorbid condition, should always be treated, otherwise it can represent a maintaining factor for depressive symptoms, consequently altering the patients' quality of life and global functionality.

# **CONFLICT OF INTEREST**

Nothing to declare.

# REFERENCES

- 1. Mullen S. Major depressive disorder in children and adolescents. *Ment Health Clin.* 2018;8:275-283.
- Saragoussi D, Christensen MC, Hammer-Helmich L, Rive B, Touya M, Haro JM. Long-term follow-up on health-related quality of life in major depressive disorder: a 2-year European cohort study. *Neuropsychiatr Dis Treat*. 2018;14:1339-1350.
- Proudman D, Greenberg P, Nellesen D. The Growing Burden of Major Depressive Disorders (MDD): Implications for Researchers and Policy Makers. *Pharmacoeconomics*. 2021;39:619-625.
- Evans-Lacko S, Aguilar-Gaxiola S, Al-Hamzawi A, et al. Socio-economic variations in the mental health treatment gap for people with anxiety, mood, and substance use disorders: results from the WHO World Mental Health (WMH) surveys. *Psychol Med*. 2018;48:1560-1571.
- Richter-Levin G, Xu L. How could stress lead to major depressive disorder? IBRO Rep. 2018;4:38-43.
- WHO. Mental health: strengthening our response! Available at: https:// www.who.int/news-room/fact-sheets/detail/mental-health-strengtheningour-response [18 February 2022]
- Cipriani A, Zhou X, Del Giovane C, et al. Comparative efficacy and tolerability of antidepressants for major depressive disorder in children and adolescents: a network meta-analysis. *Lancet.* 2016;388881-90.
- Gao K, Su M, Sweet J, Calabrese JR. Correlation between depression/ anxiety symptom severity and quality of life in patients with major depressive disorder or bipolar disorder. J Affect Disord. 2019;244:9-15.
- 9. Sim K, Lau WK, Sim J, Sum MY, Baldessarini RJ. Prevention of Relapse and

Recurrence in Adults with Major Depressive Disorder: Systematic Review and Meta-Analyses of Controlled Trials. *Int J Neuropsychopharmacol.* 2015;19:pyv076.

- Muresan D, Voidăzan S, Salcudean A, Bodo CR, Grecu IG. Bioresonance, an alternative therapy for mild and moderate depression. *Exp Ther Med.* 2022;23:264.
- Li H, Luo X, Ke X, et al. Major depressive disorder and suicide risk among adult outpatients at several general hospitals in a Chinese Han population. *PLoS One*. 2017;12:e0186143.
- 12. Malhi GS, Mann JJ. Depression. *Lancet.* 2018;392:2299-2312.
- Tolentino JC, Schmidt SL. DSM-5 Criteria and Depression Severity: Implications for Clinical Practice. *Front Psychiatry*. 2018;9:450.
- Rao S, Broadbear J. Borderline personality disorder and depressive disorder. Australasian Psychiatry. 2019;27:573-577.
- Bjørlykhaug KI, Karlsson B, Hesook SK, Kleppe LC. Social support and recovery from mental health problems: a scoping review. *Nordic Social Work Research*. 2021:1-32.
- Choi KW, Kim YK, Jeon HJ. Comorbid Anxiety and Depression: Clinical and Conceptual Consideration and Transdiagnostic Treatment. *Adv Exp Med Biol.* 2020;1191:219-235.
- Ogawa Y, Takeshima N, Hayasaka Y, et al. Antidepressants plus benzodiazepines for adults with major depression. *Cochrane Database Syst Rev.* 2019;6:CD001026.
- Lochmann D, Richardson T. Selective Serotonin Reuptake Inhibitors. Handb Exp Pharmacol. 2019;250:135-144.
- Dold M, Bartova L, Kautzky A, et al. Psychotic Features in Patients With Major Depressive Disorder: A Report From the European Group for the Study of Resistant Depression. J Clin Psychiatry. 2019;80:17m12090.
- Salcudean A, Strete EG, Ban RA, Lica MM, Nan AG, Bodo CR. Notions of Ethics and Malpraxis [Noţiuni de etică medicală şi malpraxis]. Târgu Mureş: University Press; 2021.
- 21. Staner L. Comorbidity of insomnia and depression. *Sleep Med Rev.* 2010;14:35-46.