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Depression- Types, Causes, Symptoms, Risk Factor, and Treatment

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ABSTRACT

Depression is one of the most common causes of illness in the world. Depression is a mood disorder characterized by feelings of inadequacy, anxiety, mood swings, restlessness, decreased activity, loss of interest, and sadness, which severely disrupt and negatively affect a person's life, sometimes to the point where suicide is attempted or occurs. Depression has become a troubling trend that not only affects a person's psychological well-being data are suggest that female patients affected more than men not only adults students, children, teenager also suffer from depression. Depression caused by genetic factor, stress factor, etc, risk factor of depression are living alone person, female gender, alcohol abuse, drug abuse. Complication of depression raises their risk of suicide. Several medical comorbidities that depression can exacerbate, Anti-depressant medication are caused server side effect such as anticholinergic effects, CNS effect, GI effect, Cardiovascular effects, Sexual dysfunction. Depression is a serious medical illness that affects a large number of people. Women are affects more than men. As an end, some people a threat to themselves, attempting or actually committing suicide. The early signs of depression and help people find the correct therapy and services, and improve the quality of life.

KEYWORDS: *Depression, Stress, Treatment, Anti-depressants, Risk factor*

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INTRODUCTION

Depression is now regarded as one of the most common disease in the world. It is an illness that affects everyone, regardless of socioeconomic level, educational attainment, gender, or race. Despite the fact that depression has no gender bias, it is obvious that woman is treated for depression at a higher rate than men. This does not indicate that women are more susceptible to depression, instead, because of their emotional character, women's depression is more easily identified. Not only adults, but 2% of students, are affected, In addition 5% of children and 5% of teenager suffer from depression. Depression is a common occurrence that goes unnoticed. Depression characterized by sadness, loss of interest, feelings of guilt, feelings of tiredness, hopelessness, less concentration.(1) Depression can indicate dysthymic disorder, major depressive disorder, seasonal affective disorder, episodic depression, or be a symptoms of another mood illness. Psychosis, often known as bipolar disorder, is a form of mental illness (2). Major depression prior to pregnancy (3) adolescence, or at the end of life is referred to as postpartum depression. (4)

TYPE OF DEPRESSION

When diagnosing a first depressive episode, the ICD-10 Classification of Mental and Behavioral Disorders examine the categories of mild, moderate, and severe depression. Additional depressed episodes are categorized as follows. Recurrent depressive disorder is divided into several groups.

MAJOR DEPRESSION

Clinical depression or unipolar depression is other names for major depression. The ICD-10 Classification of Mental and Behavioral Disorders are used to determine these symptoms two or many years which is predicted of major depression.

DYSTHYMIA

Dysthymia is a kind of depression that is more persistent but less severe than major depression. It is more common in women than in males, and it is also more common among the elderly.

MANIA DEPRESSION or BIPOLAR DEPRESSION

Manic depression, commonly known as bipolar disorder, is characterized by mood fluctuations that alternate between high and low. Bipolar disorder, often known as manic depression, is characterized by significant depressive episodes and is manifested by dramatic mood swings. Mania and severe despair are the two extremes of depression.

MANIA

Depression is the total opposite of mania. It also has an impact on a person's capacity to function in daily life, as well as their work and relationships. Mania may lead to people losing touch with reality and taking risks that are harmful or dangerous.

SEASONAL AFFECTIVE DISORDER

Seasonal affective disorder (SAD) is a very common illness that affects 1–4% of individuals in temperate climes, with women being more affected. The disease is manifested by extreme mood fluctuations several seasons of the year.

POSTNATAL DEPRESSION

After childbirth, some women experience postnatal depression. About 12% of women experience significant depression in the first few months after childbirth. Many of these women will recover, but up to half of them will still experience depressed symptoms 6 months after their baby's birth.(5)

RISK FACTOR

1. History of anxiety
2. Psychiatric history
3. Female gender
4. Smoking
5. Obesity
6. Disability
7. New medical illness
8. History of current drug abuse
9. History of alcohol abuse
10. Living alone
11. Poor health status
12. Older

Patients with serious medical problems or persistent medical disorders are more likely to develop depressed symptoms. These conditions may include (cardiac illness, cancer, chronic lungs diseases, diabetes, chronic renal diseases, extreme pain, etc..,). (6,7) Despite the fact that the incidence of major depression are highest in the 24-45 years old age groups, individuals in older age groups may be at higher risk due to the variety of factor, cognitive or physical impairments, and a higher prevalence of depression a group of chronic disorder. (8)

SYMPTOMS

The characteristic symptoms of depression include agitation, sleep disturbance, appetite disturbance, decreased energy, loss of interest, guilt, concentration disturbances, suicidal intent, sadness, feelings of worthlessness, hopelessness, anxiety, weight loss or weight gain daily behavior changes, mood swings, social isolation. (9) As a result, psychomotor symptoms are among the most common symptoms linked with the melancholic subtype, as measured by clinical ratings. Unlike other neuro-vegetative symptoms for severe depressive illness, they appear to differentiate among symptoms. A melancholic subtype of depression evidence demonstrates that bipolar depression is a real thing. Patients may be more prone to showing signs of retardation. Unipolar depressive patients, while unipolar depressed patients agitation may be more common in certain patients than in others patients with bipolar disorder simultaneously, the uniqueness of retardation. From agitation to depressive illness, there's a lot to look forward to additional investigation. (10)The high mortality rate in severe major depressive disorder (MDD) and epilepsy is common in people with severe MDD. Patients with MDD, according to studies, those over the age of 55 have an increased by four times risk of death. (11)

CAUSES OF DEPRESSION

Major depression appears to run in certain families from generation to generation, albeit not as severely as bipolar I or II. Major depression can develop in persons of all ages. A depressed episode frequently appears to be triggered by an external event. As a result, a significant loss, a persistent sickness, a strained relationship, and financial difficulties or any undesirable change in one's life a depressed episode might be triggered by certain patterns. Very frequently, a mix of genetic, psychological, and environmental factors have a role. Contributing stressors depression can lead to the development of depression in certain people. Some groups are more affected than others. Different neuropsychiatric disorders appear to be linked to an excess or deficiency of certain of these neurochemicals in specific areas of the brain the mind. For instance, a shortage of dopamine in the brain might cause. Parkinson's disease is caused by the base of the brain disease. Alzheimer's disease appears to be linked to reduce the amount of acetylcholine in the brain. The addiction illnesses are influenced by the Dopamine is a neurochemicals. That is to say, Drugs and alcohol, for example, function by releasing dopamine. The neurotransmitter dopamine is present in the brain. Dopamine is a neurotransmitter that has a role in the feeling of exhilaration is a pleasant one repeated. The

use of drugs or alcohol, on the other hand, desensitizes the body. The system is called the dopamine system because it produces dopamine becomes used to the usage of drugs and alcohol As a result, to attain the desired result, the individual need additional drugs or alcohol same euphoric sensation As a result, the addict consumes more drug while feeling less and less euphoric and becoming progressively sad.(12)

GENETIC CAUSES OF DEPRESSION

The majority of published genetic investigations of mood disorders have focused on functional polymorphisms (DNA sequence variants that affect the expression and/or function of genes) of the gene product) in the serotonin-coding regions SLC6A4 transporter, serotonin 2A receptor (5HTR2A), tyrosine hydroxylase (TH) (dopamine's limiting enzyme) TPH1 (serotonin production), tryptophan hydroxylase 1 (TPH1) catechol-o-methyl transferase, and catechol-o-methyl transferase (COMT) (catabolism of dopamine15).

ENVIRONMENTAL CAUSES OF DEPRESSION

Stress: It appears that there is a complicated link between stressful conditions, the individual's mind and body's response to stress, and the emergence of clinical symptoms depression. The majority of scientists agree that for certain persons, there is a clear link between a traumatic incident and the depression may emerge. What's more, it's worth noting that this tension may be both positive and bad.

Noise Pollution: Aggression, hypertension, higher stress levels, tinnitus, hearing loss, and sleep disturbances have all been related to noise pollution. Tinnitus, in particular, has been associated to significant hearing loss. Depression, panic attacks, and forgetfulness are all symptoms of depression. Consistent exposure there's also a correlation between noise pollution and cardiovascular illness with a rise in blood pressure a person who may be depressed. Depression will become even more prevalent as a result of these inclinations exposed to noise pollution for a lengthy period of time. (13)

COMPLICATION

Depression is one of the most common causes of disability in the globe. It not only impairs one's ability to operate, but it also has a negative impact on interpersonal connections, decreasing one's quality of life. People with depression are more likely to have comorbid anxiety and drug use disorders, which raises their risk of suicide. Diabetes, hypertension, chronic obstructive pulmonary disease, and coronary artery disease are several medical comorbidities that depression can exacerbate. Depressed people are more likely to engage in self-destructive conduct. If left untreated, depression may be quite severe. (14, 15)

DIAGNOSIS

Serious depression is diagnosed based on clinical evidence. It is determined, like with other psychiatric diseases, after a thorough clinical interview and mental state examination. According to research, such an interview has sensitivity and specificity comparable to numerous radiologic and laboratory tests routinely used in medicine. Because major depression is a syndrome diagnosis, it may be appropriate to consider other psychiatric disorders (obsessive-compulsive disorder, panic disorder, bulimia nervosa, and dementia), general medical conditions, medications, or a substance use disorder as etiologic and pursue relevant diagnostic investigations based on the patient's medical history and physical examination.

There are a variety of screening measures available to assist clinicians in identifying people who are most likely to be depressed. They are sensitive but not very specific for detecting depression, as are most screening tools. When a clinician has an a priori suspicion of depression, such as a particular depressed symptom, unexplained physical symptoms, reduced functioning, or subjective discomfort out of proportion to a known general medical condition or another mental problem, most authors recommend screening. Physicians must appropriately interpret particular screening findings and recognize the need for additional clinical evaluation. Asymptomatic people should not be screened for depression, according to any preventive care guidance. (16)

Long-established, symptom-oriented patient self-report screens include, the Beck Depression Inventory, (17) the Inventory of Depressive Symptoms,(18) the Zung Depression Scale,(19) Scores over a preset cutoff point highlight the need for a more thorough depression assessment. These screens have sensitivities ranging from 70% to 85% and specificities of around 80%. Depression scale developed by the Center for Epidemiologic Studies,(20) and the shortened Geriatric Depression Scale have been proposed as particularly valuable in the elderly.(21)These tools are designed simply to produce a depression rating (severity) score; however, two more recent instruments, the Symptom-Driven Diagnostic System for Primary Care and the Primary Care Evaluation of Mental Disorders,(22) The World Health Organization has created a basic health care version of the International Classification of Diseases (ICD-10 PHC, chapter 5) that comprises cards with information about the typical symptoms, diagnosis,

and treatment of 24 common psychiatric illnesses (ICD-10 PHC, chapter 5).(23)

The Hamilton Depression Scale is a semi structured interview that a qualified psychiatrist uses to determine the frequency and intensity of depressed symptoms. There are 17 sub-domains in the HAM-D, including depressed mood (1), guilt (2), suicide (3), initial insomnia (4), insomnia during the night (5), delayed insomnia (6), work and interests (7), retardation (8), agitation (9), psychiatric anxiety (10), somatic anxiety (11), gastrointestinal somatic symptoms (12), general somatic symptoms (13), genital symptoms (14) etc..,. Patients are classified into one of three groups based on their HAM-D scores: (1) mild: a score of 10 to 13; (2) moderate: a score of 14 to 17; and (3) severe: a score of 17 or higher.

The Pittsburgh Sleep Quality Index is a self-reported tool that measures sleep quality and interruptions over a one-month period. Subjective sleep quality (1), sleep latency (2), sleep length (3), habitual sleep efficiency (4), sleep disorder (5), sleep medication use (6), and daily sleep dysfunction (7). This instrument has a score range of 0 to 21, with healthy sleep (0–4 points), poor sleep (5–10 points), and sleep disorder being the three categories (greater than 10 points). (24)

In a medical environment, some components of the DSM method may be problematic. Somatic symptoms account for a lot of the symptoms consider depression as a differential diagnosis for the patient's major complaint unless the problem is dysphoria or the patient is visibly and noticeably unhappy. Patients may choose to focus on physical symptoms because they are the most bothersome, because they are hesitant to admit emotional suffering, or because they assume the physician would be most keen in or helpful for those symptoms. It might be difficult to tell if a certain symptom is caused by depression or by another medical condition at times.

PATHOPHYSOLOGY

Monoamine hypothesis:

The first major hypothesis of depression was claiming that depression is caused by a functional deficiency of the brain monoaminergic transmitter's norepinephrine (NE), 5-HT, and/or dopamine (DA), whereas mania is caused by a functional excess of monoamines at critical synapses in the brain.(25,26)

Neurotrophic hypothesis:

The Neurotrophic hypothesis a growth factor coming from the brain BNDF increases the survival and function of adult neurons by promoting the growth and development of immature neurons, especially monoaminergic neurons. The loss of monoaminergic neurons, as well as the loss of function or atrophy of the hippocampus and other brain regions, may be caused by low BNDF levels. The capacity of the hippocampus nucleus to limit CRF release by the hypothalamus is lost, resulting in increased glucocorticoid release.

Neuroendocrine hypothesis:

Dexamethasone suppression test did not lower cortisol levels in 50c/o of depression patients, indicating a stress HPA axis imbalance (hypothalamus pituitary adrenal gland axis). Enhanced corticotropin-releasing factor (CRF) from the hypothalamus (as a result of hippocampal atrophy), enlarged adrenal gland, and increased cortical secretion are all symptoms of HPA axis deregulation (glucocorticoid). Thyroid hormone deficiency is caused by deregulation of the HPT axis (hypothalamus pituitary thyroid), which can be detected in depression

Stress:

Corticotropin releasing hormone (CRH)level remain elevated, and dopamine, norepinephrine, serotonin 5HT levels are decrease, cortisol level increases, decreases feedback inhibition from hippocampus.(27)

PHARMACOLOGICAL TREATMENT

The antidepressant medication should be customized to the medical state and personal preferences of the individual patient. According to the evidence, a seriously depressed patient need antidepressant medication, but a mildly depressed one does not other therapies to serious depression may be beneficial. Several medication types have been discovered to be useful in treating depression by boosting levels of the neurotransmitters serotonin and norepinephrine. In the central nervous system, norepinephrine is found in the postsynaptic cleft of neurons. Selective therapeutic drugs are among these. SSRIs (selective serotonin reuptake inhibitors), norepinephrine NRIs (norepinephrine reuptake inhibitors) and dual-action compound serotonin and norepinephrine reuptake inhibition MAOIs (monoamine oxidase inhibitors) increases concentrations of neurotransmitters by inhibiting their degeneration. The availability of other agents is increased by inhibiting alpha-adrenergic receptors, neurotransmitters are released as well as serotonin, are involved (5-HT) 5a reuptake and 2a reuptake HT3 Histamine receptors and histamine H1 receptors. Antidepressants may be supplemented with mood stabilizers like lithium and anticonvulsants like lamotrigine, valproic acid, divalproex, or carbamazepine. When it comes to the treatment of bipolar disorder Antipsychotics and antidepressants, atypical antipsychotics may be useful in the treatment

of depression with psychotic symptoms, as well as a severe depressive disorder bipolar depression and depression. Newer antidepressants, primarily SSRIs, should be administered in mildly and moderately depressed individuals, whereas TCAs should be recommended in severely depressed patients, according to evidence-based guidelines. Benzodiazepines have a relatively limited function in treating anxiety and insomnia symptoms in the short term, at least until safer and more complete antidepressants become available (TABLE1).(28,29,30,31)

ALTERNATIVE TREATMENTS FOR DEPRESSION

Despite the fact that pharmacological treatment is the most common treatment for depression, clinical psychiatrists believe that non pharmacological treatments are more effective.

Examples of alternative therapies include: Cognitive behavioral therapy, Acupuncture, Aromatherapy, Chiropractic treatments, Hypnosis, Massage therapy, Meditation, Relaxation, Interpersonal psychotherapy, Exercise therapy, Bibliotherapy, Electroconvulsive therapy. (32)

ADVERSE DRUG REACTIONS

Changes in adverse responses and toxicity are generally more relevant than minor differences in therapeutic benefit across medications. Tricyclic antidepressants include both peripheral and cerebral anticholinergic symptoms, such as dry mouth, constipation, and blurred vision. Nausea, diarrhea, anxiety, agitation, sleeplessness, and anorexia are the most common side effects of selective serotonin reuptake inhibitors. In two recent meta analyses, patients using Tricyclic antidepressants experienced greater discontinuation rates owing to side effects than those on selective serotonin reuptake inhibitors. (33, 34) Long-term usage of selective serotonin reuptake inhibitors can result in sexual dysfunction, prompting patients to avoid taking the medication. (35) Other medicines with a mainly serotonergic profile, such as clomipramine, venlafaxine, and nefazodone, have the same side effects as selective serotonin reuptake inhibitors, however nefazodone causes less sleeplessness and sexual dysfunction. (36)

TABLE1: Anti-depressant, dosing, side effects

Generic Name	Initial dose(mg/day)	Maintenance dose(mg/day)	Maximum dose(mg/day)	Comments and cautions
SSRI				
Sertraline	25	50	200	fatigue, headache, insomnia, diarrhea, nausea, ejaculatory disturbances, tremors,
Citalopram	10	40	40-60	Somnolence, insomnia, nausea, QTc prolongation
Escitalopram	5	10	20	ejaculation disorder, Headache, somnolence, nausea,
SNRI				
Venlafaxine	75	150	375	increase blood pressure, anorexia, constipation, sexual dysfunction, weakness, diaphoresis
MAOIs				
Phenelzine	15	45	90	Edema, orthostatic hypotension, weight gain, constipation ,increased, fatigue, dizziness
Tranyl cypromine	10	20	60	Edema, weight gain, constipation, somnolence, dizziness
Isocarboxazid	20	40	60	Dizziness, headache, insomnia,
Tricyclics				
Nortriptyline	25	50	100	Weight gain, bloating symptom, constipation, asthenia, dizziness, headache, blurred vision, fatigue, loss of appetite
Amitriptyline	25	50-75	100-150	Weight gain, bloating symptom, constipation, headache, blurred vision, fatigue
Desipramine	25	100	300	Weight gain/loss, bloating symptom, constipation, loss of appetite, nausea, headache, somnolence, blurred vision, fatigue

CONCLUSION

Depression is a serious medical illness that affects a large number of people. Women are affects more than men. As an end, some people a threat to themselves, attempting or actually committing suicide. One of the major public health challenges will be identifying persons who do not take medication or have not been diagnosed with a depressed disorder.

If mental health experts can spot the early signs of depression and help people find the correct therapy and services, depression may become less of a persistent illness for some people and their improve the quality of life and improve family bonds may be maintained for others.

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