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POST STROKE DEPRESSION: INCIDENCE AND ASSOSCIATIONS.

General Medicine

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ABSTRACT

INTRODUCTION: A Stroke or cerebro vascular accident is defined as abrupt onset of a neurologic deficit that is attributable to a focal vascular pathology. DEPRESSIVE SYMPTOMS are common after stroke occurring in over 25% of patients. Stroke patients should be questioned and screened for depression. Depression is common following left hemisphere stroke especially in the frontal lobe, possibly caused by disruption of catecholamine pathways.

AIM OF THE STUDY:

1. TO FIND OUT THE INCIDENCE OF DEPRESSION IN STROKE PATIENTS.
2. TO FIND OUT THE HEMISPHERE OF THE BRAIN COMMONLY ASSOCIATED WITH POST STROKE DEPRESSION.
3. TO INCREASE THE AWARENESS AND IMPORTANCE OF ANTIDEPRESSANTS IN STROKE PATIENTS.

MATERIALS AND METHODS: This study was done among 100 pts with stroke between November 2019 to November 2020 at Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh

INCLUSION CRITERIA: Stroke within the last 30 days

EXCLUSION CRITERIA:1. Aphasic patients 2.Unconcious patient. 3. Heart, Respiratory, kidney, or liver failure 4.Severe disabling musculoskeletal disorder or cancer.5.Diagnosis of neuro degenerative disorders such as Parkinsons disease, Alzeimer's disease, Multiple system atrophy or Huntington's disease. 6. Pre-existing dementia.

RESULT: Out of the 60 cases selected, 16 patients had post stroke depression.26.7% of stroke patients had post stroke depression

CONCLUSION:

Our study shown that

1. 27% of stroke patients developed post stroke depression.
2. The left hemisphere stroke is commonly associated with depression.
3. Post stroke depression is common in younger age patients
4. The severity of disability is not related to depression.

KEYWORDS

INTRODUCTION:

A Stroke or cerebro vascular accident is defined as abrupt onset of a neurologic deficit that is attributable to a focal vascular pathology. Cerebrovascular diseases include.

1. Ischemic stroke.
2. Hemorrhagic stroke.
3. Cerebrovascular anomalies: intra cranial aneurysm and arterio venous malformations.

They are the major cause of disability. The incidence of stroke increases with age and the number of strokes is projected to increase as elderly population grows. The clinical manifestation of stroke are highly variable because of the complex anatomy of the brain and its vasculature.

Rehabilitation after stroke begins as soon as the diagnosis of the stroke is established and as soon as any life threatening neurological or medical complications have been stabilised.

DEPRESSIVE SYMPTOMS:

are common after stroke occurring in over 25% of patients. Stroke patients should be questioned and screened for depression. Depression is common following left hemisphere stroke especially in the frontal lobe, possibly caused by disruption of catecholamine pathways. Treatment with antidepressants is often successful in ameliorating symptoms. Appropriate diagnosis and treatment of depression may bring substantial benefits to persons recovering from stroke by improving their medical status ,enhancing their quality of life and reducing their disability.

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1. Aphasic patients.
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5. Diagnosis of neuro degenerative disorders such as Parkinsons disease, Alzeimer's disease, Multiple system atrophy or Huntington's disease.
6. Pre-existing dementia.
7. Recurrent unipolar or Bipolar disorder prior to the stroke.
8. Patient taking drugs prone for depression like betablockers, Glucocorticoids, anti convulsants, anti parkinsonian medications.

CRITERIA USED TO DIAGNOSE DEPRESSION.

DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, V Edition

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report [ex: feels sad or empty] or observation made by others [ex: appears tearful]
2. Recurrent thoughts of death [not just fear of dying],recurrent suicidal ideation without a specific plan, or a suicide attempt or a

specific plan for committing suicide.
3. Feelings of worthlessness or excessive or inappropriate guilt [which may be delusional] nearly every day [not merely self reproach or guilt about being sick].
4. Markedly diminished interest or pleasure in all, or almost all , activities most of the day, nearly every day [as indicated by either subjective account or observation made by others].
5. Fatigue or loss of energy nearly every day.
6. Diminished ability to think or concentrate or indecisiveness, nearly every day [either by subjective account or as observed by others].
7. Psychomotor agitation or retardation nearly every day [Observable by others, not merely subjective feelings of restlessness or being slowed down].
8. Insomnia or hypersomnia nearly every day.
9. Significant weight loss when not dieting or weight gain or decrease or increase in appetite nearly every day.

Five or more of the above symptoms have been present during the same 2 week period and represent a change from previous functioning is needed to diagnose major depression.

OBSERVATIONS AND RESULTS:

POST STROKE DEPRESSION: INCIDENCE.

60 stroke patients were selected for evaluation of depression.
Stroke patients presenting within 30 days were selected for study.

Table1: Post Stroke Depression: Incidence

	Cases
HYPERTENSION AND POST STROKE DEPRESSION:	60
Patients with post stroke depression:	16[26.7%]
Patients without post stroke depression:	44[73.3%]

Out of the 60 cases selected, 16 patients had post stroke depression.26.7% of stroke patients had post stroke depression .

POST STROKE DEPRESSION: ASSOCIATIONS

Table2: Age And Post Stroke Depression:

	NO PSD	PSD PRESENT	TOTAL
Age less than 40 years	2[66.7%]	1[33.3%]	3
Age 40 to 60 years	31[70.5%]	13[29.5%]	44
Age more than 60 years	11[84.6%]	2[15.4%]	13
Total	44[73.3%]	16[26.7%]	60

Table 3: Age And Post Stroke Depression

	NO PSD	PSD PRESENT	TOTAL
Age less than or equal to 60 years	33[70.2%]	14[29.8%]	48
Age more than 60years	11[84.6%]	2[15.4%]	13
Total	44	16	61

The younger age patients were commonly associated with depression. Around 30% of stroke patients with age less than or equal to 60 years were associated with post stroke depression while around 15% of patients with age more than 60 years were associated with depression. It is statistically insignificant. [P=0.57]

Table 4: Hypertension And Post Stroke Depression:

	PSD	PSD PRESENT
NON HT	22[75.9%]	7[24.1%]
HT	22[71%]	9[29%]
TOTAL	44	16

Table 5:diabetes And Post Stroke Depression: P=0.42

	NO PSD	PSD PRESENT	TOTAL
right hemisphere	29[82.9%]	6[17.1%]	35
Left hemisphere	15[60%]	10[40%]	25
total	44	16	60

Table 6: Ischemic Heart Disease And Post Stroke Depression:

	NO PSD	PSD PRESENT
HEMIPARESIS	31[73.8%]	11[26.2%]
HEMIPLEGIA	13[72.2%]	5[27.8%]
TOTAL	44	16

PVALUE : 0.16

Table 7: Hemisphere Side And Post Stroke Depression: P : 0.05

	NO PSD	PSD PRESENT
INFARCT	40[71.4%]	16[28.6%]
HEMORRHAGE	4[100%]	0
TOTAL	44	16

The left hemisphere stroke showed increased incidence of depression compared to right hemisphere stroke, which is statistically significant[p=0.05]. The left hemisphere stroke showed around 40% of depression while right hemisphere stroke showed 17% post stroke depression.

Table8: Disability And Post Stroke Depression:

	NO PSD	PSD PRESENT
NON DM	37[75.5%]	12[24.5%]
DM	7[63.6%]	4[36.4%]
TOTAL	44	16

P=0.4

Table 9: Type Of Cva And Post Stroke Depression:

	NO PSD	PSD PRESENT
NO IHD	39[70.9%]	16[29.1%]
IHD	5[100%]	0
TOTAL	44	16

P=0.21

Female and male patients had 31.8% and 23.7% of post stroke depression respectively which is statistically insignificant.

Hypertension, Ischemic heart disease, diabetes, smoking, alcohol association with post stroke depression is statistically insignificant.

Left hemisphere stroke patients showed statistically significant depression. [P=.05]

DISCUSSION:

INCIDENCE: In this study, 60 stroke patients were taken for evaluation of depression.38 cases of male stroke patients and 22 cases of female stroke patients were studied.26.7% of stroke patients were associated with depression.
SEX: Female stroke patients had a increased chance of depression compared to male patients which is comparable to incidence of depression in general population.31.8%of female patients has depression compared to 23.7% of male patients.

HEMISPHERE SIDE:

The hemisphere side played a major role in determining the depression. Left hemisphere stroke showed increased incidence of depression compared to right hemisphere stroke, which is statistically significant[p=0.05].The left hemisphere stroke showed 40% post stroke depression while right hemisphere stroke showed 17% post stroke depression.

DISABILITY:

In this study, the disability is not related to depression .The patients with weakness less than or equal to 3 showed 28% of depression while patients with weakness more than 3 showed 26 % of depression. This is statistically insignificant.

DIABETES:

Patients with diabetic have showed increased depression compared to non diabetic. Non diabetic with stroke showed 25% incidence of depression while the diabetic with stroke showed 36%.This is explained by the depression associated with hyperglycemic levels and diabetic complications.

In this study hypertension, ischemic heart disease, smoking, alcohol did not have significant association with depression in stroke patients.

CONCLUSION:

1. 27% of stroke patients developed post stroke depression.
2. The left hemisphere stroke is commonly associated with depression.
3. Post stroke depression is common in younger age patients.
4. The severity of disability is not related to depression.

In Summary, Depression Is Common Following The Strokeand Identifying Post Stroke Depressionwillhelp To Improve The Physical,cognitive And Intellectual Recovery Of Stroke Patients Using Antidepressants.

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