**DATA COLLECTION SHEET**

**N-METHYL-D-ASPARTATE RECEPTOR ANTIBODY ENCEPHALITIS**

**NATIONAL INSTITUTE OF NEUROLOGY AND NEUROSURGERY**

**I. IDENTIFICATION AND GENERAL DATA**

|  |  |
| --- | --- |
| *FULL NAME* |  |
| GENDER | M F | SOCIOECONOMIC STATUS |  |
| CASE NUMBER |  | FILE NUMBER |  |
| TELEPHONE NUMBER |  | CELL PHONE NUMBER |  |
| AGE |  | MARITAL STATUS |  |
| SCHOLARSHIP (YEARS) |  | OCUPATION |  |
| NATURAL FROM |  | LIVES IN |  |
| DIAGNOSIS ON ADMISSION |  | DIAGNOSIS AT DISCHARGE |  |
| DATE OF ENTRY |  | DATE OF RELEASE |  | DEIH |  |
|  |  |  |  |  |  |
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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| DATE OF SYMPTOM ONSET |  | IMMUNOTHERAPY START DATE |  | DAYS BETWEEN SYMPTOMS ONSET AND INMUNOTHERAPY |  |

 |
| PRIOR CONSULTATION WITHPSYCHIATRY | YES NO | PRIOR ANTIPSYCHOTIC USE | YES NO |
| PRODROMAL PHASE | YES NO | RELAPSE | YES NO |
| HEADACHE |  | FATIGA |  |  | RANKIN ON ADMISSION |  |
| FEVER |  | FLU-LIKE SYMPTOMS |  | RANKIN AT DISCHARGE |  |
| WEIGHT LOSS |  | OTHERS |  |  | CGI ON ADMISSION |  |
| GASTROINTESTINAL SYMPTOMS  |  |  |  |  | CGI AT DISCHARGE |  |

**II. DIAGNOSTIC CRITERIA.**

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| --- | --- | --- | --- | --- | --- | --- |
| **PROBABLE ANTI-NMDAR ENCEPHALITIS** | **YES** | **NO** |  |  |  |  |
| DIAGNOSIS CAN BE MADE WHEN ALL OF THE FOLLOWING THREE CRITERIA ARE MET: | 1 ( ) 2 ( ) 3 ( ) |
| 1. RAPID ONSET (LESS THAN 3 MONTHS) OF AT LEAST 4 OF 6 OF THE FOLLOWING SYMPTOM CLUSTERS:
 | YES | **NO** |
| - COGNITIVE DYSFUNCTION OR ABNORMAL BEHAVIOR | YES | **NO** |
| * SPEECH DISORDERS (SPEECH PRESSURE, VERBAL REDUCTION, MUTISM)
 | YES | **NO** |
| - SEIZURES | YES | **NO** |
| - MOVEMENT DISORDERS, DYSKINESIA, STIFFNESS OR ABNORMAL POSTURES | YES | **NO** |
| - DECREASED LEVEL OF CONSCIOUSNESS | YES | **NO** |
| - AUTONOMIC DYSFUNCTION OR CENTRAL HYPOVENTILATION | YES | **NO** |
| 2. AT LEAST ONE OF THE FOLLOWING LABORATORY RESULTS: |  |  |
| - ABNORMAL EEG (FOCAL OR DIFFUSE SLOW OR DISORGANIZED ACTIVITY, EPILEPTIC ACTIVITY OR DELTA BRUSH) | YES | **NO** |
| - CEREBROSPINAL FLUID WITH PLEOCYTOSIS OR OLIGOCLONAL BANDS | YES | **NO** |
| 3. REASONABLE EXCLUSION OF OTHER DISORDERS | YES | **NO** |
| EXTRA FOR THE DATABASE: DIAGNOSIS OF TERATOMA | YES | **NO** |
| **DEFINITE ANTI-NMDA RECEPTOR ENCEPHALITIS.** YES **NO**THE DIAGNOSIS OF ANTI-NMDAR ENCEPHALITIS IS DEFINITIVE IN THE PRESENCE OF ONE OR MORE OF THE 6 MAJOR CLUSTERS OF SYMPTOMS AND ANTI-GLUN1 IGG ANTIBODIES IN CEREBROSPINAL FLUID, AFTER REASONABLE EXCLUSION OF OTHER DISORDERS. |

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| **POSSIBLE AUTOIMMUNE ENCEPHALITIS YES NO** |
| DIAGNOSIS CAN BE MADE WHEN ALL THREE OF THE FOLLOWING CRITERIA HAVE BEEN MET: | 1 ( ) 2 ( ) 3 ( ) |
| 1 . SUBACUTE ONSET (RAPID PROGRESSION OF LESS THAN 3 MONTHS) OF WORKING MEMORY DEFICITS (SHORT-TERM MEMORY LOSS), ALTERED MENTAL STATUS\*, OR PSYCHIATRIC SYMPTOMS | YES | NO |
| 2. AT LEAST ONE OF THE FOLLOWING: |  |  |
| - NEW FOCAL CNS FINDINGS | YES | NO |
| - SEIZURES NOT EXPLAINED BY A PREVIOUSLY KNOWN SEIZURE DISORDER | YES | NO |
| * CSF PLEOCYTOSIS (WHITE BLOOD CELL COUNT OF MORE THAN FIVE CELLS/ MM.)
 | YES | NO |
| * MRI FEATURES SUGGESTIVE OF ENCEPHALITIS
 | YES | NO |
| 3. REASONABLE EXCLUSION OF ALTERNATIVE CAUSES | YES | NO |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **POSSIBLE AUTOIMMUNE PSYCHOSIS** | **YES** | **NO** |  |  |  |
| 1. THE PATIENT MUST HAVE CURRENT PSYCHOTIC SYMPTOMS OF ABRUPT ONSET (RAPID PROGRESSION OF (<3 MONTHS) WITH AT LEAST ONE OF THE FOLLOWING: | YES | NO |
| * CURRENTLY OR RECENTLY DIAGNOSED WITH A TUMOUR
 | YES | NO |
| * MOVEMENT DISORDER (CATATONIA OR DYSKINESIA)
 | YES | NO |
| * ADVERSE RESPONSE TO ANTIPSYCHOTICS, RAISING SUSPICION OF NEUROLEPTIC MALIGNANT SYNDROME (RIGIDITY, HYPERTHERMIA, OR RAISED CREATINE KINASE)
 | YES | NO |
| * SEVERE OR DISPROPORTIONATE COGNITIVE DYSFUNCTION
 | YES | NO |
| * A DECREASED LEVEL OF CONSCIOUSNESS
 | YES | NO |
| * THE OCCURRENCE OF SEIZURES THAT ARE NOT EXPLAINED BY A PREVIOUSLY KNOWN SEIZURE DISORDER
 | YES | NO |
| * A CLINICALLY SIGNIFICANT AUTONOMIC DYSFUNCTION (ABNORMAL OR UNEXPECTEDLY FLUCTUANT BLOOD PRESSURE, TEMPERATURE, OR HEART RATE)
 | YES | NO |
| **PROBABLE AUTOIMMUNE PSYCHOSIS** | **YES** | **NO** |  |  |  |
| 1. THE PATIENT MUST HAVE CURRENT PSYCHOTIC SYMPTOMS OF ABRUPT ONSET (RAPID PROGRESSION OF <3 MONTHS) WITH AT LEAST ONE OF THE SEVEN CLINICAL CRITERIA LISTED ABOVE FOR POSSIBLE AUTOIMMUNE PSYCHOSIS AND AT LEAST ONE OF THE FOLLOWING: | YES | NO |
| * CSF PLEOCYTOSIS OF >5 WHITE BLOOD CELLS PER ΜL
 | YES | NO |
| * BILATERAL BRAIN ABNORMALITIES ON T2-WEIGHTED FLUID-ATTENUATED INVERSION RECOVERY MRI HIGHLY RESTRICTED TO THE MEDIAL TEMPORAL LOBES
 | YES | NO |
| 2. OR TWO OF THE FOLLOWING: |  |  |
| * ELECTROENCEPHALOGRAM ENCEPHALOPATHIC CHANGES (IE, SPIKES, SPIKE-WAVE ACTIVITY, OR RHYTHMIC SLOWING [INTERMITTENT RHYTHMIC DELTA OR THETA ACTIVITY] FOCAL CHANGES, OR EXTREME DELTA BRUSH
 | YES | NO |
| * CSF OLIGOCLONAL BANDS OR INCREASED IGG INDEX
 | YES | NO |
| * THE PRESENCE OF A SERUM ANTI-NEURONAL ANTIBODY DETECTED BY CELL-BASED ASSAY AFTER EXCLUSION OF ALTERNATIVE DIAGNOSES.
 | YES | NO |
| **DEFINITE AUTOIMMUNE PSYCHOSIS YES NO**THE PATIENT MUST MEET THE CRITERIA FOR PROBABLE AUTOIMMUNE PSYCHOSIS WITH IGG CLASSANTI-NEURONAL ANTIBODIES IN CSF. |

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| **RED FLAGS**  |
| RED FLAGS | YES | NO | ACUTE PSYCHOSIS OR CATATONIA | YES | NO | ABNORMAL MOVEMENTS DIFFERENT FROM CATATONIA | YES | NO |
| SEIZURES | YES | NO | NEUROLEPTIC MALIGNANT SYNDROME |  YES |  NO | APHASIA | YES | NO |
| COGNITIVE IMPAIRMENT | YES | NO | DELIRIUM | YES | NO | WORSENING AFTER ANTIPSYCHOTIC USE | YES | NO |

**III. CLINICAL VARIABLES**

|  |  |
| --- | --- |
| **FIRST SET OF SYMPTOMS**  |  |
| 1. BEHAVIORAL OR COGNITIVE SYMPTOMS | 4. ABNOMAL MOVEMENTS  |
| 2. SPEECH DISTURBANCES  | 5. DELIRIUM OR IMPARTMENT OF ALERTNESS  |
| 3. SEIZURES | 6. AUTONOMIC SYMPTOMS OR HYPOVENTILATION  |

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| --- |
| **BEHAVIORAL OR PSYCHIATRIC SYMPTOMS** |
| **PSYCHIATRIC SYMPTOMS** | YES | NO | LABILITY | YES | NO | DISINHIBITION | YES | NO |
| IMPULSIVITY | YES | NO | AGITATION | YES | NO | IRRITABILITY | YES | NO |
| AGRESSIVITY | YES | NO | HYPERACTIVITY | YES | NO | APATHY | YES | NO |
| DEPRESSIVE SYMPTOMS | YES | NO | MANIC SYMPTOMS | YES | NO | ANXIETY  | YES | NO |
| SELF-HARM | YES | NO | SUICIDAL IDEATION | YES | NO | SUICIDAL ATTEMPT  | YES | NO |
| INSOMNIA | YES | NO | DIMINISHED NEED FOR SLEEP | YES | NO | CHANGES IN APPETITE  | YES | NO |
| **SINTOMAS PSICÓTICOS** | YES | NO | AUDITORY HALLUCINATIONS  | YES | NO | VISUAL HALLUCINATIONS | YES | NO |
| PARANOID DELUSIONS  | YES | NO | GRANDEUR DELUSIONS  | YES | NO | NIHILISTIC DELUSIONS  | YES | NO |
| CELOTYPIC DELUSIONS | YES | NO | MISIDENTIFICATION DELUSIONS | YES | NO |  |  |  |
| **COGNITIVE SYMPTOMS**  | **COGNITIVE SYMPTOMS**  | YES | **NO** |
| DISORIENTATION  | YES | YES | CONCENTRATION DIFFICULTIES  | YES | NO | MEMORY IMPAIRMENT  | YES | NO |
| ATENTIONAL IMPAIRMENT  | YES | YES | HEMINEGLECT | YES | NO | APHASIA | YES | NO |
| ALEXIA | YES | NO | AGGRAPHY | YES | NO | APRAXIA | YES | NO |
| **PSYCHOTIC DISORDER ACCORDING TO DSM YES NO** |
| **DELIRIUM OR ALERTNESS ALTERATIONS YES NO** |
| RETARDED CATATONIA  | YES | NO | EXCITED CATATONIA  | YES | NO | DELIRIUM | YES | NO |
| HYPOACTIVE DELIRIUM | YES | NO | MIXED DELIRIUM  | YES | NO | HYPERACTIVE DELIRIUM | YES | NO |
| CATATONIC DELIRIUM  | YES | NO | FLUCTUACIONES | YES | NO | INDIFERENCIA AL MEDIO | YES | NO |
| **SPEECH DISTURBANCES**  |
| SPEECH DISTURBANCES | YES | NO | PRESSURED SPEECH | YES | NO | REDUCED SPEECH PRODUCTION | **YES** | NO |
| MUTISM | YES | NO | DISARTHRIA | YES | NO | FEELING OF DIFFICULTYTO SPEAK | **YES** | NO |
| STUTTERING | YES | NO |  |  |  |  |  |  |
| **SEIZURES**  |
| SEIZURES | YES | NO | SINGLE SEIZURE | YES | NO | MULTIPLE SEIZURES |  |
| STATUS EPILEPTICUS | YES | NO | NEW ONSET REFRACTORY STATUS EPILEPTICUS | YES | NO | REFRACTORY STATUS EPILEPTICUS | YES | NO |
| SUPER REFRACTORY STATUTS EPILEPTICUS | YES | NO | GENERALIZED SEIZURES | YES | NO | FOCAL SEIZURE WITH IMPAIRMENT OF CONSCIOUSNESS | YES | NO |
| FOCAL SEIZURE WITHOUT IMPAIRMENT OF CONSCIOUSNESS | YES | NO | NUMBER OF SEIZURES |  |

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| **ABNORMAL MOVEMENTS** |
| ABNORMAL MOVEMENTS | YES | NO | EXTREMITIES DYSKINESIA | YES | NO | OROLINGUAL DYSKINESIA | YES | NO |
| GROPING | YES | NO | CHOREOATHETOSIS | YES | NO | REPETITIVE HYPERACTIVE MOVEMENTS  | YES | NO |
| OCULOGYRIC CRISIS  | YES | NO | DYSTONIA | YES | NO | RIGIDITY | YES | NO |
| OPISTHOTONOS | YES | NO | CHEWING MOVEMENTS | YES | NO | RESISTANCE TO EYELID OPENING | YES | NO |
| MANDIBULAR OPENING RESISTANCE | YES | NO | FORCED JAW CLOSURE | YES | NO | LIP SMACKING | YES | NO |
| **AUTONOMIC SYMPTOMS**  |
| AUTONOMIC INESTABILITY | YES | NO | HYPERHIDROSIS | YES | NO | TACHYCARDIA  | YES | NO |
| BRADYCARDIA | YES | NO | HYPERTENSION | YES | NO | HYPOTENSION  | YES | NO |
| HYPERTHERMIA | YES | NO | HYPOTHERMIA | YES | NO | HYPOVENTILATION | YES | NO |
| **MEDICAL COMPLICATIONS**  |
| ICU ADMISSION  | YES | NO | MECHANICAL VENTILATION  | YES | NO | GASTROSTOMY  | YES | NO |
| TRACHEOSTOMY | YES | NO | ARRYTMIA | YES | NO | ACUTE KIDNEY INJURY  | YES | NO |
| PNEUMONIA | YES | NO | URINARY TRACT INFECTION  | YES | NO | ELECTROLITE DISBALANCE  | YES | NO |
| HYPERGLICEMIA | YES | NO | NEUROLEPTIC MALIGNANT SYNDROME  | YES | NO | ANEMIA | YES | NO |
| RABDOMYOLYSIS | YES | NO | SEPSIS | YES | NO | COMA | YES | NO |
| PHARMACOLOGICALLY INDUCED COMA  | YES | NO | DEATH | YES | NO |  | YES | NO |
| REASON FOR ADMISSION TO ICU: |

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| **FINAL DIAGNOSIS**  |
| DEFINITE ANTI-NMDAR ENCEPHALITIS YES / NO |
| NON- ANTI-NMDAR ENCEPHALITIS  | YES | NO | ANTI-LGI1 ENCEPHALITIS  | YES | NO | ANTI-CASPR-2 ENCEPHALITIS | YES | NO |
| PRION DISEASE  | YES | NO | PRIMARY PSYCHOTIC DISORDER | YES | NO | SECUNDARY PSYCHOTIC DISORDER | YES | NO |
| DESCRIBE FINAL DIAGNOSIS:  |

**IV. LABORATORY AND NEUROIMAGING VARIABLES**

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| **CEREBROSPINAL FLUID** |
| CEREBROSPINAL FLUID | DATE |  | DAYS FROM SYMPTOMS ONSET  |  |
| ABNORMAL CSF  | YES | NO | PLEOCYTOSIS (>5 CELLS) | YES | NO | NÚMERO DE CÉLULAS Y PREDOMINIO |  |
| LYNPHOCITIC PLEOCYTOSIS | YES | NO | PROTEINS( 20-45 mg/dL) |  | GLUCOSE(60 a 80 mg/dl) |  |
| POSITIVE OLIGOCLONAL BANDS  | YES | NO | NEGATIVE FILMARRAY  | YES | NO | NEGATIVE PCR FOR TUBERCULOSIS  | YES | NO |
| IN CASE CSF FILMARRAY WAS POSITVE, SPECIFY: |    |
| **ELECTROENCEPHALOGRAM** |  |  |  | YES |
| FIRST ELECTROENCEPHALOGRAM | DATE |  | DAYS FROM SYMPTOMS ONSET |  |
| EEG REPORT  |
| ABEEG  | YES | NO | GENERALIZED DYSFUNCTION  | YES | NO | EPILEPTIC ACTIVITY | YES | NO |
| ASYMMETRIC | YES | NO | FOCAL DYSFUNCTION  | YES | NO | DELTA-BRUSH | YES | NO |

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| **BRAIN MRI** |
| BRAIN MRI | DATE |  | DAYS FROM SYMPTOMS ONSET |  |
| BRAIN MRI REPORT |
| ABNORMAL BRAIN MRI | YES | NO | RIGHT AMYGDALA LESIONS | YES | NO | LEFT AMYGDALA LESIONS | YES | NO |
| RIGHT PARAHIPPOCAMPAL GYRUS LESIONS | YES | NO | LEFT PARAHIPPOCAMPAL GYRUS LESIONS | YES | NO | RIGHT MID-CINGULATE GYRUS LESIONS  | YES | NO |
| LEFT MID-CINGULATE GYRUS LESIONS  | YES | NO | RIGHT POSTERIOR CINGULATE GYRUS LESIONS | YES | NO | LEFT POSTERIOR CINGULATE GYRUS LESIONS | YES | NO |
| RIGHT MAMMILARY BODIES LESIONS | YES | NO | LEFT MAMMILARY BODIES LESIONS | YES | NO | RIGHT THALAMUS LESIONS  | YES | NO |
| LEFT THALAMUS LESIONS  | YES | NO | RIGHT ACCUMBENS LESIONS | YES | NO | LEFT ACCUMBENS LESIONS | YES | NO |
| RIGHT DORSOLATERAL PREFRONTAL CORTEX LESIONS | YES | NO | LEFT DORSOLATERAL PREFRONTAL CORTEX LESIONS | YES | NO | RIGHT PARIETAL LESIONS | YES | NO |
| LEFT PARIETAL LESIONS | YES | NO | RIGHT OCCIPITAL LESIONS | YES | NO | LEFT OCCIPITAL LESIONS  | YES | NO |
| RIGHT HIPPOCAMPAL LESIONS  | YES | NO | LEFT HIPPOCAMPUS LESIONS | YES | NO | RIGHT ANTERIOR CINGULATE LESIONS | YES | NO |
| LEFT ANTERIOR CINGULATE LESIONS | YES | NO | RIGHT FORNIX LESIONS | YES | NO | LEFT FORNIX LESIONS | YES | NO |
| RIGHT INSULAR LESIONS  | YES | NO | LEFT INSULAR LESIONS  | YES | NO | RIGHT ORBITOFRONTAL LESIONS  | YES | NO |
| LEFT ORBITOFRONTAL LESIONS  | YES | NO | RIGHT TEMPORAL LOBE LESIONS  | YES | NO | LEFT TEMPORAL LOBE LESIONS  | YES | NO |
| BRAINSTEM LESIONS | YES | NO | CEREBELLAR LESIONS  | YES | NO | MENINGEAL REINFORMENT  | YES | NO |
| OTHER, SPECIFY:  | MRI MTA-SCALE |  | MRI GCA-SCALE |  |
|  |  |  |  |  |

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| **BRAIN PET-CT WITH FDG** |
| FDG-PET | DATE  |  | DAYS FROM SYMPTOMS ONSET |  |
| FDG-PET REPORT 0 (NORMAL) / 1 (HYPOMETABOLISM) / 2 (HYPERMETABOLISM) / 3 (MIXED) |
| ABNORMAL PET-CT | YES | NO | PARIETOCCIPITAL HYPOMETABOLISM  |  YES | NO | LIMBIC HYPERMETABOLISM | YES | NO |
| RIGHT FRONTAL LOBE |  | LEFT FRONTAL LOBE |  | RIGHT PARIETAL LOBE |  |
| LEFT PARIETAL LOBE |  | RIGHT TEMPORAL LOBE |  | TEMPORAL IZQUIERDO |  |
| RIGHT INSULAR CORTEX |  | LEFT INSULAR CORTEX |  | RIGHT OCCIPITAL LOBE  |  |
| LEFT OCCIPITAL LOBE  |  | RIGHT CEREBELLAR HEMISPHERE  |  | LEFT CEREBELLAR HEMISPHERE  |  |
| RIGHT CAUDATE NUCLEUS  |  | LEFT CAUDATE NUCLEUS  |  |  |  |

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| **ABDOMINAL AND PELVIC CT** |
| **ABDOMINAL AND PELVIC CT** | DATE |  | DAYS FROM SYMPTOMS ONSET |  |
| REPORT  |
| ABNORMAL STUDY | YES | NO | FINDINGS SUGGEST OVERIAN TERATOMA | YES | NO |
| NOTES:  |

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| --- |
| **TRANSVAGINAL ULTRASOUND** |
| TRANSVAGINAL US | DATE |  | DAYS FROM SYMPTOMS ONSET |  |
| REPORT  |
| FINDINGS SUGGEST OVERIAN TERATOMA | YES | NO |
| NOTES: |

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| --- |
| **TESTICULAR ULTRASOUND** |
|  TESTICULAR US | DATE  |  |  DAYS FROM SYMPTOMS ONSET |  |
| REPORT |
| ABNORMAL TESTICULAR US | YES | NO | FINDINGS SUGGEST TESTICULAR CANCER | YES | NO |  |
| NOTES: |

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| **PERFIL HORMONAL** |
| NORMAL | ABNORMAL |
| **HORMONE PROFILE DESCRIPTION**  |  |
| **ANTI-TPO** |  |

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| --- |
| **RHEUMATOLOGIC PROFILE** |
| NORMAL | ABNORMAL |
| **DESCRIPTION OF THE RHEUMATOLOGIC PROFILE** |  |

**V. TREATMENT VARIABLES**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **TREATMENT VARIABLES**  | **SI** | **NO** | **DOSIS** | **START DATE**  | **COMPLETION DATE**  | **DAYS OF TREATMENT** |
| METHYLPREDNISOLONE | YES | NO |  |  |  |  |
| PLASMAPHERESIS (PLEX) | YES | NO |  |  |  |  |
| IV IMMUNOGLOBULINE | YES | NO |  |  |  |  |
| CICLOPHOSPHAMIDE | YES | NO |  |  |  |  |
| SUBSEQUENT APPLICATIONS |
| RITUXIMAB | YES | NO |  |  |  |  |
| SUBSEQUENT APPLICATIONS | YES |
| TUMOR RESECTION  | YES | NO |  |  |  |  |
| OTHERS  | YES | NO |  |  |  |  |
| **ANTIPSYCHOTIC USE PRIOR HOSPITAL ADMISSION**  | YES | **NO** |
| **WHICH ANTIPSYCHOTIC?** |  |
| **SYMPTOMATIC TREATMENT**  | YES | NO | **DOSIS MIN-MAX** | **FECHA INICIO** | **FECHA FINAL** | **DÍAS TTO** |
| BENZODIACEPINAES | YES | NO |  |  |  |  |
| * MIDAZOLAM
 | YES | NO |  |  |  |  |
| * LORAZEPAM
 | YES | NO  |  |  |  |  |
| * CLONAZEPAM
 | YES | NO |  |  |  |  |
| * BROMOCRIPTINE
 | YES | NO |  |  |  |  |
| AMANTADINE | YES | NO |  |  |  |  |
| MEMANTINE | YES | NO |  |  |  |  |
| LEVODOPA | YES | NO |  |  |  |  |
| QUETIAPINE | YES | NO |  |  |  |  |
| OLANZAPINE | YES | NO |  |  |  |  |
| RISPERIDONE | YES | NO |  |  |  |  |
| HALOPERIDOL | YES | NO |  |  |  |  |
| DEXMETOMIDINE/CLONIDINE | YES | NO |  |  |  |  |
| ELECTROCONVULSIVE THERAPY | YES | NO | NUMBER OF ECT SESSIONS  |  |

**VI. CLINIMETRIC ASSEMMENT**

1. **NEUROPSYCHIATRIC INVENTORY QUESTIONNAIRE**(Cummings, 2012)

|  |  |  |
| --- | --- | --- |
| **DATE** | **ADMISSION:** | **DISCHARGE:** |
| **FEATURES**  | **YES** | **NO** | **SEVERITY**  | **YES** | **NO** | **SEVERITY** |
| DELUSION |  |  | 1 2 3 X |  |  | 1 2 3 X |
| HALLUCINATONS |  |  | 1 2 3 X |  |  | 1 2 3 X |
| AGRESSIVITY/AGITATION  |  |  | 1 2 3 X |  |  | 1 2 3 X |
| DEPRESSION |  |  | 1 2 3 X |  |  | 1 2 3 X |
| ANXIETY  |  |  | 1 2 3 X |  |  | 1 2 3 X |
| EUPHORIA  |  |  | 1 2 3 X |  |  | 1 2 3 X |
| APHATY/INDIFFERENCE |  |  | 1 2 3 X |  |  | 1 2 3 X |
| DISIHIBITION |  |  | 1 2 3 X |  |  | 1 2 3 X |
| IRRITABILITY/LABILITY |  |  | 1 2 3 X |  |  | 1 2 3 X |
| MOTOR BEHAVIOR WITHOUT A GOAL  |  |  | 1 2 3 X |  |  | 1 2 3 X |
| NIGHT BEHAVIORS  |  |  | 1 2 3 X |  |  | 1 2 3 X |
| APPETITE ABNORMALITIES  |  |  | 1 2 3 X |  |  | 1 2 3 X |
| **TOTAL** |  |  |  |  |

* The NPI-Q is filled both on admission and at discharge. We fill these inventory according to the patients family members or care-givers. The NPI-Q filled on admission takes in considerations the patients’ symptoms during the last 30 days. On the contrary, we have adapted this questionnaire also to evaluate the neuropsychiatric symptoms one week before patients discharge.

 **2. . BUSH FRANCIS CATATONIA RATING SCALE**(Bush *et al.*, 1996)

* We used the Bush & Francis Catatonia Rating Scale (BFCRS) to register the presence of catatonia signs and to measure the severity of catatonic syndrome(Bush *et al.*, 1996; Oldham and Francis, 2020). We did this at least three times during the hospital stay of patients, with particular interest on admission and at discharge measurements. An additional measurement is conducted during the follow-up. To establish a categorical diagnosis of catatonia, we use DSM-5 criteria (293.89), without the use of criterion D., which refers to the exclusion of delirium. Also, we use the Bush and Francis Catatonia Screening Instrument, with a cut-off point of 4 or more items, as the conventional cut-off point of 2 or more items increases the number of misclassification errors in neurological patients (Espinola-Nadurille *et al.*, 2016; Oldham and Francis, 2020).

**3. CONFUSSION ASSESSMENT METHOD SEVERITY**

It is an instrument that stands out for its simplicity of application and its efficacy. It was designed specifically for the diagnosis of delirium.

It is able to distinguish between dementia and delirium, assesses multiple features of delirium and is feasible to be performed in patients

with delirium. It was created based on DSM-III-R diagnostic criteria and includes: a) Acute onset and fluctuating course; b) Inattention; c)

Disorganized thinking; d) Altered level of consciousness. The diagnosis is made if it meets a+b+c or d. The Confussion Assessment Method

Severity allows calculating the severity of delirium according to these same items(Grover, 2012), scoring from 0 to 7. This scale is also

used on admission, follow-up, and on discharge.

**4. OVERT AGITATION SEVERITY SCALE**(Yudof and Kopecky, 2014)

 **5. MONTREAL COGNITIVE ASSESSMENT (MOCA)**

* The Montreal Cognitive Assessment test (MoCA test) is a screening tool to detect cognitive impairment. The MoCA evaluates executive functions, attention, abstraction, memory, language, visual-constructive abilities, calculation and orientation. It is easy to administer, with an approximate duration of 10 minutes. The maximum score is 30 points, with a cut-off point for MCI and dementias < 26 in developed countries. Its main disadvantage is that it has a high educational bias, so that in the original version it is recommended the addition of one point if schooling is less than 12 years(Nasreddine *et al.*, 2005). The MoCA is admistered on admission and at discharge.

**¿DID THE EVALUATION TAKE PLACE? 0 (NO EVALUABLE) / 1 (DONE)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **DATE:** | **DATE:** | **DATE:** |
|  | **ADMISSION**  | **FOLLOW-UP** | **DISCHARGE** |
| VISUOSPATIAL/EXECUTIVE |  |  |  |
| IDENTIFICATION  |  |  |  |
| MEMORY |  |  |  |
| ATENTION  |  |  |  |
| LANGUAGE  |  |  |  |
| ABSTRACTION  |  |  |  |
| MEMORY RECALL |  |  |  |
| ORIENTATION |  |  |  |
| TOTAL |  |  |  |

6. CLINICIAN RATED DIMENSIONS OF PSYCHOSIS SYMPTOM SEVERITY

|  |  |  |
| --- | --- | --- |
| CLINICAL FEATURES | ADMISSION  | DISCHARGE  |
| 1. HALLUCINATIONS (0-4) |  |  |
| 2. DELUSIONS (0-4) |  |  |
| 3. DISORGANIZED SPEECH (0-4) |  |  |
| 4. ABNORMAL PSYCHOMOTOR BEHAVIOR (0-4) |  |  |
| 5. NEGATIVE SYMPTOMS (DIMISHED EMOTIONAL EXPRESSION OR AVOLITION) (0-4) |  |  |
| 6. COGNITIVE IMPAIRMENT (0-4) |  |  |
| 7. DEPRESSION (0-4) |  |  |
| 8. MANIA (0-4) |  |  |
| TOTAL (0-32) |  |  |

* The Clinician-Rated Dimensions of Psychosis Symptom Severity is an 8-item measure that assesses the severity of mental health symptoms that are important across psychotic disorders. Each item is rated on a 5-point scale (0=none; 1=equivocal; 2=present, but mild; 3=present and moderate; and 4=present and severe) with a symptom-specific definition of each rating level. The clinician rates the severity of each symptom as experienced by the individual during the past 7 days. This scale is measured both on admission and at discharge.

**VII. PRONOSTIC MEASUREMENTS**

|  |
| --- |
| **NEOS score accurately predicts 1-year functional status** |
| INTENSIVE CARE UNIT ADMISSION | 1 | 0 | LACK OF CLINICAL IMPROVEMENT WITHIN 4 WEEKS | 1 | 0 | TREATMENT DELAY >4 WEEKS | 1 | 0 |
| ABNORMAL MRI | 1 | 0 | CSF WHITE BLOOD CELL COUNT >20 CELLS/ΜL | 1 | 0 | SCORE | /5 |

* For the NEOS score these 5 variables are assigned 1 point each. NEOS score strongly associates with the probability of poor functional status at 1 year (3% for 0 or 1 point to 69% for 4 or 5 points).