**Supplementary item 1: Comprehensive data of 32 patients**

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| Reference | Country | Age/sex | Measles vaccination  | Childhood measles | Duration of illness before presentation | Psychiatric manifestation | Clinical features | Neuroimaging  | Brain biopsy | Course of illness | Treatment and its response | Outcome |
| Koehler and Jakumeit 1976 | Germany | 20/FPregnant | NA | NA | 2 weeks | Dissociative disorderLeonhard'sspeech-prompt catatonia | Vision lossDenial of vision lossShe was cheerful despite vision loss Vision loss wasinterpreted as hysterical “la belle indifference”Auditoryhallucinations Generalized catatonic rigiditySoon progressed to encephalopathy | NA | NA | Acute fulminant  | NA | Delivered a normal babyBecame akinetic mute in few months |
| Moodie 1980 | South Africa | 16/F | NA | NA | 2 days | Schizophrenia | Paranoidbehavior and auditory hallucinations | NA | Perivascular infiltrationIncrease in microglial cellsDead and 'dying' neuronswithin the cortexexcessive subpial gliosisIntranuclear inclusions in neurons and oligodendrogliaNo measles antigen could be demonstrated | Acute fulminant  | NA | Died 7 days later |
| Caplan et al 1987 | USA | 9/F | NA | NA | 6 months | Schizophrenia (Early onset) | Psychomotor agitationInsomniaDelusionsDeclining scholastic performanceSpeech incoherence, echolalia, Auditory hallucinationsMyoclonus | NA | NA | Chronic  | Thioridazine Extrapyramidal side effectsLaterPhenothiazineand chlorpromazine | Died 2 years after |
| 11/M | NA | Measles at age 3years | Sudden | Schizophrenia | Hyperactivity,aggressive behavior Inappropriatelaughing.Suicidal ideationNeologisms,perseveration, and echolaliaFormal thought disorders Social withdrawal.Myoclonus | NA | NA | Acute fulminant  | chlorpromazine | Akinetic mute within 4 weeks Died 1 year later |
| Salib 1988 | United kingdom | 21/M | NA | NA | 8 months | Schizophrenia-like state with bizarre dysmorphophobia  | Withdrawn and apathetic Preoccupiedwith the shape of various body parts Clumsy anxious, restless, and agitated | CT= normal | NA | Subacute  | Treated in psychiatry unit. | He died 8 months later |
| Duncalf et al 1989 | Australia | 21/F | NA | NA | 2 months | Schizophrenia  | DelusionsFearful and perplexed withecholalia. Lately withdrawn, agitated and had echolalia | NA | Generalized grey matter atrophyDiffuse demyelinationInclusion bodies in neurons | Acute fulminant  | FluphenazinePsychotic symptoms improved But had extrapyramidal side effects  | Died within 6 months |
| Mattinson 1989 | United Kingdom | 44/F | NA | Measles at 5 years | Sudden | Functionalpsychiatric disorders  | Impaired recent memoryEmotional labilitySocial disinhibitionDysarthria and gait abnormality | NA | Focal demyelinationwith gliosis Inflammatory cell infiltrationVirus inclusion bodies Measles virus was not demonstrated. | Acute fulminant  | NA | Died 9 weeks later |
| Forrest and Stores 1996 | United Kingdom | 9/F | NA | Measles at the age of 2 | 4 months | Psychosis (Possibly early onset schizophrenia) | Nightmares seeing 'aliens' in a dreamAlleged attack by a bald manDisorientated and uncooperativeMyoclonus and progressive encephalopathy | NA | NA | Acute fulminant  | NA | Died after 3 months |
| Jähnel 2003 | Germany | 19/M | NA | NA | 2 months | Schizophrenia  | Auditory and visual hallucinations Lack of interestDecreased driveSeizures andMyoclonus | T2/FLAIR hyperintensity In pons | NA | Acute fulminant  | Flupentixol | Died within 2 months |
| Datta et al 2006 | India  | 24/M | NA | NA | 5 months |  Moderate depressive episode with somaticsymptoms (refers to Major depressive disorder as per DSM-5) | Feeling sad Loss of interest Increased fatigue and lethargyMultiple somaticcomplaints and insomnia2 months later,Myoclonus and encephalopathy | CT=normal | NA | Acute fulminant  | Sertraline | Died within 2 months |
| Kayal et al 2006 | India | 13/M | No vaccination | had measlesat the age of 5 | 2 months | Major depressive disorder | Quiet and withdrawnConfined to homeApathyInappropriate crying and laughterDifficultyin walkingMyoclonus and encephalopathy | Normal | NA | Acute fulminant  | Fluoxetine | Rapidly became bedridden  |
| Theethira et al 2009 | India | 15/M | Not received | measles at8 months of age | Several months | Schizophrenia | Paranoid and self-referentialdelusionsLaterRecurrent fallsMyoclonus andencephalopathy | NA | NA | NA | A first-generation antipsychoticdrug | Lost to follow up |
| Baran et al 2010 | Turkey | 31/M | NA | Measles at 9years | 1 year | Schizophrenia  | Delusions anddepressive moodCatatoniaCognitive declineAkinetic mutism | Normal | NA | Subacute | OlanzapineExtrapyramidal side effectsECT | NA |
| Aggarwal et al 2011 | India | 13/M | NA | NA | 5 months | Catatonia(Possibly catatonic schizophrenia) | Withdrawn behavior anddecreased interaction, mutism.Prolonged standing, clenching of teeth, violent behaviourPoor scholastic performance Akinetic mutism | T2/FLAIR hyperintensity foci in periventricular region | NA | Acute fulminant  | LorazepamNo improvement | Lost to follow up. |
| Aggarwal et al 2011 | India | 14/M | NA | NA | 1 month | Manic episode | Behavioural changesBecame talkative, irritable and angryFrequent bathing and reduced sleep Increased psychomotor activityMyoclonus and encephalopathy | T2/FLAIR hyperintensity foci in periventricular region mainly parieto-occipital region | NA | Acute fulminant  | Olanzapine Unduly sedated and urinary incontinence | Lost to follow up. |
| Altunkaynak et al 2013 | Turkey | 19/F | NA | NA | 1 year | Schizophrenia | Behavioral changes Later, myoclonus and encephalopathy | NA | NA | Subacute  | Antipsychotic treatment  | Died within 1 year |
| Dayal and Balhara 2014 | India | 14/M | NA | NA | 6 months | Catatonia (Possibly catatonic schizophrenia)  | Reduced interactionMutismCatatonic odd posturing  Poor eye contact Negativism  | NA | NA | Acute fulminant  | Lorazepam Reduction in BFCRS score to 4. | 4 months later developed diffuse encephalopathyLost to follow up. |
| Kartal et al 2014 | Turkey | 14/F | NA | NA | 3 months | Schizophrenia | Insomnia Visual and auditory hallucinationsDisorganized behavior and poor self-careAgitation | Normal | NA | Acute fulminant  | OlanzapineNo response | NA |
| Erdogan et al 2015 | Turkey | 20/M | NA | NA | 6 months | Manic episode | Increased irritability and increased psychomotor activitydecreased need for sleep & increased goal directed activityReckless spendingIncreased subjective energy | T2/FLAIR hyperintensity In splenium of corpus callosum | NA | Chronic course | Olanzapine | Died 2 years |
| Manoj et al 2015 | India | 23/F | No | Present | 1 year | Excessive sexual drive (Nymphomania) | Behavioral abnormalities (increased libido, disinhibited sexual behavior) | T2/FLAIR hyperintensity  | NA | Subacute | Risperidone | Died after 1 year |
| 27/M | No | Present | 2 year | Excessive sexual drive (satyriasis) | Behavioral abnormalities (increased libido, disinhibited sexual behavior) | T2/FLAIR hyperintensity  |  | Chronic progressive c  | Risperidone | Akinetic mute |
| Parmar et al 2017 | India | 15/M | NA | NA | 5 months | Schizophrenia | Behavioral changesInsomniaDelusions and hallucinationSmiling and muttering to selfIncontinenceRepeated motor acts ( stereotypy) Catatonic odd posturing | T2/FLAIR hyperintensity foci in periventricular region  | NA | Acute fulminant  | Risperidone | NA |
| Tak et al 2017 | Turkey | 14/M | Fully vaccinated | measles infection at the age of 4 months | 9 months | Nonspecific symptomsled to psychiatric consultation | Poor scholastic performance Decreased communicationDifficulty in finding appropriate wordsLately, myoclonus and diffuse encephalopathy. | MRI=normal | NA | Subacute  | NA | Discharged on mechanical ventilation |
| Ahmad et al 2018 | India | 26/M | NA | NA | 2 months | Acute and transient psychotic disorder | Withdrawn behavior, muttering to self and inappropriatesmiling, reduced self-careImpaired sleep and disorganized behaviorMyoclonus and encephalopathy | T2/FLAIR hyperintensity foci in periventricular region mainly frontal-parietal region | NA | Acute fulminant  | OlanzapineSevere extrapyramidal side effects (parkinsoniansymptoms) | Improvement in his psychotic symptomsbut he developed severe extrapyramidal side effects |
| Bhat et al 2018 | India | 8/M | NA | NA | 7 days | Depressive episode (with antidepressant induced mania) | Change in behaviourExcessive talking, overfamiliarbehaviour, decreased sleep, spitting, excessive playing andhyperactivity | NA | NA | Acute fulminant course | Fluoxetine | No improvement after 2 weeks |
| Reddy et al 2018 | India | 17/M | NA | NA | 1 year | Moderate depressive episode | Poor scholastic performanceCrying spells, and irritabilitySudden drop of objects from hands4 months later,Repeated fall myoclonus and encephalopathy | T2/FLAIR hyperintensity foci in periventricular region | NA | Subacute  | Psychotherapy and fluoxetine | NA |
| Gökoglu Gözdaş 2019 | Turkey | 62/F | NA | NA | 3 years | Depressive episode | Meaningless speechMemory lossGait disorder | T2/FLAIR hyperintensity foci in periventricular region | NA | Chronic progressive  | Amantadine | clinical and radiological improvement. |
| Arora et al 2022 | India | 19/M | Incomplete | Exanthematous febrile illness at 7 years of age | 3 years | Schizophrenia | Apathy, personality changeAuditory and tactile hallucinationsSevere cognitive declineMyoclonus | NA | NA | Chronic progressive  | Aripiprazole | No further deterioration after 6 months |
| Sutar and Rai 2020 | India | 13/M | NA | NA | 8 months | Periodic catatonia (Possibly catatonic schizophrenia) | Acute abnormalities in sleep cycle (circadian rhythm disturbances; insomnia)  Episodes of slowness and excitementPoor scholastic performanceAlternating episodes of slowness and excitationRecurrent fallsMutism, and psychomotor slowingIntermittently, period of psychomotor agitation and irritability4 months later, myoclonus and encephalopathy  | NA | NA | Subacute  | LorazepamIntrathecal interferon α2b  | His oral intake and sleep improved. |
| Chakraborty et al 2021 | India | 15/M | NA | NA | 6 months | Catatonic schizophrenia | Smiling and muttering to selfCatatoniaEpisodes of aggressionAttempts to run out of homePoor self- careMyoclonus | NA | NA | Acute fulminant  | Amisulpride and oral lorazepamolanzapineacuteextrapyramidal side effects  | Alive after more than 3 years of follow up. |
| Kaur et al 2021 | India | 17/F | NA | NA | 1 year | Schizophrenia | Behavioral changesSocial withdrawal Irrelevant talk and laughter | NA | NA | Acute fulminant  | RisperidoneNo response | Became akinetic mute within few weeks  |
| Jain et al 2022 | India | 18/M | NA | NA | 4 months | Somatization disorder (Later developedCatatonia) | Behavioral changes Episodes of stuporSoonbecame mute and had catatonic odd posturingEncephalopathy and myoclonus | NA | NA | Acute fulminant  | LevetiracetamLorazepam | NA |

BFCRS score =Bush-Francis Catatonia Rating Scale; CT= computed tomography; ECT= electroconvulsive therapy; FLAIR= Fluid attenuated inversion recovery; NA= not available