Author	Year	Country	N	Main Findings
Prevalence				
Bhushan et al.	**2018**	**India**	**1627**	**In this cross-sectional observational study, 1627 laboratory-confirmed DF cases, 14,6% presented neurological complications, and 4,86% (79) had immune-mediated neurological complications. The spectrum of IMNC included GBS, MFS, ADEM, myelitis, polyneuritis cranialis, among others, and the majority of theses developed in a subacute period (7-30 days). GBS was detected in 32 cases, with acute motor and sensory axonal neuropathy subtype being the most prevalent, 18 patients. They also had 3 patients with MFS. Out of 32 patients, 25 had a full recovery with the treatments that varied from immunoglobulins, plasmapheresis and methylprednisolone.**
Sil et al.	**2016**	**India**	**71**	**It's a descriptive, observational, cross-sectional study that analyzed 71 children with the age range of 1–12 years. 28% had neurological involvement, encephalopathy (40%), enchephalitis (30%), pire motor weakness (15%), TM (5%), ADEM (5%), GBS(5%), were the the common presentations.**
Encephalitis				
Chatur et al.	**2019**	**India**	**2**	**Two dengue encephalitis cases showing the "double doughnut sign" in reference to symmetric involvement of bilateral CNS parenchyma.**
Weerasinghe et al.	**2019**	**Sri-Lanka**	**1**	**A case report of a 18-year-old patient that had a enchephalitis associated with DHF.**
Kyaw et al.	**2019**	**Myanmar**	**123**	**The study was designed to evaluated the weight of Japanese enchephalitis virus and DENV in children under 13 on Myanmar. They found 1 patient with dengue fever among the 123 patients.**
Singh et al.	**2018**	**India**	**1**	**The Jack-o'-lantern sign in a patient that with dengue enchephalitis that died on day 7.**
Josis et al.	**2018**	**India**	**3**	**Viral neurotropism may occur in DF causing direct neuronal damage, generating viral encephalitis. Autopsy findings were cerebral edema with obliteration of the sulci and flattening the gyri. The dura was found tense and there were hemorrhagic foci al over the brain. Microscopically, cerebral edema, inflammation and hemorrhage were the main findings. All three patients were positive for NS-1 dengue antigen.**
Kumar et al.	**2017**	**India**	**1**	**A 22-year-old primagravida that had encephalitis associated with DF. On the MRI she had lesions with the appearance of double doughnut sign.**
Kutiyal et al.	**2017**	**India**	**1**	**A case report with a brain MRI on T2 weighted and FLAIR sequence showing hyperintense lesions in bilateral ganglio-thalamic complex, periventricular and peritrigonal white matter on Dengue encephalitis.**
Garg et al.	**2017**	**India**	**1**	**Involvement of brainstem, cerebellum, corpus callosum and thalamus in dengue encephalitis, evidences with multifocal hyperintensities in bilateral periventricular zones, including basal ganglia, in T2W and FLAIR sequences.**

Sivamani et al.	**2017**	**India**	**1**	**A patient with encephalitis that had both DENV and Japanese encephalitis vírus serology positive, but the authors were to realize the PCR to confirm if it was a dual infection or a cross reactivity.**
Withana et al.	**2014**	**Sri-Lanka**	**1**	**A case of acute cerebellitis associated with de hue fever. Dengue antigen is demonstrated in the brain of patients with dengue encephalitis**
Rao et al.	**2013**	**India**	**1**	**A dengue encephalitis case with positive antibodies and antigen testing on the CSF of the patiens.**
Soares et al .	**2013**	**Brazil**	**Not applied**	**New propose for dengue encephalitis definition: (1) presence of fever (2) acute signs of cerebral involvement, such as altered consciousness or personality and/or seizures and/or focal neurological signs (3) reactive IgM dengue antibody, NS1 antigen or positive dengue PCR on serum and/or CSF, according to the time of onset (4) exclusion of other causes of viral encephalitis and encephalopathy.**
Borawake et al.	**2011**	**India**	**1**	**A case of DENV associated encephalitis described.**
Guillain-Barre Syndrome				
Silva et al.	**2019**	**Sri Lanka**	**1**	**GBS and its variants usually develop after 1 or more weeks of the acute infection, which suggest an immunological ground. The dengue virus has a potential neurotropism for peripheral nerves that cause illness. In their case, the MFS was assumed to be a parainfectious manifestation, not a postinfectious**
Pandey et al.	**2019**	**India**	**1**	**A case report of a pharyngeal-cervical-brachial variant of GBS associated with dengue fever infection.**
Pandey et al.	**2018**	**India**	**1**	**A report of two brothers presenting simultaneously with an Axonal variant of GBS both associated with a mild dengue fever infection, the author calls attention for the possible genetic mechanism associated with GBS and dengue fever.**
Dalugama et al.	**2018**	**Sri Lanka**	**1**	**It suggests that screening for dengue in patients with acute flaccid paralysis may be important in hyperendemic regions. The article discusses about the correlation and the pathogenesis of GBS and dengue fever. It postulated about two possible mechanisms, one being the molecular mimicry, that is when the cell-mediated immunological response to nonself-antigens misdirect to the host nerve tissue. And the other one, is that pro-inflammatory cytokines (TNF, complements, and interleukins) that participated in the immune response of dengue fever may have an important role.**
Raboni et al.	**2017**	**Brazil**	**1**	**It reports a case of flavivirus cross-reactivity in serological tests and Guillain-Barré syndrome in a hematopoietic stem cell transplant patient. They discuss the similarity between two flaviviruses, the Zika virus and Dengue virus, and their association with GBS. They suggest that antibodies against the viruses can react causing damage to the antigens on the nerve cells.**

Fragoso, Y. D. et al	**2016**	**Brazil**	**10**	**These report 10 cases of DF and GBS, with variable and severe symptoms, and acute motor-sensory axonal neuropathy being identified in all cases. The average days between DF and GBS was 10,9 days. All patients were treated equally with immunoglobulin, and full recovery varied from nine days to one year.**
Simon O. et al.	**2016**	**New Caledonia**	**3**	**It reports 3 cases of early GBS and dengue fever. All these three patients had de neurological disease and its regression, dengue fever, and the serum diagnosis within one week, suggesting an infectious origin. Contrasting with the majority of the cases, which are considered as a post-infectious disease.**
Ralapanawa et al.	**2015**	**Sri Lanka**	**1**	**It reports a case of a 34 years old man who had DF and 10 days later developed GBS. He has treated with plasmapheresis and recovery well. They discuss the mechanism for GBS after DF, being an immune-mediated neurological disease in which DF response, with pro-inflammatory substances, may have an important part.**
Gonçalvez et al.	**2011**	**Brazil**	**1**	**It reports a case of a six years old girl who had DF and 20 days later developed GBS. She was treated properly but some neurological sequels remained. It tries to explain the correlation in the pathogenesis between these two diseases, being the main factor the similarity of the immune response presented by both.**
Myopathy				
Verma et al.	**2017**	**India**	**30**	**In this observational study of 30 patiens presenting creatinine kinase (CK) elevation 14 was caused by dengue infection of this 5 with hypokalemia and 9 had normokalemia. Those with normokalemia were more prone to have CK 10 times the normal value compared with the hypokalemic group.**
Misra et al.	**2015**	**India**	**116**	**In this prospective study 79% out of the 116 patiens analyzed presented a neurological complication. 34% presented with encephalopathy or encephalitis and 45% had muscle dysfunction of those 34 patients had muscle weakness associated with high CK levels, 97% of patients with muscle weakness had myalgia. Muscle weakness were severe in 20 patients and 16 patients had hyporeflexia.**
Kalita et al.	**2012**	**India**	**13**	**13 patients with dengue myopathy were submitted to electromyography (EMG) and a 1 month follow up. The weakness were more prominent proximal and in the lower limbs. There were no difference in EMG between the severe and mild group, none of the groups show signs characteristic of inflammatory myopaties.**
Misra et al.	**2011**	**India**	**39**	**In this study 16 patients had muscle weakness and high CK level and 15 had just higher CK levels without muscle weakness. 8 patients presented severe muscle weakness and 5 had hypotonia and hyporeflexia. By 2 weeks all patients presented full recovery. Electromyography didn't show characteristics of inflammatory myopathy and the 3 patients that underwent muscle biopsy didn't show myositis either.**

Paliwal et al.	**2011**	**India**	**7**	**In this case series it's described a great variety of clinical presentations of dengue myositis, from mild asymmetric weakness for severe 3 cases of fulminant myositis.**
Acharya et al.	**2010**	**India**	**1**	**A case report of a 40-year-old man presenting with fever and myalgia with muscle tenderness and pain to movement but normal strength. In the next day he presented flaccid quadriparesis which progressed to pharyngeal muscle weakness, head drop and respiratory insufficiency and rhabdomyolysis. A muscular biopsy showed perifascicular myonecrosis.**
Sangle et al.	**2010**	**India**	**1**	**A case report of a 16-year-old girl that had myositis and myocarditis associated with dengue infection.**
Finsterer et al.	**2006**	**Austria**	**1**	**A case report of a 38-year-old man that experience severe heache and fever on a holiday in Thailand, that was followed by a severe myalgia 10/10. After 36 days he still had 6/10 myalgia and electromyography revealed electrical spontaneous activity on the subscapularis muscle. 62 days after the onset he received dexamthasone during 3 weeks resolving the pain.**
Malheiros et al.	**1993**	**Brazil**	**15**	**The study's shows perivascular infiltrates in 12 out of 15 patients with acute classic dengue fever but there was no sign of myositis. None of the patiens had alterations on the neurological exam and just 3 had abnormal CK levels on serum.**
Myelitis				
Landais et al.	**2019**	**France**	**1**	**This case report describes a 24-year-old woman who developed myelitis on the 7th day of dengue fever. Spinal MRI identified diffuse medullar hyperintense lesions, suggesting acute inflammation. She was treated with intravenous pulse methylprednisolone. immunoglobulin plasmapheresis and physiotherapy, achieving almost full recovery after 5 months.**
Chaudhry et al.	**2018**	**India**	**1**	**This case describes a 55-year-old woman who tested positive for dengue IgM antibody, and who developed spontaneous subarachnoid hemorrhage and LETM. She was properly treated with methylprednisolone pulse therapy and physical therapy, but after a one-month follow-up, the patient didn't show any significant signs of recovery.**
Malik et al.	**2018**	**India**	**1**	**It describes a case of an adolescent patient who presented symptoms of TM after 4 weeks of DF. The authors discuss the difference between acute (parainfectious) and late (post-infectious) stages of dengue with neurological manifestation and suggest that the parainfectious phase is characterized by direct infection of dengue virus in the spinal cord but, at the post-infectious one, immune reactions play the main role.**
Lana-Peixoto et al.	**2018**	**Brazil**	**2**	**Two patients with NMOSD that occur associated with DF infection, both patients tested positive for AQP4 antibodies.**
Mota et al.	**2017**	**Brazil**	**1**	**This article reports a case of a 21-year-old male patient who had dengue fever and manifested TM. The authors discuss the real prevalence of dengue-associated TM, suggesting that is underestimated and reinforcing the importance of careful evaluation and follow-up to avoid misdiagnosis.**

Fong et al.	**2016**	**Malaysia**	**1**	**This article reports the first pediatric case of LETM associated with DF. A 12-year-old girl presented flaccid quadriplegia on the 8th day of dengue infection. She was treated with pulse methylprednisolone, intravenous immunoglobulin, and plasmapheresis, reaching an almost complete clinical recovery after six months, persisting with mild residual weakness of her limbs.**
Tomar et al.	**2015**	**India**	**1**	**In this article, a case of a middle-aged man, who developed LETM in the acute parainfectious phase of DF. On the third day of fever, the patient started presenting neurological alterations such as lower limb weakness, urinary retention, and sensory impairment. Although this disease is associated with a poor prognosis, the patient achieved total improvement in neurological symptoms without residual deficits, receiving treatment with intravenous corticosteroids.**
Larik et al.	**2012**	**India**	**1**	**This article describes a case of an adolescent male patient with high-intensity low back pain who was diagnosed with LETM 4 weeks after dengue's infection onset.**
Chanthamat et al.	**2010**	**Thailand**	**1**	**This case describes a 61-year-old woman who developed acute paraplegia with sensory loss and urinary retention 6 days after the onset of DF. She was diagnosed with TM and received immunomodulatory treatment, achieving complete recovery after one month.**
Puccioni-Sohler et al.	**2009**	**Brazil**	**10**	**This retrospective study analyzed 10 patients with the age range of 22 to 74 years and with IgM/IgG seropositivity for dengue, who developed neurological symptoms. Three of them were diagnosed, by spinal MRI and CSF inflammatory findings, with Transverse Myelitis. In one of the patients, it was also identified intrathecal synthesis of dengue antibodies in CSF, which could be associated with direct viral invasion of the spinal cord.**
Soares et al.	**2006**	**Brazil**	**13**	**This retrospective study involved 13 patients, 10 women and 3 men between 11 to 79-years-old, who developed DF during the epidemic of 2002 in Rio de Janeiro and who had neurological complications. Two of them manifested myelitis with paraparesis and sphincteric retention, but MRI results were abnormal in only one of the cases. According to CSF analysis, both of them had elevated Albumin Quotient (which could mean blood–CSF barrier dysfunction), and one had intrathecal synthesis of antibodies. High levels of cells and protein in the CSF were also defined as indicators of direct viral invasion and acute inflammation, and were present in both cases.**
ADEM				
Rastogi et al.	**2019**	**India**	**1**	**Acaso report of a man with ADEM associated with dengue fever that rapidly progress to respiratory insufficiency requiring mechanical ventilation, but presented food response to cortical steroids.**
Sulaiman et al.	**2017**	**Review**	**22**	**A narrative review with a summary of 22 cases of ADEM Associated with dengue fever.**

Kamel et al.	**2017**	**Meta-analysis**	**29**	**In this meta-analysis the authors found a 0.4% prevalence of ADEM in dengue fever patients, corresponding for 6.8% of all neurological complications in DF.**
Viswanathan et al.	**2016**	**Malaysia**	**2**	**Two cases of ADEM associated with DF that mimicked multiple sclerosis on the neuroimaging.**
New Daily Persistent Headache				
Abreu et al	**2019**	**Brazil**	**450**	**Of 600 cases of dengue fever in the city, the authors were able to contact 450. Of these 450 patients, 3 cases of NDPH were confirmed, leading to a prevalence of 0.67% (1:150) of NDPH attributed to dengue fever.**
Bordini & Valença	**2017**	**Brazil**	**2**	**Two cases were reported. Case 1: 23 years old causasian male with a two-year history of headache. Pain was bilateral, in pressure, and severe most of the time. It was refractory to amitriptyline, divalproex and topiramate. Nerve blockade leaded to temporary relief for 2 weeks. Case 2: 42-years old caucasian woman with bilateral pressure headache, moderate to severe, sometimes associated to nausea, photophobia and phonophobia; with substancial relief after the use of dexametasone for 10 days**
Others				
Mohammed et al.	**2020**	**India**	**1**	**A case report of a 64-year-old woman that presented with a rapid progressive dementia associated with focal epilepsy a month after a uncomplicated dengue infection. The autoimmune conditions research was negative, she had a normal MRI. She received intravenous corticosteroids and gradually improve in 4 weeks.**
Borrelli et al.	**2019**	**Belgium**	**1**	**A case report of a 35-year-old women that presented fever, myalgia, pain in the eyes, arthralgia after a trip to Brazil. 2-months later she had cauda equina syndrome and received the diagnosis of immune mediated sacral radiculitis associated with dengue fever. She had positive IgM-antibodies for dengue on the CSF as well as oligoglonal IgG bands.**
Sardana et al.	**2019**	**India**	**1**	**A case of facial nerve palsy associated with dengue fever infection.**
Desai et al.	**2018**	**India**	**1**	**A case report of a 14-year-old boy with dengue fever that developed opsoclonus myoclonus with spontaneous resolution in 2 weeks.**
Higgoda et al.	**2018**	**Sri Lanka**	**1**	**A case of multiple motor neuropathy associated with dengue fever infection that respodended well with immunoglobulin therapy.**
Saini et al.	**2017**	**India**	**1**	**A case of hemiconvulsion hemiplegia epilepsy triggered by dengue virus infection.**
Mahale et al.	**2017**	**India**	**1**	**A case report of a 14-year-old boy with ocular flutter and truncal ataxia with concomitant dengue fever infection. He was treated with corticosteroids and the ocular flutter and ataxia improved.**
Jaganathan et al.	**2014**	**India**	**1**	**A case report of an isolated hypoglossal nerve paralysis associated with dengue virus infection.**

Weeratunga et al.	**2014**	**Sri Lanka**	**3**	**The authors described three cases of cerebellar syndrome related to dengue infection, with positive IgM against dengue virus on the CSF.**
Fong et al.	**2014**	**Malaysia**	**1**	**A case of pediatric post-dengue encephalopathy parkinsonism in a 6-year-old patient that took 7-weeks to regain its normal function.**
Tan et al.	**2014**	**Malaysia and Myanmar**	**2**	**Two cases of opsoclonus of myoclonus with dengue infection. The first in a 30-year-old adult that had a pachy- and leptomeningeal enhancement. The second case happened in a 10-year old child with normal EEG and computed tomography, MRI wasn't realized in this case.**
Mamdouh et al.	**2013**	**Saudi Arabia**	**2**	**Two cases of atypical meningitis due to dengue virus with the patients presenting recurrent migraine like attacks, phobia (terrifying sense of near death) and signs of cardiac dysautonomia.**
Srivastava et al.	**2013**	**India**	**1**	**A case report of a 21-year-old without family history or other risk factors, that devolped maniac symptoms after a dengue fever infection.**
Azmin et al.	**2013**	**Malaysia**	**1**	**A 18-year-old men that developed parkinssonism associated cerebellar ataxia, multiple cranial neuropathies and brachial plexopahty- that resulted in denevetion on eletromyography after one month of onset. This presentention was following a dengue fever infection.**
Verma et al.	**2011**	**India**	**3**	**A case series of patients that developed neuralgic amyotrophy associated with dengue infection, 2 patients just showed up complete recovery of strength at the third month of follow up.**