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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Virus** | **Ref** | **Country** | **Sample size** | **Gestation** | | | **Timing of maternal Sx** | | **Main neonatal outcomes** | IUFD | Premature delivery | LBW | Neonatal death | Congenital malformations | Neonatal disease | Age at first symptoms (days) | RT-PCR | IgM | Microcephalia | NS1 | Fever | Rash | Jaundice | Thrombocytopenia | Bleeding | Petechia/bleeding | Petechia/bruising | Hepatomegaly | Deranged LFTs | Hyperpigmentation | Seizures | Encephalopathy | Other | Outcome | Transmission rate |
| **1st tri** | **2nd tri** | **3rd tri** | **>15 days** | **<15 days** |
| DENV | [31] | Sri Lanka | 1 |  |  | 1 |  | 1 | Neonatal dengue | 0 | 1 | 0 | 1 | 0 | 1 |  | 1 | 1 |  |  | 1 | 1 |  | 1 |  |  | N/A | N/A | 1 |  |  |  | Pericholecystic fluid | Died |  |
| [36] | New Caledonia | 10 |  |  | 10 |  | 2 | Neonatal dengue | 0 | 0 | N/A | 0 | 0 | 9 |  | 9 | N/A |  |  | 9 | 7 |  | 7 |  |  | 0 | N/A | N/A |  |  |  |  |  | 90% |
| [16] | Brazil | 13 |  |  |  |  |  | Prematurity |  | 7 | 0 | 1 | 0 | 0 |  |  |  |  |  |  | 3 |  | 3 |  |  | 0 |  |  |  |  |  |  |  | 0% |
| [37] | New Caledonia | 1 |  |  | 1 |  | 1 | Prematurity, neonatal dengue | 0 | 1 | 0 | 0 | 0 | 1 |  | 1 | 1 |  |  | 1 | 1 |  | 1 |  |  | 0 | N/A | N/A |  |  |  |  | Recovered |  |
| [21] | French Guinea | 73 |  |  |  |  |  | No statistical association | 3 | 22 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [115] | French Guinea | 54 |  |  |  |  |  | Neonatal dengue | 2 |  |  |  | 0 | 3 |  | 7 | 2 |  | 4 | 3 | 3 |  | 3 |  |  | 0 | N/A | 2 |  |  |  |  |  | 18.5% |
| [30] | Malaysia | 2 |  |  | 2 |  | 2 | Neonatal dengue | 0 | 0 | 0 | 1 | 0 | 2 | 0,4 | 1 | 1 |  |  | 2 | 2 |  | 2 |  |  | 1 | N/A |  |  |  |  | Irritability, opisthotonus, rash, RDS, ICH | Died + Recovered |  |
| [11] | French Guinea | 86 | 10 | 30 | 46 |  | 22 | Prematurity, LBW | 9 | 13 | 17 |  |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [39] | Colombia | 6 |  |  | 6 |  | 6 | Prematurity (tocolysis) | 0 | 3 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [32] | India | 1 |  |  | 1 |  | 1 | Neonatal dengue (no fever) | 0 | 1 | 0 | 1 | 0 | 1 | 3 |  | 1 |  | 1 | 0 | 1 |  | 1 |  |  | 1 |  | 1 |  |  |  | RDS, pulmonary haemorrhagic, ascites, pleural effusion | Died |  |
| [116] | India | 44 | 10 |  | 34 |  | 18 |  | 1 | 20 | 7 | 0 | 0 | ?4 |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| [14] | Brazil | 1 |  |  | 1 |  | 1 | Stillborn with dengue | 1 | 0 | 0 | 0 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [13] | Colombia | 1 |  |  | 1 |  | 1 | Neonatal dengue | 0 | 0 | 0 | 0 | 0 | 1 | 2 |  |  |  | 1 | 1 | 1 |  | 1 |  |  |  |  |  |  |  |  |  | Recovered |  |
| [18] | Brazil | 17673 |  |  |  |  |  | Prematurity, LBW (not SGA) |  | 13189 | 1484 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [19] | Brazil | 162188 |  |  |  |  |  | Stillbirths | 275 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [20] | Brazil | 336 |  |  |  | 281 | 35 | Prematurity, LBW |  | 20 | 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [29] | Thailand | 1 |  |  | 1 |  | 1 | Neonatal dengue | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 1 | 0 |  |  | 1 | 1 |  | 1 |  |  |  |  |  |  |  |  |  | Recovered |  |
| [17] | Brazil | 3898 | 987 | 1595 | 1316 |  |  | No statistical association |  | 322 | 322 |  | 27 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [22] | Pakistan | 48 |  | 48 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [23] | India | 78 | 1 | 17 | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [40] | Thailand | 1 |  |  | 1 |  | 1 | Neonatal dengue | 0 | 0 |  | 0 | 0 | 1 | 5 | 1 | 1 |  |  | 1 |  |  |  |  |  |  |  | 1 |  |  |  | Rash, irritability | Recovered |  |
| CHIKV | [43] | Colombia | 2 |  |  | 1 |  | 1 | Neonatal CHIKV |  |  |  |  |  | 1 | 3 |  | 1 |  |  | 1 | 0 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| [48] | Colombia | 8 |  |  | 8 |  | 8 | Neonatal CHIKV |  | 0 | 2 | 3 | 0 | 8 |  | 8 | 8 |  |  |  | 6 |  |  |  |  |  |  |  |  |  | 2 | NEC, myocarditis, pericarditis |  |  |
| [46] | France | 38 |  |  | 38 |  | 38 | Neonatal CHIKV |  | 0 |  | 1 |  | 38 | 3-7 | 24 | 26 |  |  | 30 | 31 |  | 29 |  | 6 |  |  |  |  | 6 |  | Peirpheral oedema, deranged LFTs, haemorrhagic syndrome, myocardial hypertrophy, pericarditis, NEC, coronary artery dilatation |  |  |
| [52] | Colombia | 60 | 5 | 17 | 38 |  | 15 | Tocolysis |  | 1 |  | 0 | 0 | 0 |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [50] | France | 739 |  |  |  |  | 61 | Neonatal CHIKV |  |  |  |  |  | 19 | 4 | 2 | 18 |  |  | 19 | 17 |  | 17 |  | 9 |  |  |  |  |  | 9 | Irritability, haemorrhagic fever |  | 0.29-50% |
| [47] | Central/South America | 191 |  |  | 53 |  |  | Neonatal CHIKV |  | 17 |  |  |  |  | 5 |  |  |  |  | 169 | 115 |  | 2 |  |  |  |  |  | 4 |  | 12 | Irritability, myocarditis, LL oedema |  | 27.2-48.29% |
| ZIKV | [65] | French Polynesia | 2 |  |  | 2 |  | 2 | Neonatal disease | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [117] | Brazil | 6 |  |  | 6 | 6 |  | Normal | 0 | 0 |  | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [59] | Brazil | 2 |  |  | 2 | 1 | 1 | Subependymal cysts but asymptomatic | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [57] | Colombia | 1850 | 532 | 702 | 616 |  |  | No association with structural abnormalities | 0 | 49 | 12 | 6 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [71] | New Caledonia | 1 |  |  | 1 |  | 1 | Breast milk infectious particles, baby asymptomatic | 0 | 0 |  | 0 | 0 | 0 |  | ~ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [72] | Brazil | 1 |  |  | 1 | 1 |  | Normal | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WNV | [76] | USA | 77 | 25 | 27 | 24 | 1 | 3 | Neonatal disease |  |  |  |  | 1 | 3 | 10 | 2 | 1 |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| YFV | [84] | Brazil | 1 |  |  | 1 |  | 1 | Neonatal infection | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 1 | 1 |  |  | 1 |  | 1 |  |  |  |  |  | 1 |  |  |  | DIC, seizures, hepatic encephalopathy | Death |  |
| [85] | Brazil | 1 |  |  | 1 |  | 1 | Neonatal infection | 0 | 0 | 0 | 1 | 0 | 1 | 6 | 1 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| WEEV | [95] | USA | 1 |  |  | 1 |  | 1 | Neonatal disease | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 2 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  | Meningitis, seizures | Recovered |  |
| CCHF | [96] | Russia, Kazakhstan, Turkey |  |  |  | 4 |  | 4 | Normal, premature/stillborn, neonatal death, stillbirth | 1 | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [99] | Turkey | 1 |  |  | 1 | 1 |  | SGA, normal | 0 | 0 | 1 |  |  |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [98] | Turkey | 3 |  |  | 1 |  | 1 | Neonatal death, preterm/IUFD | 1 | 1 |  | 1 |  | 1 |  | 1 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  | Intra-abdo fluid | Death |  |
| [101] | Turkey | 1 |  |  | 1 | 1 |  | Normal |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [100] | Turkey | 1 |  |  | 1 |  | 1 | Normal | 0 | 1 |  | 0 | 0 | 0 |  | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [97] | Russia | 1 |  |  | 1 |  | 1 | Neonatal death, preterm, infection | 0 | 1 | 0 | 1 | 0 | 1 |  | 1 |  |  |  | 1 |  |  |  | 1 |  |  |  |  |  |  |  | Respiratory failure, DIC, haemorrhagic syndrome |  |  |
| RVFV | [105] | Sudan | 1 |  |  | 1 |  | 1 | Transmission but asymptomatic | 0 | 0 | 0 | 0 | 0 | 1 | 3 |  | 1 |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  | Lost to follow up |  |
| [104] | Saudi Arabia | 1 |  |  | 1 |  | 1 | Neonatal disease and death | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 |  |  | 1 |  | 1 |  |  |  |  | 1 |  |  |  |  | Hepatomegaly, DIC | Death |  |
| JEV | [110] | India | 5 |  | 2 | 3 | 1 | 1 | Normal (baby not tested) |  |  | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| [111] | India | 4 | 1 | 1 | 2 |  |  | Normal (baby not tested) |  | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TBEV | [113] | Slovakia | 1 |  |  | 1 | 1 | 0 | No transmission | 0 | 0 |  | 0 | 0 | 0 |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| VEEV | [114] | Venezuela | 7 |  |  | 4 | 3 | 1 | Neonatal death, congenital malformations | 0 | 0 | 0 | 4 | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |