Objective: To characterize the fetuses with Congenital Zika Syndrome (SZC) according to the pattern of neurological damage, neonatal outcomes and motor development in the first three years of life. Methods: A cohort study with fetuses/children with SZC. Fetuses were characterized according to severity of neurological damage observed on obstetric ultrasonography (Samsung WS80 Elite) and Fetal Magnetic Resonance (1.5T Espree Siemens). Two variables were considered: presence or absence of microcephaly (Intergrowth-21st) and presence or absence of severe infratentorial structures (cerebellar dysmorphism and non-segmented brainstem). Motor function was evaluated using the Gross Motor Function Measure (GMFM) and classified using the Gross Motor Function Classification System (GMFCS). The study was approved by the local research Ethics Committee. Results: 24 children were followed since pregnancy until the 3rd year of life, with 15 cases of microcephaly (62.5%) and 11 cases (45.8%) of severe posterior fossa alterations. The median of the 1’ and 5’ Apgar scores was 8 and 9, with six death (25%) and nine arthrogryposes (37.5%). Most children at three years were classified as GMFCS V (83.3%), had seizures (83%) and the median GMFM was 23 (6-226). It was observed an association between the presence of severe infratentorial alterations and Apgar at 1’(p=0.008), Apgar at 5’(p=0.005), number of anticonvulsants (p=0.006), arthrogryposis (p=0.0001), death (p=0.003) and GMFM in the third year of life (p=0.02). Association between microcephaly was observed with motor development (GMFM), p<0.0001

Conclusions: Unfavorable outcomes were more frequent in fetuses that presented severe infratentorial alterations when compared to those who presented microcephaly. Studies considering other radiological findings are being performed.