

## Perinatal stroke in NICU: a single-center experience

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**Objective.** Perinatal stroke is an important cause of acquired brain injury in neonates. The goal of our study was to describe perinatal stroke cases observed in our department in a 10 year period.

**Materials and Methods.** In our department we have the opportunity to perform brain MRI on every neonate with neurological symptoms (seizures, apnoea, change in consciousness, *etc.*). In order to identify cases of perinatal stroke we retrospectively reviewed brain MRI of neonates born or transferred shortly after birth to our department from March 2012 to July 2022, with the type of stroke registered.

**Results.** Out of 468 infants with neurological symptoms, 58 had perinatal stroke. 28 patients (48.3%) presented an arterial ischemic stroke: in 8 cases the strokes were multiple, and in

another 4 they were accompanied by punctate white matter lesions. In 17 cases (29.3%) the stroke had a venous origin: in 10 thrombosis of cerebral sinuses was present, and in 4 of them thalamic and intraventricular haemorrhage (IVH) could be seen; other 3 cases were associated with vascular malformations. The remaining 13 cases (22.4%) were haemorrhagic strokes, with 6 cases of parenchymal haemorrhage, 5 cases of IVH and 2 cases with association of both. Eighteen infants were born at our Institute, while 40 infants were transferred from other centres: 25 from the Liguria Region and 15 from the rest of Italy.

**Conclusions.** According to our experience, venous and haemorrhagic strokes could be more frequent than described, and this could be important considering treatment options available.