A first experience of neonatal cerebral ultrasound in the Central African Republic

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Objective. The Teaching Paediatric Hospital in Bangui (CHUPB) is the only referral paediatric hospital for the 4,500,000 habitants: 18,940 admitted infants in 2021, 1511 new-born, 583 weighing > 2500 g.
Neonatal seizures (NS) are common at CHUPB and asphyxia neonatorum is the main diagnosis. In the first 6 months of 2022, from the 880-new-borns admitted, 100 at term had seizures in a context of neonatal encephalopathy (NE), often associated with infection/sepsis.
Before cUS use, diagnosis was NE in 44% of cases (associated with infection in 20% and with sepsis in 16% of cases). 28% died (71.42% after 24 hours).
Materials and Methods. In June 2022, the ONG "Doctors with Africa CUAMM" organised a 2 week training course on cUS, for the paediatricians and medical residents. After this a trained paediatrician performed cUS under supervision (the images were sent to AO).
cUS were performed in 30 at term new-borns with seizures and low Apgar score, with an ESAOTE machine, 5Mhz convex probe.
Results. cUS and clinical diagnosis are summarized on **Table 1**.
Conclusions. cUS has led to a significant diagnostic improvement to allow the early detection of congenital or other non-hypoxic-ischemic (HI) causes of NE and informs regarding the timing of HI injury.
cUS has proven to be not only a diagnostic device but a way to increase a neurological culture and to encourage an exchange with obstetricians; in our experience not all NE originate at the time of delivery.

Table 1. *cUS Diagnosis.*

Normal	11
Arterial infarcts	3
Cerebral malformations	3
Abscess /hemorrhages	1
Oedema	10
Basal ganglia thalami lesions	1
Congenital infections	1