

[2365.7] Empowering Mothers Prevents Kernicterus in Nigeria

Zainab Imam, Zubaida Farouk, Isa Abdulkadir, Akinyemi Ofakunrin, Chiara Greco, Tina Slusher, Richard Wennberg. Pediatrics, Massey Street Children's Hospital, Lagos, Nigeria; Bayero University, Kano, Nigeria; Ahmadu Bello University, Zaria, Nigeria; University of Jos, Jos, Nigeria; Bilimetrix Srl, Trieste, Italy; University of Minnesota, Minneapolis, MN; University of Washington, Seattle, WA.

BACKGROUND: Acute bilirubin encephalopathy (ABE) is responsible for 6-10% of neonatal deaths in Nigeria. Most babies with severe ABE are already affected when admitted for care and therefore benefit little from treatment.

OBJECTIVE: To determine whether public and maternal awareness about risks of severe jaundice will reduce the prevalence of ABE.

DESIGN/METHODS: This prospective observational study documented the baseline prevalence of ABE in 5 collaborating centers (phase 1) and then evaluated the impact of education on the occurrence of severe hyperbilirubinemia and ABE. In phase 2, health providers, including traditional birth attendants, participated in jaundice awareness sessions. Radio jingles alerted the public to the dangers of jaundice. Educational posters were placed in antenatal clinics and postpartum wards; mothers were shown how to detect jaundice, taught to avoid substances known to cause hemolysis in G6PD deficient infants, and when to seek help. Maternal training commenced in June, 2015.

RESULTS: Baseline prevalence: 158 cases of suspect ABE/ABE (37 deaths) occurred in 1061 admissions for jaundice (14.9%). In phase 2, 350 patients were treated for jaundice during a 4 months period when maternal training was introduced. Suspect ABE/ABE decreased from 14.9% to 11.1% and, in 4 of 5 centers, from 13.1% to 6.6%. ABE occurred in 27 babies born to 162 uninstructed mothers (6 died from ABE). No ABE occurred in 181 babies whose mothers had received postpartum instruction about neonatal jaundice.

χ^2 43.61 P<.00001	Received Jaundice Instruction Postpartum	No Jaundice Instruction Postpartum
Normal at discharge	179	123
Suspect mild ABE	2	12
ABE	0	27
Total Cases	181	162

Antenatal training was also effective; ABE occurred in only one instance where a mother had received antenatal instruction but no postpartum reinforcement. Contributing factors to failed maternal empowerment were 1) no jaundice instruction given in some antenatal clinics, 2) home deliveries with no antenatal care, and 3) long distance to care facilities.

CONCLUSIONS: Providing mothers and health care workers the skill to detect jaundice and guidance to avoid ABE empowered them to make appropriate decisions in their babies' care resulting in a near total elimination of ABE in this sub-group. Scaling this model could have a significant impact on the incidence of severe hyperbilirubinemia and kernicterus throughout Sub-Saharan Africa.

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