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## Is Cesarean Section a Barrier to Early Initiation of Breastfeeding?

Cesarean section is considered as a barrier for early initiation of breastfeeding. We found that 65.2% of mothers initiated breastfeeding within 1 hour of delivery. We found that there is no significant difference between vaginal delivery and cesarean section in early initiation of breastfeeding, ( $P = 0.35$ ). We were successful in overcoming this barrier by involving a lactation management counsellor in supporting mothers in early initiation of breastfeeding following cesarean section.

**Keywords:** *Breastfeeding, Cesarean section, Early initiation.*

This cross-sectional analytical study was conducted between March 2011 to June 2012 in Bapuji Hospital, Davangere, Karnataka. To document the prevalence of early initiation of breastfeeding in a Baby Friendly Hospital among singleton deliveries and to determine whether mode of delivery is responsible for delayed initiation of breastfeeding.

A trained Lactation management counselor visited the mothers daily in the postnatal ward and counseled them about art of breastfeeding and its advantages. Every mother, irrespective of mode of delivery, was helped by the counselor and the nursing students to initiate and sustain breastfeeding. Data acquisition was done by the counselor by interviewing the mothers. Mother and infant pairs were divided into 3 groups. Group A included those mothers who initiated breastfeeding within 1 hour, Group B initiated feeding between 1-4 hours and Group C included those beyond 4 hours.

There were a total of 1793 live singleton deliveries during this period. Among them 917 neonates were delivered by cesarean section and 876 neonates were delivered vaginally. Group A included 1169 (65.19%) neonates; among them 588 neonates were delivered by

cesarean section and 581 neonates delivered vaginally. Group B consisted of 385 (21.47%) neonates. Among them 193 neonates delivered vaginally and 192 neonates by cesarean section. The reasons for delayed initiation of breastfeeding in Group B were that baby was given late to the mother ( $n=81$ , 21.0%), mother was tired ( $n=73$ , 19.0%), baby slept off ( $n=19$ , 4.9%), traditional belief ( $n=57$ , 14.8%), and mother thought milk is not coming ( $n=39$ , 10.12%). There were 239 (13.32%) neonates in Group C. Among them 137 were delivered by cesarean section and 102 were delivered vaginally. Main reasons for delayed initiation being that 197(89.94%) babies were shifted to NICU for various reasons, mother/baby slept ( $n=12$ , 5.1%) and traditional belief ( $n=5$ , 2.1%), or mother was in ICU ( $n=5$ , 2.1%).

In this study, initiation of breastfeeding within 1 hour among vaginally delivered neonates was 66.32% and by cesarean section was 64.12%. There was no significant difference between the two modes of delivery in early initiation of breastfeeding ( $P=0.35$ ).

Most critical period for initiation of breastfeeding is first 1 hour after birth [1,2]. WHO has rated the percentages of breastfeeding initiation in the first hour as poor (0–29%), fair (30–49%), good (50–89%), and very good (90–100%) [3]. Early initiation of breastfeeding is good (65.56%) in this study. Often, mothers who have undergone cesarean section need extra help with breastfeeding. Otherwise, these mothers on an average initiate breastfeeding much later and terminate breastfeeding sooner [3,4]. We conclude that with the help of a trained lactation management counselor it is possible to initiate breastfeeding early even among mothers delivered by cesarean section.

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## Childhood Moyamoya Disease: A Clinical and Angiographic Study from Eastern India

Moyamoya disease (MMD) is a rare cerebrovascular disease of childhood with majority of cases from Japan. This is a case series of 14 children diagnosed on the basis of characteristic angiographic findings. Various clinical features and chief angiographic findings were analyzed.

Moya moya disease is a rare cerebrovascular disease of unknown etiology. We herein present a case series of 14 children (7 males and 7 females, mean age: 6.89; age range: 2-14 years) identified among 241 diagnostic cerebral angiographies performed over a period of two years. Majority ( $n=11$ ) presented with ischemic stroke; and only one with hemorrhagic stroke. Ten patients had recurrent TIA; weakness of 1 or more limbs was seen in 7; headache in 6 and seizures in 4 patients. Cerebral ischemic symptoms including cognitive defect, speech and sensory disturbances were present in 2, 3, and 3 children, respectively. The only child who presented with hemorrhagic stroke had thalassemia major, and the history of antecedent head trauma was present in one child. None had positive family history of the disorder. Ancillary laboratory tests including blood glucose, serum electrolytes, complete hemogram with peripheral blood smear for sickle cells, and serum lactate levels were normal in all study subjects. The patient with thalassemia major showed a hypercoagulable state.

Cerebral angiographies showed obstruction or stenosis of the supraclinoid portion of the ICA and the proximal portions of anterior and middle cerebral artery with a typical fine network of vessels at the base of brain with hazy, puff-of-smoke appearance, and development of transdural and leptomeningeal anastomoses in all children. Bilateral abnormalities were present in majority (11/14). Two angiographies showed stenosis in posterior circulation also.

Hemorrhagic stroke in pediatric Moyamoya disease is reportedly uncommon. In the present case, it is believed to be as a result of hypertension which occurs due to vasopressive substances provided by multiple transfusions [1]. Apart from stroke, headache was another consistent feature in our series which is presumed to be closely related to cerebral hypoperfusion [2].

Cognitive decline as initial manifestation signifies the need to consider Moyamoya disease in children presenting with such symptoms in absence of typical findings. The unilateral disease can progress to bilateral disease [3] thus requiring long term follow-up later. Involvement of posterior circulation indicating rapid progression of disease, is in accordance with other recent studies from India [4,5].

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