Level of folic acid and vitamin B12 in mothers and children with neural tube defect

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Neural Tube Defect (NTD) is the leading cause of death in infants younger than one year. Incidence of congenital anomalies has approximately 1 in 1000 live births in the United States. Less dietary folic acid and vitamin B12 in the mother during the critical period of pregnancy reported to play a role in the occurrence of neural tube defects. The aim of this study was compared the level of folic acid and vitamin B12 in both mother and her child with and without NTD. This study was cross-sectional design and will be examined levels of folic acid in six mothers and children with and without neural tube defect in Saiful Anwar Hospital during September 2009 until September 2013. This study showed no significant differences of folic acid and vitamin B12 level between NTD and control group in mothers (p>0.05). The study also showed no significant differences of folic acid and vitamin B12 level between NTD group and control group in children (p>0.05). The level of folic acid and vitamin B12 in the mother having neural tube defect child as much as the mother with haven't neural tube defect child. Additionally, the result of the children above a year with neural tube defect and without neural tube defect has same folic acid and vitamin B12 level.

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Effect of home based child care on child mortality and malnutrition in a tribal belt: Result of field cluster randomized control trial

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Background: Melghat, a hilly tribal area in Maharashtra has low socio-economic conditions, scarce hospital services, high-risk child care practices and low health-seeking behavior. Home deliveries are up to 60%. Common childhood infectious illnesses do not get timely adequate treatment. Prevalence of malnutrition is very high. A home based child care model consisting of neonatal care, treatment of childhood infectious illnesses and behavior change communication (BCC) was designed for reducing child mortality and malnutrition.

Methods: A cluster-randomized control field trial was conducted in Melghat. Study area constituted 35 village shaving population of 36,000. Control Area (CA) and Intervention Area (IA) received usual government health services. In addition IA received interventions through village health workers (VHWs) for essential new-born care (birth preparedness, safe delivery, thermal care, breast-feeding promotion and danger sign recognition); BCC for health, nutrition and hygiene by demonstrations of hand washing, nail cutting, nutritious recipes, use of flip charts, audio-visuals; and treatment of childhood illnesses like diarrhea, pneumonia, malaria, neonatal sepsis etc. Outcome indicators are still birth rate (SBR), neonatal mortality rate (NMR), infant mortality rate (IMR), under-5 children mortality rate (U5MR), perinatal mortality rate (PNMR) and prevalence of severe malnutrition. Analysis was by intention-to-treat.

Results: The net reduction in IA over CA is 121.34% (P<0.0001) in SBR, 50.87% (P<0.0001) in NMR, 61% (P<0.0001) in IMR, 68.82% (P<0.0001) in U5MR, 107.34% (P<0.0001) in PNMR and 39.70% (P<0.0001) in prevalence of severe malnutrition. Analysis was by intention-to-treat.

Interpretation: Results show statistically highly significant reduction in SBR, NMR, IMR, U5MR, PNMR and prevalence of severe malnutrition. This affordable, acceptable, achievable and safe model is replicable for reducing child mortality and malnutrition in other similar areas. A socio-culturally contextualized, community-based intervention, targeted at high-risk child-care practices, can lead to substantial behavioral modification and reduction in child mortality. This study had positive impact on government health policies.

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