

**Prevention of HIV transmission through breastmilk
GHENT WORKSHOP, December 12-13, 2002**

**Exclusive breastfeeding
and early cessation of breastfeeding
to prevent HIV-1 transmission through breastmilk**

The DITRAME PLUS ANRS 1202 project
Abidjan, Côte d'Ivoire, March 2001-May 2002

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Background : DITRAME PLUS 2 project (1)

- **Shortened exposure to breastmilk and avoidance of predominant or mixed feeding : exclusive breastfeeding (EBF) during 3 months then early cessation of breastfeeding (BF) is one of the most conceivable options**
 - reduction of the postnatal risk of HIV transmission
 - benefits of BF during 3 months
 - but possible increase of the risk of child morbidity and mortality induced by early weaning
- **The aim of the DITRAME PLUS 2 project is to evaluate nutritional interventions to reduce postnatal HIV-1 transmission, including EBF for 3 months**

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Background : DITRAME PLUS 2 project (2)

Post-partum interventions of the DITRAME PLUS 2 project

- systematic and hierarchical proposition from 36 weeks of gestation of two alternatives to prolonged breastfeeding, the common practice in Côte d'Ivoire :
 - **formula feeding (FF)** from birth (with a drug inhibiting lactation)
 - or
 - **exclusive breastfeeding (EBF)** with early cessation from three months of age completed
- pediatric micronutrients supplementation (vitamin A)
- postnatal contraception systematically proposed

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DITRAME PLUS 2 - Methods (1)

- **Nutritional counselling**
 - conducted by nutritionists
 - during the prepartum period : explanations of the nature of the interventions proposed
 - throughout the follow-up : complete information and appropriate education
 - benefits of EBF, risks of mixed feeding
 - specific counselling during the weaning period
 - regular "workshops" to learn how to cook baby food
- **EBF & early weaning group : free provision of formula milk (cup) from time of weaning to 9 months of age**

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DITRAME PLUS 2 - Methods (2)

- **Follow-up of the mother-infant pairs**
 - birth, second day of life
 - weekly until 6 weeks of age
 - monthly until the first birthday
 - quarterly until the second birthday
- **Consultations**
 - documentation of clinical events
 - effective practices of infant feeding
- **All transport costs and care expenses related to any clinical event supported by the project**

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DITRAME PLUS 2 - Methods (3)

- **Outcome : prenatal choice + post-partum effective practice**
- **Nutritional data are not collected by the nutritionists that counselled the women, but by independent counsellors : minimization of the information bias**
- **Objectives of the collection of nutritional data**
 - exhaustive documentation of what the child ate the week prior to the interview
 - classification of children according to the effective feeding practices

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DITRAME PLUS 2 - Methods (4)

- **Seven day recall**
 - qualitative description of the nutritional intake in the past 7 days
 - documentation of ALL liquids and foods eaten by each child
 - difficulties specific to the African context
 - quantitative description more complicated
 - technical reasons
 - several children eat in the same container
 - problems of language : questionnaire in french, some mothers speaking "dioula"
- **Collection of the nutritional data**
 - water (tap, stored, mineral, boiled), fruit juices, tea
 - baby food with cereals, bobs, vegetables, fruits
 - meat, fish, eggs, milk
 - traditional and "zoulou" drugs

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DITRAME PLUS 2 - Results (1)

- **From March 6th, 2001 to May 31st, 2002**
 - among the 323 HIV+ pregnant women enrolled, 266 women have delivered
 - 252 singletons of whom one was a stillbirth
 - 12 pairs of twins and 2 triplets, including one stillbirth
 - of these women, 256 gave a live-birth, and fed at least once
- **All but one (99.4%) expressed a choice before delivery on their infant feeding intention**
 - 151 (59.2%) have chosen the FF option from birth
 - 104 (40.8%) have planned to breastfed

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DITRAME PLUS 2 - Results (2)

Initial infant feeding practice according to prenatal choice (n=104)

Infant feeding practice at Day 2 post-partum	Prenatal BF choice	
	n	(%)
FF	3	(2.9)
EBF	54	(51.9)
Predominant BF	46	(44.2)
Mixed feeding	1	(1.0)
Total	104	(100)

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DITRAME PLUS 2 - Results (3)

Infant feeding modalities after live birth

BF : Breast feeding ; EBF : Exclusive Breast Feeding ; PBF : Predominant Breast Feeding
 FF : Formula Feeding ; MF : Mixed Feeding (breast and formula feeding)
 D : death ; LTF : Lost to Follow Up or not yet seen

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DITRAME PLUS 2 - Results (4)

Switches from exclusive breastfeeding

- 30/54 : 55% of failure
- switches to FF : 10 switches
 - 3 for medical reasons : malnutrition, varicella infection
 - 2 for personal reasons
- switches to predominant BF : 20 switches

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DITRAME PLUS 2 - Discussion

- **In this context of predominant BF population, the uptake of the post-partum package proposed looks high**
- **For women who choose EBF & early cessation of BF**
 - EBF seems to be more difficult to apply beyond the first weeks of life
 - only 1/5 mother actually practiced EBF during three months, and chose to predominantly breastfed their babies
 - few children are exposed to mixed feeding
- **Cut-off proposed for begining weaning at age 3 months appears to be less acceptable than a later age**
 - importance of stigmatisation
 - complete cessation of BF really obtained at 4, 6 months ?

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DITRAME PLUS 2 – Preliminary conclusions

- **Further investigations are needed to explore**
 - the acceptability (prenatal choice + post-partum effective practice) of the nutritional interventions for the full sample (n=1500)
 - the incidence of post-natal transmission of HIV according to BF practices, especially EBF vs. the others
 - the risk of child morbidity and mortality induced by early weaning
 - the incidence of subsequent pregnancies

- **This study will be useful in providing safe and feasible strategies regarding to infant feeding practices, in the context of the HIV epidemic in Africa, at least in Abidjan**

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