

COLOSTRUM AND IDEAS ABOUT BAD MILK: A CASE STUDY FROM GUINEA-BISSAU

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Abstract—The study aims to explore ideas about bad milk found among women in Guinea-Bissau. Interviews were held with 20 elderly knowledgeable rural women. Interinformant agreement was high within each ethnic group studied. All the informants recognized colostrum but disliked its consistency. Depending on ethnical background, it was considered good, of no special value or harmful to the newborn baby. Further, all the informants held that mature breast milk could turn bad, e.g. in case of mother's sickness or adultery. Suspected bad milk can be diagnosed by putting an ant into it to observe if it dies. The condition of bad milk can be treated by various procedures. The findings are discussed in relation to similar ideas existing in other societies and to views on the quality of maternal milk held in the industrialized countries. It is proposed that the idea of producing bad milk may be an important determinant of breastfeeding performance generally. Restrictions imposed on the breastfeeding woman, with the intention of producing healthier breast milk, may actually contribute to a decline in breastfeeding.

Key words—breastfeeding, colostrum, milk quality, Guinea-Bissau

INTRODUCTION

The benefits of colostrum, the first milk, and the early initiation of breastfeeding have received increased attention since the early 70s. Colostrum has unique anti-infective properties specially adapted to the environment the newborn shares with the mother [1]. Also, being put early to the breast positively affects the duration of breastfeeding [2] and the bonding of the mother and child [3]. In contrast to this positive, modern, medical view, many cultures around the world consider colostrum to be of no value and even harmful to their newborns and discard it [4-7]. It is not only colostrum that is regarded unfavourably; the whole breastfeeding period may be hampered by diverse ideas on milk quality as a consequence of the mother's mental or physical health, food intake, sexual relations or her other activities [8-12].

In Guinea-Bissau breastfeeding is generally practiced for 2 years or more [13]. Colostrum taboos are known to exist, resulting in delayed breastfeeding start especially among mothers from the country's largest ethnic group (Balanta) [14]. This study was undertaken to explore notions among Guinean women concerning bad milk in general and colostrum in particular.

THE GUINEAN SETTING

The Republic of Guinea-Bissau covers 36,125 km² on Africa's west coast about 12° North. The population is about 950,000 with the majority (80%) living as self-subsistence peasants. The number of ethnic groups in the country varies between the sources, but

often it is claimed they are 15-20 altogether. Considering the religious traditions the most important ethnic groups can be divided into groups adhering to the traditional religious beliefs of African peoples (animist groups) and Islamic groups [15].

Animist groups

The *Balanta* is the largest group (27%) with a patrilineal, segmentary lineage-based society with an age-set system. The political and economical power is in the hands of the senior men who act as lineage heads. The *Papel* (10%), *Manjaco* (11%) and *Man-canha* (3-4%) are ethnically related and may be patrilineal or matrilineal. They are mainly polygamous with patrilocal habitats as are Balanta. The *Bijagó* (1-2%) live on small islands by the coast. Their society is characterized by matrilineal system with matrilocal habitats, and they are mainly monogamous. They have an age-set system, one for men and another for women which is very uncommon.

Islamic groups

These are hierarchial societies, polygamous, and patrilinear with patrilocal habitats. The *Fula* constitute the second largest ethnic group (23%), living in the east of the country, the *Mandinga* (12%) live in the north while the *Beafada* (3%), the ethnic group most recently Islamized, live in the south.

METHOD

Twenty knowledgeable and respected elderly women ('*miñjer-garandi*') were interviewed during

Table 1. Ideas about colostrum and the use of pre-lacteal feeds and supplements according to informants in rural Guinea-Bissau

	Quality of colostrum		
	Good	Neutral	Bad
Ethnic group	Fula Mandinga	Papel Manjaco Mancanha Bijagó Beafada	Balanta
Aspect	Unpleasant	Unpleasant	Unpleasant
Positive value	Gives strength and protection against diseases	'Nothing' 'Worthless'	'Dirty'
Risk for infant	In some cases: vomiting diarrhoea	Diarrhoea	Any disease Death
Pre-lacteal and supplemental food	Cow's/goat's milk Wet nurse Sugared water	Cow's/goat's milk Wet nurse Sugared water Fresh palmwine Herbal mixture	Cow's/goat's milk Sugared water
Special name	Yes	None*	Yes
Initiation of breastfeeding	Within 6-12 hr	Wait for the mature white milk	Wait 3 or more days

*With the exception of the Bijagós.

the years 1984-85 on the use of colostrum and ideas about bad milk. The women were from the Papel-Manjaco-Mancanha group (5 women), Balanta (4), Mandinga (3), Fula (5), and Beafada (2). Information on the Bijagó group is based on an interview with one informant only and is included by virtue of its quality. The women were chosen for interview by judgement sampling. They were identified by locals as the most knowledgeable on the subject of breastfeeding and were visited in their villages. All had given birth themselves and had experience of attending women in labour. None of them had received any formal education on the matters concerned by the interview. It was unstructured around some key questions and conducted with the help of a local translator.

RESULTS

Colostrum and initiation of breastfeeding

All of the women interviewed noticed the difference in consistency and colour between the first milk and the 'real' milk that comes 2-5 days after birth. Colostrum was generally described as unpleasant, watery looking and of a red/yellow colour. The taste was considered bad and irritating for the baby but opinions differed on its quality.

The *Balanta* informants considered colostrum unsuitable for the newborn and that breastfeeding should be delayed for 3-4 days (longer for the primiparous) while waiting for the mature milk to come in. They described colostrum as 'dirty', insufficient, and capable of causing any disease, in some cases even the

death of the infant. Colostrum should thus be discarded and pre-lacteal feeds given instead, preferably undiluted cow's milk or sugared water. The reason for this was said to be that the tribal father survived thanks to receiving cow's milk as his mother died while giving birth. Also, at childbirth it is the custom of the *Balanta* to pay respect to their animistic deity '*irão*' by performing a ceremony at his sacred place, wishing the newborn health and a happy life. In many cases this sacred place is situated far away from the place of birth. This ritual being considered necessary before starting to breastfeed, such as in case of the mothers suspected conjugal infidelity, it may delay the initiation of breastfeeding by 1 week or more.

The *Papel-Manjaco-Mancanha* informants considered colostrum insufficient and of no nutritional value but not harmful despite occasionally causing diarrhoea. The mother can thus initiate breastfeeding right after birth but no particular value was attributed to doing so. While waiting for the mature, white milk to come in pre-lacteal feeds or supplements can be given such as sugared water, cow's or goat's milk and even fresh palmwine, sucked with the help of a cotton cloth. A wet nurse may also be resorted to during this period.

The *Bijagó* informant perceived colostrum as concentrated. It may give diarrhoea, thus cleaning the stomach but does not harm the infant and never kills. However, a wet nurse is preferable, allowing the mother to throw away her colostrum and wait with breastfeeding until the mature milk starts flowing. Sugared water and sweet palmwine can also be given to the infant as pre-lacteal feeds.

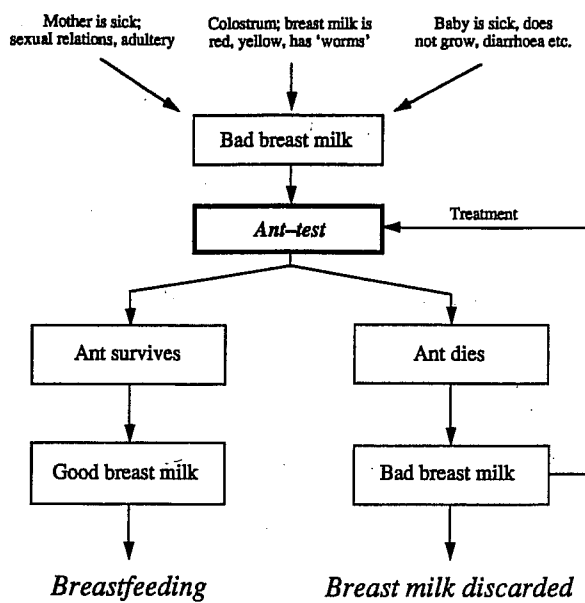


Fig. 1. Test for the diagnosis of bad milk among Guinean women.

The informants from the Islamic groups had generally positive ideas about breast milk and referred to the 'will of Allah'. The *Fula* and *Mandinga* women considered it best to start breastfeeding 6–12 hr after birth but there is no harm in starting right away. According to the *Fula*, colostrum gives babies strength and protection against diseases. This is so rooted in their culture that a boy who beats another in a fight may exclaim "you lost because you did not get your mothers colostrum!" However, the *Fula* and *Mandinga* informants held that colostrum can be bad if it is from a primiparous woman or from a woman with very dark areolas. Such colostrum may irritate the mouth of the child and even cause diarrhoea, constipation or vomiting. If the colostrum is judged as bad for any of the above mentioned reasons a wet nurse should be recruited. Despite taking advantage of colostrum, pre-lacteal feeds and supplements are also used, e.g. sugared water and goat's or cow's milk (diluted/undiluted).

The *Beafada* informants claimed that all breast milk is good but they preferred to give a herbal mixture to the newborn while waiting for the mature milk to come in. Also, wet nurses are frequently resorted to during this period.

None of the informants considered early skin-to-skin contact between the mother and baby after birth as important. Instead, the child should be taken care of by an assisting woman who gives the baby a bath and swaddles it in a cotton cloth before giving it to the mother.

The *Balanta*, *Bijagó*, *Fula* and *Mandinga*, i.e. the groups that in one way or another had an opinion on colostrum other than seeing it as worthless or of no particular value have a special name for it. Actually the *Mandinga* have different names for the breast milk in each stage of the child's development i.e. the

first week, the first month, until the child can walk and after learning to walk. The different ideas about colostrum according to the informants are summarized in Table 1.

The problem of bad mature milk

Not only colostrum is considered bad milk for the child. Under certain conditions the mature breast milk, too, may differ in quality from one mother to another according to all of the informants. Bad milk can be verified by observing the babies. If the baby is strong and looks healthy, the milk is good. If the breast milk is bad, the baby does not grow and is always sick, with cough or diarrhoea. Observing the milk's colour and consistency was considered as an important quality control. If it is yellow, red or watery or has 'worms', described as 'tiny little particles', the milk is bad. Sickness of the mother was also given as a cause of bad milk. So was sexual intercourse in the lactational period, during which the norm is abstinence on the part of the mother. It may last more than 2 years, but the significance of breaking this rule was qualified somewhat by some of the informants. Sexual relations with the husband without the knowledge of others was thus considered as less dangerous than adultery, but not as entirely appropriate either.

When the quality of the breast milk is in doubt for any of these reasons the so called *ant-test* should be performed according to the informants from all the ethnic groups (Fig. 1). The mother expresses some milk into her hand or calabash and puts an ant into it. If the ant survives it shows that the milk is good. If the ant dies, that verifies her suspicion and she has to undergo treatment for bad milk.

The treatment procedures prescribed vary between the different groups. One is the so called breast-ceremony of the *Fula*. The breasts are rubbed with red palm oil and then washed with a herbal mixture including the peel of a mango fruit, *culáti* (*Cassia occidentalis* Linn.), and the bark of a blooming tree. During this ceremony the breast milk is discarded. The *ant-test* is repeated and breastfeeding is resumed only after the ant has escaped from the milk. The *Balanta* women warm the breasts with steam from a brew of *mel de бага бага* (a kind of honey). The *Papel* women warm sand in a caldron and put it into a cotton cloth. Then they rub the breasts with it. The *Beafada* women boil *nham-ba-ida* leaves in water and add red palm oil. Washing the breasts with this liquid is thought to remedy the milk. While treated for bad milk the mother should stop breastfeeding and a wet nurse recruited or the infant be given other foods like cow's or goat's milk, or sweet palmwine. Among the *Balanta*, *Papel*, *Manjaco*, *Mancanha* and *Beafada*, wet nurses should be recruited from within kin or from at least the same ethnic group while the *Fula*, *Mandinga* and *Bijagó* do not impose any such restrictions.

DISCUSSION

The notions on the quality of breast milk among the interviewed elderly women in Guinea-Bissau can be divided into two main groups, i.e. those relating to colostrum and those relating to the mature milk. The quality of colostrum was considered good, neutral or bad for the newborn baby depending on ethnical background. The mature milk was generally considered valuable but in some cases it too may turn bad.

Among the Balanta, the largest ethnic group in the country, colostrum is considered to be dangerous, and breastfeeding start should thus be delayed. Interestingly, the Mandinga and Fula women that generally considered the first milk to be good are from the groups most influenced by the Islamic faith which advocates breastfeeding.

Negative ideas on colostrum are known in many societies, past and present. Indian Brahminical medicine ('Susruta', second century B.C.) describes the custom of giving honey or clarified butter during the first 4 days of life whilst colostrum was discarded, and Soranus of Ephesus recommended mothers to discard colostrum in his treatise on gynaecology and obstetrics from the second century A.D. [16]. The first writings in Western medical literature propagating the use of colostrum are from the 17th century [17]. Today colostrum taboos can be found in many cultures throughout the world. A recent survey of the 'Human Relations Area Files' and diverse ethnographic infant feeding literature by Morse *et al.* found that about two fifths of the 120 groups surveyed delayed breastfeeding for 2 or more days, considering colostrum poisonous, bad, provoking illness or 'nothing' [18].

Why is colostrum so widely disliked? Both colour and consistency seem to contribute. The fact that some colostrum is secreted in the last weeks of pregnancy may favour the belief that it is an old and stale milk, not suitable for the newborn. Another factor may be that mothers in some way associate colostrum with meconium, the first dark fecal passage of the newborn. Further, withholding colostrum has been proposed as an aspect of the less-than-full parental commitment which mothers resort to under conditions of high infant mortality [19], such as in Guinea-Bissau. The wide inter-ethnic variation in ideas, that we found, would disfavour this explanation in the case of Guinea-Bissau, where infant mortality is very high in all ethnic groups [20].

Most ethnographic descriptions on childbirth end with the cutting of the umbilical cord and only a few mention the need of the mother to rest. Rarely is the breast given in the first hour postpartum and skin-to-skin contact between the mother and her newborn is usually delayed [21]. The same holds true for the women in Guinea-Bissau, and even groups that appreciate colostrum delay the initiation of breastfeeding for several hours or days [14]. Some mothers

put the newborn to the breast immediately but that is definitely not the rule among women giving birth in the rural villages. The notion that breastfeeding should be started immediately after birth seems to be new, a result of medical research. However, late initiation of breastfeeding and its interruption for the treatment of bad milk coexist with prolonged lactation in the vast majority of cases.

The idea that mature breast milk can turn bad is common in Guinea-Bissau and little difference was found between the groups concerning diagnosis and causes. The ant-test, commonly used among all the groups for diagnosing bad milk (Fig. 1) is a typical consultation of the random type, comparable with throwing the bones or watching the liver of a chicken [22]. The recommended treatment varied between the groups and included mechanical, chemical and magico-religious procedures [23]. The purpose of the ant-test and the treatment procedures, is to 'clean' the milk from its bad properties, making it possible for the mother to resume breastfeeding.

Tests for milk quality are mentioned in the literature mostly in connection with the choice of a wet nurse. Indian Brahminical medicine recommended that the milk should be found "easily miscible with water, thin, cold, clear, without froth or shreds and the colour of a conch shell" [16]. The nail test was first described by Soranus [16]. Good milk on a fingernail does not roll off the nail in spite of finger movement, while it should fall when the finger is turned. In China, "a milk drop on a table should be round and raised, and it should not be possible to blow it into smaller drops" [24]. A test resembling the ant-test in Guinea-Bissau is described from Fiji in the South Pacific. If the flies do not settle on the breast milk in a saucer, it is 'poison' milk [19]. Common to all these tests is the special importance placed on milk consistency. In Guinea-Bissau the ant-test is not applied to the milk of wet nurses but rather to the milk of the mother herself.

The recruitment of wet nurses while waiting for the milk to come in and in case of bad milk, is relevant to the spread of HIV infection [25]. HIV-2 is prevalent in Guinea-Bissau [26]. However, the risk of transmission through breastfeeding is probably low, and has to be weighed against the risks of not receiving breast milk [27]. That entails great health hazards in the setting concerned. This has to be strictly observed in information campaigns on HIV transmission.

The informants interviewed for this study were few in number and constitute a judgement sample [28]. However, the interinformant agreement within each ethnic group was high, indicating a high degree of shared knowledge [29]. What the women said was later confirmed by large numbers of mothers and health personnel during three years of work in the country. On the other hand, our informants may not have given us all there is to say on the topics concerned but we are confident that the views

expressed are genuine. On one important point, namely the value of colostrum, we have verified their impact on actual behaviour of young mothers in Bissau. Thus, one third of Balanta mothers had not yet put their newborn to the breast 48 hours after delivery compared to one tenth of mothers from other ethnic groups [14]. Negative attitude towards colostrum is described in other societies, and may there as well have an impact on health-related behaviour. They should therefore be considered by the 'Baby-Friendly Hospital Initiative' recently launched by WHO/UNICEF, among other things advocating breastfeeding to be started within half an hour from birth [30].

Contrary to what is happening in the developing countries, the last few decades have seen an increase in breastfeeding in the Western world [31, 32]. This increase is partly due to new ideas about breastfeeding. It is not only seen as a way of giving food but also as protection against diseases and in favour of the bonding between mother and child. However, in some developed countries the breastfeeding rates are now levelling-off or declining [33]. There are many contingencies a mother wishing to breastfeed may encounter. Immediately after giving birth she is expected to receive her newborn baby and allow it to suckle. Failing to do so, or worse still, unable to or feeling too tired for it, she may see herself as inadequate [34]. Later on, after a sleepless night with a crying baby she may wonder about the quality of her milk. She may wonder whether it has been compromised by her smoking, or drinking or some food she ate [11, 12]. Or, was it one of those foggy days with industrial smoke polluting her milk? Is her breast milk really good enough?

In analyzing breastfeeding performance ideas on bad milk should be considered. In order to produce healthy milk women in both developing and developed countries are supposed to conform to a set of rules that unmistakably restrict their daily lives. Given the option, they may find it easier not to breastfeed than to accept these restrictions. Cultural ideas that make it difficult for mothers to breastfeed 'correctly' may contribute to the decline of breastfeeding.

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