

Keys to Successful Exclusive Breastfeeding

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ABSTRACT

Breastfeeding offers great advantages for families, mothers and also for the babies. Breastfeeding should be initiated from the time a child is born and subsequently continued for 6 month until 2 years old as clearly mentioned in the Quran. Lack of knowledge and motivation as well as easy accessibility of infant formula in market are among the factors which have caused most Muslim parents to neglect breastfeeding as a whole. In our country, breastfeeding rate is lower compared to other developed countries like America and New Zealand and the discontinuation rate is also high. This paper intends to explain the importance of breast feeding and the way to success in breastfeed and at the same time highlighting some of the benefits of breastfeeding from all aspects which include management of breastfeeding for working mothers.

Keywords: *breastfeeding, exclusive breastfeeding, management of breastfeeding, benefits*

Introduction

Breastfeeding has proven to give great benefit in short and long term duration for infants and also for the mothers. It can improve the health and cognitive ability of the infant (AAP 2005). Bernardo et al. 2007 reported that breastfeeding can fight against chronic disease later in life such insulin-dependent (Type I) and non-insulin-dependent (Type II) diabetes mellitus and hypercholesterolemia. It also give a special benefit for the breastfeed mother which include maternal health such as reducing risk of reproductive cancer, decreased postpartum bleeding, birth planning earlier return to repregnancy weight and reduced risk of hip fractures and (Labbok, 2006).

Healthy People (2000) aim to increase the percentage of breast feeding to 75% of all infant at the time discharge from the hospital and also the duration of breastfeeding to 50% of infant up to 6 months old. The World Health Organisation (WHO) recommended 6 months for the baby to be breastfed exclusively and followed with the introduction of solid food in conjunction of breastfeeding until the age of 2 years. National Breastfeeding Policy in Malaysia was formulated in year 1993 and exclusive breastfeeding was recommended for the first 4 or 6 months of life and continued up to 2 years with the introduction of solid food after 4 or 6 month according to the baby acceptance. In 2005, the policy was revised in accordance with World Health Assembly Resolution which recommended the exclusive breastfeeding for 6 months of life and highly recommended to continue until 2 years (Fatimah S. Et al., 2010).

Unfortunately, in Malaysia, before 1990s, the representative data of exclusive breastfeeding level was almost unavailable and it was reported based on first national survey that used World Health Organisation (WHO) recommended indicator, the second National and Health Morbidity Survey (NHMS II) that the number of exclusive breastfeeding infant was only 29% eventhough the number of infant ever breastfed in Malaysia was 88.6% (Fatimah et al., 1999).

Breastfeeding is an art that can be learned, acquired and nurtured with knowledge, support and motivation of the mother and the people surrounding them. Leff, Gagne & Jefferis, (1994) summerised that factors associated with succesful exclusive breastfeeding are the health of the baby, the satisfaction of the baby, the maternal enjoyment, attainment of maternal role and life-style compatibility. Espy & Senn, (2003) found that the reason why mother does not initiate breastfeeding are due to complication during labor, low social class and low level of education.

The aim of this paper is to share some information about breastfeeding and breastmilk as well as highlighting a few keys to succesful exclusive breastfeeding. The process starts from early pregnancy until weaning of breastfeeding.

Things to know about breastfeeding

Knowledge

Knowledge about breastfeeding including the process of initiating and maintaining breastfeeding duration, with the information about a benefit of breastmilk will motivate a mother to give the best for the baby. This will help to extend the duration of breastfeeding. It is also reported that the duration of breast-feeding increased for mothers who attend antenatal and breastfeeding support group (Brown, Raynor, & Lee, 2011). Evan and Danda (2011) suggest, a mother needs to inform a doctor or/and the people at the hospital their intention to breastfeed their baby. This can be a first step for that process by putting them in touch with a training or will be introduced to a lactation consultant at the hospital as a coach on gathering all the information and help.

The second step after initiation of breastfeeding is to maintain the exclusive breastfeeding duration. This process is also important and this duration is very critical. As reported by Fatimah et al. (2010), the number of infants being breastfed below the age of two months was 26.7 %, but this number reduced to 6.1%. eventhough some mothers do not need to be encouraged to breastfeed but they do need to be educated and be supported to maintain exclusive breastfeeding for the first 6 months of the age of the baby.

Talk to Experienced Mother

In order to succeed in exclusive breastfeeding, the mother needs to talk to other experienced mother as this will expose them lively to the process of breastfeeding. In the early day after birth, practical support is among the most important skills in breastfeeding (Yenikkerem et al., 2009). This can be obtained by sharing the experience and observing the experienced-mother doing so.

Early preparation

Edmond et al., (2006) states that the early initiation of breastfeeding was recommended to stimulate the suckling reflex and also for initiation of the process of the bonding between mother and baby. Suckling reflex is a stimulation process to increase milk production. Furthermore, timely initiation can help the retraction process of mother's uterus. All this can give a comfort condition that can get a mother ready for breastfeeding process. Early initiation can be started as early as right after delivery to 60 minutes.

Get a Support

Brown et al., (2011) analysed a number of factors that significantly influence the duration of breastfeeding. In a breastfeeding-accepted environment will be more encouraged to breastfeed longer when they have a supportive partner. Support from health-care is a key in promoting breastfeeding (Yanikkerem, Tuncer, Yilmaz, Aslan, & Karadeniz, 2009). Dykes et al., (2010) finding highlighted that a combination of professional and peer support was obviously become the most important factor in reducing the cessation of breastfeeding.

Benefits of Breastfeeding

Breastfeeding is the ideal form of nutrition for the first six months of a baby's life for both mother and child. There are many advantages of breastfeeding, including optimum infant nutrition, reduce the risk of infant infection, and close bonding of mother and child.

Mothers present a variety of reasons for breast feeding. Basically, they believe that their babies will be healthy and free from diseases. Other purposes mentioned for breast feeding included that it is a cheap, good way of feeding, and the breast-feeding baby get the same variety of foods the mother's diet provides. The World Health Organization (WHO), 2002 has recommended that the mother should: exclusive breastfeeding for the first six months, give breast milk before solid food for the first 12 months and gradually introduce the family food, after six months, while continuing to breastfeed for two years and beyond.

Breast milk is easily digested for growth and development for each baby to reach their full potential. Research by Fewtrell (2004) showed that breast milk and breastfeeding provide increased immunity to common childhood illnesses and reduce the risk to some adult illnesses such as cardiovascular disease and diabetes. Breast milk also has the potential to reduce the risk of obesity has been mentioned by Burke et al, (2005) and the according to Oddy WH et al, (1999), introduction of milk other than breast milk before four months of age was a

significant risk factor for asthma. Bener et al, (2007), children with more than six months breastfeeding also have lower risk of allergic diseases, eczema, wheeze and ear infection.

Wambach and Cohen (2009), breastfeeding is a natural requirement and an essential element in the emotional bond between mother and newborn. Physical contact between mother and baby is non-verbal communication that can make them feel comfortable and secure. Research also shows that exclusive breastfeeding can reduce the incidence of certain ovarian cancer among women who breast-fed for at least two months compared to those who do not have (Rosenblatt, 1993). Meanwhile, Kennedy (1994) mentioned that mothers who breast-feed can expect a significant reduction in their risk for breast cancer. It has been shown that childbearing is protective of breast cancer and could account for the decreased cancer rates in developing countries, where breast-feeding is the norm.

In addition to lower health care costs, there are also savings in the cost of infant food and formula, which is higher than the cost of the extra food mothers require for lactation. The cost of equipment such as bottles, bottle nipples and disinfecting tools are also low as compared to women who do not breastfeed their children (Shin BC, 2010).

Physiological of Breast Feeding

Knowing the basic principles of breast anatomy helps in understanding the changes that occur during pregnancy and its preparation for lactation. Breast development begins early in embryonic phase when the embryo is as early as 20 days old. When a female baby is born, nipple and milk duct system starts to form. After a girl reaches puberty at which under the influence of estrogen and progesterone hormones, she become sufficiently matured to be able to facilitate reproduction. This development occurs between the ages of 8-13 years old. Usually the female breast development is completed around the aged of 16. However, total development of mammary gland only happen during pregnancy (J. Riordan & K. Wambach, 2010).

Female breast also known as mammary gland consists of three types of tissues which are a glandular tissue, a fibrous tissue and an adipose tissue. Compositions of these tissues vary from one woman to another woman and alter with woman's age, menstrual cycle, pregnancy and nutritional status. Each mammary gland consists of ducts, lobes and alveoli (Fig 1). Functional unit of mammary gland is the alveoli. Each alveolus has secretory cells while the duct surrounded by myoepithelial cells. Secretory cells or acini cells are responsible for the production of milk while myoepithelial cells around the duct help in milk ejection.

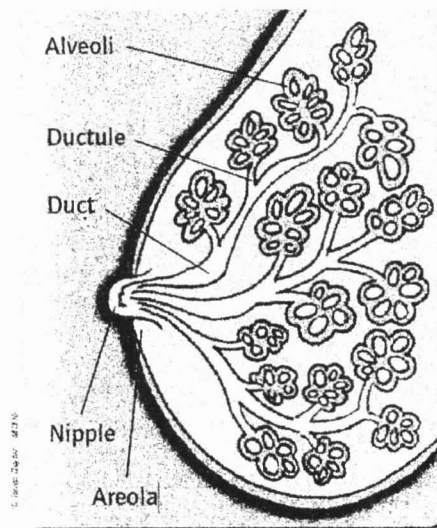


Fig. 1: Breast anatomy

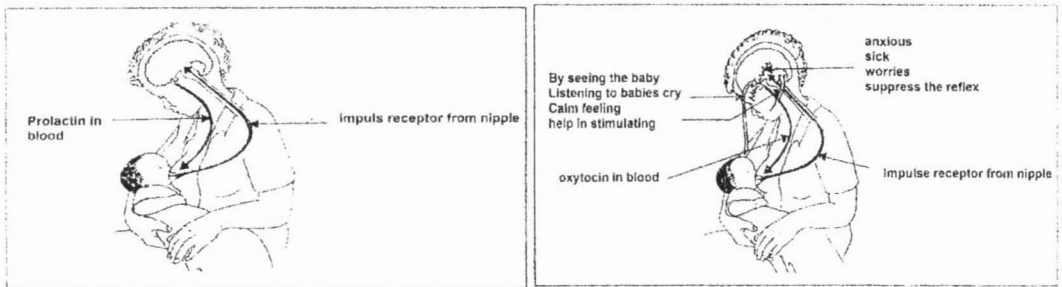
Source : Garis Panduan Kurikulum Pengurusan dan Promosi Laktasi dalam 'Baby Friendly Hospital'. Kementerian Kesihatan Malaysia.2010

During pregnancy, significant changes take place in the breast which includes rapid growth of breast tissues. These changes are influenced mainly by the hormones progesterone along with estrogen. There would be a noticeable increase in breast size which is associated with rapid growth of ductual-lobular-alveolar system. By the end of second trimester, the breast is sufficiently developed to be able to function as a milk-producing organ. Elevated levels of progesterone during pregnancy prevent the breast from secreting milk. Ejection of milk only

happens in the second stage of labour when both estrogen and progesterone level drop while prolactin hormone increases (Neville 2001).

Prolactin stimulates breast to produce milk after delivery. Prolactin surges through bloodstream to its receptor site on the acini cells of alveoli and trigger them to begin milk production. Early days after birth, many acini cells are primed to maximize the milk production. Meanwhile, another hormone called the oxytocin is responsible for the milk ejection. This hormone stimulates the contraction of myoepithelial cells of milk duct whereby milk is removed from the duct once baby starts suckling. When suckling happened, oxytocin is released and 'let down' or milk ejection reflex occurs (Fig 2). There is also another factor which act locally to allow each breast to function separately and so to prevent over-production of milk in a breast that is not been used. This factor is known as feedback inhibitor of lactation or FIL. This mechanism of action is known as autocrine process. Both endocrine (process which involves hormones) as well as autocrine processes regulate breastfeeding (J. Riordan & K. Wambach, 2010).

Oxytocin secretions are enhanced by conditioned stimuli of infant such as vision, smell and cry and also maternal factors like motivation and self-confidence. On the other hand, pain, discomfort, stress, anxiety, fear and lack of confidence may suppress oxytocin secretion and finally hampering lactation. In short, breastfeeding mothers should be calmed, relaxed and have a peaceful environment in order to have continuous and affective lactation (Fig 2).



Figure

2:

Prolactin and oxytocin reflex in milk formation

Source : Garis Panduan Kurikulum Pengurusan dan Promosi Laktasi dalam 'Baby Friendly Hospital'. Kementerian Kesihatan Malaysia.2010

Management

Handling Express Breast Milk

The mothers must prepare and store the breast milk safely. Before expressing or handling breast milk, the mother should wash her hands with soap. The milk must be stored in a clean container and the date of expressing milk must be labelled. The milk must be swirl gently to mix the milk before giving it to her baby. The mothers can use a breast pump to remove milk in the shortest time and store her milk in a glass or a safe plastic bottle. However, the fat content will reduce slightly when the breast milk is stored in polyethylene bags due to adherence to the inside surface of the bag. Some lipid-soluble nutrients in human milk can adhere to the surfaces of containers made of glass and polypropylene (Yu-Chuan, Chao-Huei, Ming-Chih, 2012). The breast milk should be refrigerated rather than frozen because the antimicrobial properties of human milk are better preserved with refrigeration. The table below shows the duration of human milk when the mothers store the milk at different types of locations or containers:

Table 1: Handling tip for breastmilk

Location	Temperature	Duration	Comments
Countertop, table	Room temperature (up to 77 °F or 25 °C)	6–8 hours	Containers should be covered and kept as cool as possible; covering the container with a cool towel may keep milk cooler.
Insulated cooler bag	5-39°F or -15-4°C	24 hours	Keep ice packs in contact with milk containers at all times, limit opening cooler bag.
Refrigerator	39°F or 4°C	5 days	Store milk in the back of the main body of the refrigerator.
Freezer			Store milk toward the back of the freezer, where temperature is most constant. Milk stored for longer durations in the ranges listed is safe, but some of the lipids in the milk undergo degradation resulting in lower quality.
Freezer compartment of a refrigerator	5°F or -15°C	2 weeks	
Freezer compartment of refrigerator with separate doors	0°F or -18°C	3–6 months	
Chest or upright deep freezer		Up to 12 month	

Breastfeeding In Situations of a Medical Nature

Jaundice

Jaundice is a disease of yellow coloring of the skin and other tissues. Bilirubin is a brownish yellow substance found in bile. Bilirubin is produced faster in the newborn's bloodstream before the liver can break it down. Jaundice happens due to the production of excess biliburin which the concentration higher than 1.8 mg/dL (>30µmol/L) (Silbernagl. S and Despopoulos. A, 2009). The severe hyperbilirubinemia can cause kernicterus which is a form of a brain damage disease. The frequent breastfeeding can prevent the severe hyperbilirubinemia and the babies should breastfed for ten to twelve times in 24 hours. The babies will often stool to remove the biliburin when they become well hydrated by frequent breastfeeding.

Hypoglycemia

Hypoglycemia occurs among babies when the level of blood sugar is low which is below 70 mg/dL. Having a high-pitched cry, poor feeding, sweating, rapid respiration and pallor are among the symptoms of Hypoglycemia.(Debra Armentrout and Judith Caple, 1999). The babies can have hypoglycemia when the mother always skip meals which cause the baby not to receive no enough food to be changed into simple sugar or glucose. Babies who are born from diabetic mothers may have other health problems. This situation will cause the babies to be separated from the mother and inadequate feeding may cause the babies to have severe drops in blood sugar. The hypoglycemia babies need a high amount of protein for treatment. Frequent breastfeeding may provide protein to babies and antibodies to disease organisms. If the mothers are away from the babies, they can only pump their milk to feed the babies.

Premature Babies

The immune system of premature infant is often underdeveloped. The babies need the nutrition from breast milk and protection from the disease (Edmunds and Nevill, 2008). Colostrum and breastmilk contain white blood cells, antibodies and other valuable immune properties that may help a premature baby resists infection. The mother needs to pump her milk and get it to their baby until they are matured enough to get a direct feeding . The premature babies can be fed by tube, finger feeding or cup feeding. The mothers should pump the milk about 5 minutes every three hours a day and once during night. The mother need to keep healthy habits such as eating well, stop smoking, getting enough rest and do some exercise to maintain their milk production.

Multiple Birth Babies

Breastfeeding more than one baby has several advantages such as may increase her milk production and increase the prolactin production of the mother. Breastfeeding can decrease the risk of breast cancer, ovarian cancer, hip fractures and osteoporosis in the postmenopausal period Linda K. Bennington, (2011). Breastfeeding after childbirth increases the level of oxytocin in the mother and stimulates the uterus to return to normal more quickly. However, the mother is hard to manage position of two small babies when nursing. Mother may lie on the floor or reclining on a couch or nursing babies in 'V' position and lie on her back with pillow for head support to get a comfortable position. Thus, mothers need to think creatively and open-minded in positioning the babies at the breast.

Conclusion

Breastfeeding is a very special task for every mother. It is a continuous process of feeding of the infant with a precious liquid, 'breastmilk'. This responsibility can be described as inheriting our kid with a healthy life, an excellent future, mind tonic for growing up process and many other great benefit for preparation to be a great person. In reward, the mother will get a benefit of maternal health, fitness, less risk of reproduction cancer, less risk of obesity and postpartum bleeding. In addition, with this process, it can speed up the retraction of mother uterus as well as getting a pre-pregnancy weight as well as unmentionable other advantages. With enough knowledge, support, early preparation physically and mentally and motivation as well as endurance and perseverance, every women can go through this process smoothly for the duration of as maximum as 2 years.

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