

## **Bonding and attachment in CHD babies and young children**

For babies and young children, care and development are strongly linked, and the bond between baby and parent or carer is crucial to the growth and development of the child – affecting physical growth as well as emotional and cognitive development and wellbeing.

Children's earliest experiences shape how their brains develop, which in turn determines future health and wellbeing. Very young children need secure and consistent relationships with other people in order to thrive, learn and adapt to their surroundings and this may also impact their ability to form good future relationships.

Research indicates that attachment aids children to develop physically, emotionally, socially and morally. Good, secure attachments enable children to cope with change and stress, cope with separation and loss, become independent and develop future relationships.

A care giver's ability to respond to, and stimulate a baby is influenced by the degree of attunement with the baby, and this serves to buffer his or her physiological, as well as emotional and behavioral responses to stress.

Attunement between mother and child is directly affected by the maternal-infant bond, which in turn is shaped by prenatal and perinatal events. Among the complex factors that influence bonding at birth are the mother's attitude toward the pregnancy and her perception of available support systems, her experience of procedures e.g echocardiograms, her perception of stress during pregnancy, and separation (Mead, 2004)

### **The sensitive period**

One of the most important perinatal periods affecting bonding are the interactions in the hours and weeks following birth. Classic work by Klaus & Kennell, 1970 indicated the harm caused to the mother-infant relationship and as a result of research such as this there has been significant changes in practice in neonatal care, from a system which routinely separated mothers from newborn infants to a family centered approach which maximises contact and promotes bonding.

An emerging literature suggests that maternal distress in the prenatal and perinatal period may adversely affect development. Factors such as maternal stress, depression, perceived social support, and parenting stress are identified in the literature as risk factors. There is a growing literature indicating that perinatal maternal adjustment is associated with children's longer term emotional and behavioural functioning. (Anhalt et al, 2007)

### **Disruption to bonding**

Separation in early life is associated with a reduction in maternal-infant attunement. The impact of maternal-infant separation during the sensitive period may permanently alter emotional relationships.

Many hospital procedures carried out to decrease perinatal health risks may pose a challenge to bonding. For example, bonding can be jeopardized when a child is separated because of illness, when placed in an intensive care nursery, when placed in an incubator, or when the mother is anaesthetised at delivery (Madrid & Pennington, 2000).

Events such as these which affect the ability of the mother to meet the needs of her infant shape the capacity of the newborn to tolerate stress. Events occurring during labour and delivery that may affect the mother or the infant's ability to bond include early separation, pain in the mother or infant, the use of medication such as anaesthesia, and anxiety. Maternal-infant separation following cesarean sections is common and appears to have a negative impact upon the quality of maternal-infant interactions. Separation from baby is found to be the most difficult aspect for mothers when their child is hospitalised. Parents can often feel excluded (Wigert et al, 2006).

Feldman et al (1999) studied of maternal bonding under differing conditions of proximity, separation and potential loss, found that separation of a mother from its newborn baby due to hospitalization initially led to increased anxiety and stress in the mother. However prolonged separation due to hospitalization resulted in a decrease in preoccupation with the child and a poor attachment.

### **Leeds Early Intervention approach**

There is a body of evidence that suggests children with chronic illnesses are at greater risk than other, healthy children of developing emotional and behavioural difficulties (Eiser, 1990). Rautava et al (2003) completed a longitudinal study of the impact of hospitalization of a newborn on families and found those who had been separated from their baby due to medical need reported higher levels of behavioural problems at age 3yrs which indicated long lasting effects of early separation. Locally, our own research looking at the incident of behavioural problems in children with Congenital Heart Defects shows significantly higher rates of behavioral problems than would be found in a healthy comparison group (Matley, 1997). Disruption to bonding and attachment play a major role in the development of longer term difficulties.

In an attempt to ameliorate longer term problems the support offered in Leeds is targeted at early and proactive interventions, which aim to support prospective parents from antenatal diagnosis through to delivery, and longer term care thereafter. This enables good working relationships to be developed and a continuity of care, which fosters trust and communication.

The benefits of having all Maternity, Neonatal and Paediatric Cardiac Surgery services upon one site, allows for a continuity of care and effective communication between all the teams involved in the care of both mother and baby.

The risks and length of maternal separation can be avoided or considerably reduced because all care can be provided on one site. Accommodation for newly delivered mothers is available on the ward so attachment and bonding can be fostered. Breast feeding, which can enhance bonding, is also encouraged and facilitated by well trained staff and good provision of facilities and equipment.

Emotional support is provided by all the team, and more specific help can be gained from the Cardiac Nurse Specialist team and the integrated Psychology and Counselling service available on the children's ward. The emotional support offered is aimed at bolstering parents' resilience and encouraging personal coping strategies. This work will often compliment the support of family members who are local enough to visit and perhaps share some of the caring responsibilities, and emotional stress.

As a Psychology team we see a number of families who have experienced the trauma of a very unexpected, and perhaps abrupt separation from their baby due to an undiagnosed problem. Much of this work focuses on helping parents to 'grieve' for the loss of a normal birth experience and early interactions, as well as helping them make sense to the trauma they have experienced.

We have also seen a number of parents who have experienced separation from their child, being left behind in a peripheral hospital, as experiencing extreme anxiety and trauma symptoms. These experiences further hinder their ability to bond with their babies.

With the increasing antenatal CHD detection rate and the expert fetal cardiology service available at Leeds, the opportunities to prepare parents, co-ordinate care with the other relevant onsite services, provide counselling and support from the very earliest of days all aims to reduce the risk of stress, anxiety, depression and separation, which in turn is aimed at fostering bonding and attachment, with the longer term goal of reducing the risks of behavioural and emotional problems for children and families in the future. Co-location of Maternity, Neonatal & Cardiac Surgery is essential to continue this unique proactive, early intervention approach to care.

### Case Study

L was a young mother whose baby was diagnosed antenatally with complex congenital heart disease. During sessions with a Psychologist L reported a number of worries about the child's future and how this would impact upon her husband and two small children. L's greatest worry however was about being separated from her baby. This upset the mother a great deal and part of the preparation work we did involved visiting the ward so that she could picture where her daughter would be.

L was terrified that her child might die without any family around her; it was very important for her that either she or her husband be there when this happened. As the child was critically ill when she was born, there was a good chance that the child may die without her family around her, if the mother was separated from the child. The

father was in a difficult position of wanting to support the mother after the birth, but also wanting to be around the baby when she was born.

Care for mother and baby was co-ordinated and arrangements made for L to deliver in Leeds, and her husband and children to be accommodated in Eckersley House, the family accommodation.

L's baby did die, but surrounded by her family once they had the chance to say goodbye. A move to care provided in a standalone heart unit would mean that maternity services would not be located in the same hospital as the cardiac surgery would have been devastating for this family. It would have increased the mother's fear, risk of future emotional & psychological difficulties and the possibility that her child would die without her being there.

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