Journal of Prenatal and Perinatal Psychology and Health 22(3), Spring 2008

New Criteria to Evaluate the Practices of Midwifery and Obstetrics

Michel Odent, MD

ABSTRACT: A position on the necessity of evaluating both obstretrics and midwifery is offered to utilize what strengths each discipline brings birthing mothers. But beyond this, the effects of birth on subsequent events, for example breastfeeding in the short term, and the potential for sweeping effects in the long term for the culture are included. To summarize, the accumulation of research in a number of areas points to the conclusion that interfering with pre- or perinatal development can have future effects currently not envisioned. Studies that demonstrate this conclusion are offered, from animal studies (ewes given epidural anaesthesia procedure at birth having the effect that they do not take care of their babies) to humans (c-sections). Comparisons are drawn to similar procedures that may be at the root of some existential changes occuring in our own civilization.

KEY WORDS: Evaluation, obstetrics, midwifery, genetics, environmental, civilization

INTRODUCTION

Many factors will influence the future of midwifery and obstetrics. The main one, after thousands of years of culturally controlled childbirth, will probably be our capacity to take advantage of the fast development of physiology to rediscover the basic needs of labouring women and newborn babies. I have had many opportunities to look at this factor and to anticipate that it will take decades to accept that the best environment for an easy birth is when there is nobody around, but an experienced, low profile and silent mother-figure behind the scenes (Odent, 2001a).

Editor's note: This essay is reprinted with permission of Michel Odent, MD, Director, Primal Health Research Center in London and the newsletter Primal Health Research, published in North and South America by Birth Works, Inc., Medford, NJ. APPPAH is pleased to support increased circulation by reprinting Dr. Odent's essays as a feature in the pages of this journal. Contact information: info@birthworks.org or (609) 953-9380. Free access to the Primal Health Research Data Bank is provided at: www.birthworks.org/primalhealth. Email for Dr. Odent is: modent@aol.com

New Criteria to Evaluate How Babies are Born

My immediate objective is to focus on factors that are not usually taken into account when studying the evolution of midwifery and obstetrics. Their importance is probably underestimated. These are the criteria we use to evaluate how babies are born. Until now we have not enlarged a short list of old criteria established during the 20th century: they include perinatal mortality and morbidity rates, maternal mortality and morbidity rates and cost effectiveness

Today conventional medical circles and natural childbirth movements still share the same way of thinking. We might add the same battlefield. For example certain obstetrical circles constantly tend to exaggerate the risks of home birth in the same way as the natural childbirth movements tend to exaggerate the risks associated with caesarean sections. It is commonplace to claim that the risks of death are multiplied by three or four after a caesarean birth, without underlining that the caesarean is rarely the direct cause of mortality, and without underlining that the population of women who had caesareans include a comparatively greater number of maternal pathological conditions.

Today we can overcome these difficulties. Since in most hospitals all over the world the doctrine is to perform an elective caesarean at 39 weeks in the case of breech presentations, we have at our disposal a new generation of huge homogenous statistics that make it easier to evaluate the degree of safety of the modern caesarean in well-organized departments of obstetrics. If we combine the results of a large Danish study that included 7,503 planned c-sections for breech presentation at term (Krebs & Langhoff-Roos, 2003), of a Canadian study that included 46,766 c-sections for the same reasons (Liu, Liston, Joseph, et al., (2007), and of the famous randomized multicentre Lancet trial (941 cases) (Hannah, Hannah, et al., 2000), we obtain an homogenous series of 55,210 caesareans without one maternal death.

Because the natural childbirth movements do not recognize the modern caesarean as an easy, fast and safe operation, it is difficult to go a step further. The necessary analysis of new criteria to evaluate the practices of midwifery and obstetrics is postponed. In medical circles that do not dispute the safety of the modern caesarean, the increasing rates are acceptable, even welcome. This point of view has been tacitly expressed in the medical literature. For example the author of an editorial of the 'British Journal of Obstetrics and Gynaecology' has claimed that, in the near future, most women will prefer to avoid the

risks associated with a birth by the vaginal route (Steer, 1998). The many women obstetricians who choose to plan a caesarean for the birth of their own babies express in a different way similar points of view (Al-Mufti, McCarthy & Fisk, 1997; Gabbe & Holzman, 2001). Obstetricians' choice of delivery. Lancet 2001. Their way of thinking will remain legitimate, or at least understandable, as long as the hot topic will not be the introduction of new criteria to evaluate the obstetrical practices. Which criteria can we suggest?

The Quality and Duration of Breastfeeding

The quality and the duration of breastfeeding are not taken into account to evaluate the practices of midwifery and obstetrics. On the other hand, in the many articles about the risk factors for lactation difficulties, it is not usual to consider how babies are born. The time has come to realize that parturition and lactation are interdependent phenomena.

Until recently the fact that the maternal body prepares to secrete milk before the baby is born was the realm of intuitive knowledge. Today, with the language of physiologists, it is easy to explain how the hormones released by mother and baby during labour and delivery play a role in the initiation of lactation.

Here are some examples of easy-to-explain connections between birth physiology and the physiology of lactation:
In 1979 we learned that the levels of beta-endorphins increase during labour (Csontos, Rust, Hollt, et al.,1979; Akil, Watson, Barchas, & Li, 1979). We already knew, since 1977, that beta-endorphin is a releaser of prolactin (Rivier, Vale, Ling, Brown, & Guillemin, 1977). It became suddenly easy to explain a chain of event: physiological pain, release of endorphins, release of prolactin.

Swedish studies, published in 1996, demonstrated that two days after birth, when the baby is at the breast, women who gave birth vaginally release oxytocin in a pulsatile, therefore effective way, compared with women who gave birth by emergency caesarean section (Nissen, Uvnas-Moberg, Svensson, Stock, Widstrom, & Winberg, 1996). Furthermore there is a correlation between the number of pulsations when oxytocin is released two days after birth and what the duration of exclusive breastfeeding will be.

The same Swedish team found that the caesarean women lacked a significant rise in prolactin levels at 20-30 minutes after the onset of breastfeeding.

An Italian team demonstrated that colostral milk beta-endorphin

concentrations of mothers who delivered vaginally are significantly higher in the fourth postpartum day than colostrum levels of mothers who underwent caesarean section (Zanardo, Nicolussi, Giacomin, Faggian, Favaro, & Plebani, 2001). It is probable that one of the effects of milk opiates is to induce a sort of addiction to mother's milk and that the quality and duration of breastfeeding is influenced by the amount of opiates in colostral milk.

In spite of obvious difficulties in conducting randomised trials there are several valuable clinical studies confirming the importance of perinatal factors on the quality, and still more on the duration of breastfeeding. It has been possible in this regard to compare the effects of epidural anaesthesia without or with opiates. It appeared that women who were randomly assigned to receive high-dose labour epidural fentanyl (a synthetic morphine-like substance) were more likely to have stopped breast-feeding six weeks postpartum than woman who were randomly assigned to receive less fentanyl or no fentanyl (Beilin, Bodian, Weiser, et al., 2005). A Danish study compared 28 women who had a caesarean with epidural and 28 women who had a caesarean with a general anaesthesia. Women who had an epidural breastfed longer (at 6 months: 71% vs 39 per cent) (Beilin, Bodian, Weiser, et al., 2005). Almeida and Couto conducted an interesting survey about lactation among Brazilian women health professionals whose mission is to recommend exclusive breastfeeding for six months (Almeida, 2001). When these experts in lactation had their own babies the average duration of exclusive breastfeeding was a mere 98 days! All these women had a guaranteed 120-day maternity leave. A 'detail' was mentioned in the report of this study: among university-level health professionals 85.7 percent had had C-sections, as compared with 66.7 percent among technical health professionals. The results of this study confirm that it is difficult to have good breastfeeding statistics in a population of women who gave birth by caesarean.

Of course, because of the huge adaptability of human beings, we must not focus on particular cases and anecdotes. We must think in terms of statistics. I met a woman who had successfully breastfed her four adoptive children!

One cannot ignore today that the way a woman gives birth is one of the main factors influencing the duration of breastfeeding.

Thinking Long Term

Until recently, when studying the genesis of pathological conditions

or personality traits, it was commonplace to contrast genetic factors and environmental factors. In the mind of everybody, it was as if the environment starts at birth. Today we cannot contrast these two groups of factors. We are learning that the expression of our genes is highly influenced by early (particularly pre- and perinatal) environmental factors. The questions are not any more about the comparative parts of the genes and of the environment. They are about the critical period for genes-environment interaction.

The 'Primal Health Research Database' can be presented as a tool to determine the timing of such interactions. Primal Health Research is a developing branch of epidemiology. It includes all studies exploring correlations between what happened during 'the primal period' and what will happen later on in life. The primal period includes the perinatal period. From an overview of our database it appears that the perinatal period is critical in the genesis of a great diversity of pathological conditions and personality traits. In other words we now have at our disposal an accumulation of data suggesting that the way we are born has life-long consequences.

Relevant studies are found by selecting keywords such as 'juvenile criminality', 'suicide', 'drug addition', 'anorexia nervosa', 'autism', 'asthma', and 'allergic disease'. It is noticeable that all these keywords are related to very topical issues.

We must underline the great scientific value of most studies included in our database. For example, in a study about the risk factors for autism, the researchers had at their disposal the recorded data from the Swedish nationwide Birth Register regarding *all* Swedish children born during a period of 20 years (from 1974 until 1993). They also had at their disposal data regarding the 408 children (321 boys and 87 girls) diagnosed as autistic after being discharged from a hospital from 1987 through 1994 (diagnosis according to ICD-9 code 299A). Five matched controls were selected for each case, resulting in a control sample of 2040 infants (Hultman, Sparen, & Cnattingius, 2002). The risk of autism was significantly associated with perinatal events, suggesting that the period of birth is critical in the genes-environment interaction, where autism is concerned. All the other studies of autism from a primal health research perspective have reached similar conclusions.

In spite of the publication of a great number of such valuable studies, it seems that only a very small number of people, whatever their background, are ready to train themselves to think long term. This is why many of the valuable studies included in our database remain ignored, although they are about topical issues, and although

they have been published in authoritative medical or scientific journals. This led me to introduce the concept of 'cul-de-sac epidemiology'(Odent, 2000). This is one of the reasons why it will take a long time to introduce new ways to evaluate the practices of obstetrics and midwifery.

Thinking in Terms of Civilization

Human beings are different from the other mammals regarding the effects of interfering with the birth process. When the delivery of non-human mammals is disturbed the effects are immediately and easily detectable at an individual level. For example, when mammals give birth by c-section or with an epidural, the general rule is that the mother is not interested in her babies. Among humans, on the other hands, we need huge statistics to detect only tendencies and risk factors. We can explain why it is much more complex in our species. We speak. We create cultural milieus. In certain situations, particularly in the perinatal period, human behaviour is less directly under the effects of the hormonal balance and more directly under the effects of the cultural milieu. For example a human mother knows when she is pregnant and can anticipate a maternal behaviour, while other mammals must wait until the day when they release a flow of love hormones to be interested in their newborn babies.

This does not mean that we have nothing to learn from animal experiments. We learn which questions should be raised where human beings are concerned. The word civilization – indicating a specifically human dimension - should always be introduced in the question. If, for example, ewes do not take care of their babies after giving birth with an epidural anaesthesia, we must wonder about the future of a civilisation born with epidural, rather that worrying about particular cases.

These are vital questions in the age of 'The Scientification of Love' (Odent, 2001b). Today we are in a position to understand that, to have a baby, a woman –like other mammals – has been programmed to release a cocktail of love hormones. It happens today that the number of women who give birth to babies and placentas thanks to such a hormonal release is constantly decreasing. First because many women give birth by caesarean. And also because most of those who give birth vaginally need pharmacological substitutes. These pharmacological substitutes block the release of the natural hormones and do not have the same behavioural effects. We have to wonder what will happen, in terms of civilisation, if this tendency continues during several

generation.

The need to think in terms of civilisation is now perceived in some medical circles. Dr. Michael Stark – the 'father' of the simplified technique of c-section - took the initiative of a collective academic book about caesareans. He asked me to write the last two chapters of this book. The title of the last chapter will be: 'What is the future of a civilisation born by caesarean'? It is highly significant that the editor of this book is the pioneer who made the caesarean easier, faster, and safer than ever. Since the famous 'Einstein letter' to President Roosevelt in October 1939, the warnings about human-generated existential risks have been first expressed by those who had been in the forefront of the scientific or technical advances at the root of the threat. The history of the caesarean offers a new typical example. I tried in the last sentence of this last chapter to express in a concise way the subtlety, the novelty, and the gravity of the questions we have to raise: 'Can humanity survive the safe caesarean?'

REFERENCES

Akil, H., Watson, S. J., Barchas, J. D., & Li, C. H. (1979). Beta-endorphin immunoreactivity in rat and human blood : Radioimmunoassay, comparative levels and physiological alterations. *Life Science, 24*, 1659-66.

Almeida, J. A. G. (2001). *Breastfeeding: a nature-culture hybrid*. Editora Fiocruz. Rio De Janeiro.

Al-Mufti, R., McCarthy, A., & Fisk N. M. (1997). Survey of obstetricians' personal preference and discretionary practice. *European Journal of Obstetrics & Gynecology and Reproductive Biology, 73*, 1-4.

Beilin, Y., Bodian, C., Weiser, J., et al. (2005 Dec). Effect of labor epidural analgesia with and without fentanyl on infant breast-feeding: a prospective, randomized, double-blind study. *Anesthesiology, 103*(6), 1211-7.

Csontos, K., Rust, M., Hollt, V., et al. (1979). Elevated plasma beta-endorphin levels in pregnant women and their neonates. *Life Science, 25*, 835-44.

Gabbe, S. G., Holzman, G. B. (2001). Obstetricians' choice of delivery. *Lancet, 357*, 722.

Hannah, M. E., Hannah, W. J., et al. (2000). Planned caesarean section versus planned vaginal birth for breech presentation at term: a randomised multicentre trial, *Lancet, 356*, 1375-83.

Hultman, C. P., Sparen, P. & Cnattingius, S. (2002). Perinatal risk factors for infantile autism, *Epidemiology, 13*, 417-23.

Krebs, L., & Langhoff-Roos, J. (2003). Elective cesarean delivery for term breech, *Obstetrics & Gynecology, 101*(4), 690-6.

Lie, B., & Juul, J. (1988). Effect of epidural vs. general anesthesia on breastfeeding, *Acta Obstetricia et Gynecologica Scandinavica, 67*, 207-9.

Liu, S., Liston, R. M., Joseph, K. S., et al. (2007). Maternal mortality and severe morbidity associated with low-risk planned cesarean delivery versus planned vaginal delivery at term. *Canadian Medical Association Journal, 176*(4), 455-60.

Nissen, E., Uvnas-Moberg, K., Svensson, K., Stock, S., Widstrom, A. M., & Winberg, J. (1996). Different patterns of oxytocin, prolactin but not cortisol release during breastfeeding in women delivered by caesarean section or by the vaginal route. *Early Human Development, 45*, 103-118.

Odent, M. (2000). Between circular and cul-de-sac epidemiology, *Lancet, 355*, 1371.

Odent, M. (2001a). New reasons and new ways to study birth physiology, *International Journal of Obstetrics and Gynaecology*, Nov 75, Suppl 1, S39-S45.

Odent M. (2001b). *The scientification of love* (2nd edition). London: Free Association Books.

Rivier, C., Vale, W., Ling, N., Brown, M., & Guillemin, R. (1977). Stimulation in vivo of the secretion of prolactin and growth hormone by beta-endorphin, *Endocrinology, 100*, 238-41.

Steer, P. (1998). Caesarean section: an evolving procedure? *British Journal of Obstetrics & Gynecology,105*, 1052-55.

Zanardo, V., Nicolussi, S., Giacomin, C., Faggian, D., Favaro, F., & Plebani, M. (2001). Labor pain effects on colostral milk beta endorphin concentrations of lactating mothers. *Biology of the Neonate, 79*(2), 79-86.