PREVENTING VIOLENCE

Featured Paper
Michel Odent, M.D.
*Born in France in 1930, **Michel Odent** studied medicine at the University of Paris, qualifying in general surgery, obstetrics, and gynecology. His innovative leadership of the Obstetrical Unit of a state hospital in the small town of Pithiviers in Northern France from 1962-1986 brought the world to his door. From 1986-1990 he was commissioned by the World Health Organization to report on planned home birth in industrialized countries. After moving to London in 1990, Dr. Odent organized The Primal Health Research Centre and became an itinerant scholar-teacher to groups around the world. He has published more than 30 professional papers and nine books published in 19 languages. He is editor of Primal Health Research, a newsletter on the long-term health consequences of environmental conditions in utero, at birth, and infancy.*

Preventing Violence or Developing the Capacity to Love: Which Perspective? Which Investment?

In the life stories of great figures associated with love such as Venus, Buddha and Jesus, the manner in which they were born is presented as a critical phase. By contrast, the lives of famous politicians, writers, artists, scientists, business people and clergymen, their biographies often start with details about their childhood and education. Could this difference indicate that birth is a crucial time in the development of our capacity to love?

The biological sciences of the 1990s are now showing that the first hour following birth is a critical period in the development of the capacity to love. While a mother and her newborn baby are close to each other after birth they have not yet eliminated from their systems the hormones which both of them secreted during the birth process. The two are in a special hormonal balance which will last only a short time and will never recur. If we consider the properties of these different hormones and the time it takes to eliminate them, we will understand that each hormone has a specific role to play in the interaction between mother and baby.

These same hormones are involved in any aspect of love. Recent data drawn from different branches of scientific literature presents a new vision of sexuality. There is a hormone of love, and also a reward system which operates each time we, as sexual animals, do something which is necessary for the survival of the species.

Oxytocin in involved in any aspect of love. It is secreted by a primitive structure of the brain called the hypothalamus, then it is sequestered in the posterior pituitary gland, and suddenly released into the bloodstream in specific circumstances. Until recently, oxytocin was thought of as a female hormone whose only role was to stimulate contractions of the uterus during labor and delivery, and contractions of the breast during lactation. Now it is seen as a male and female hormone involved in all the different aspects of sexual life.

Role in sexual arousal

Oxytocin's role during sexual arousal and orgasm has recently come to light. Of course, there have been countless experiments with oxytocin on rats and other animals. For example, when domestic fowl and pigeons are injected with oxytocin, the majority of them start waltzing, grabbing each others' combs, mounting, and mating with each other within a minute of the injection. For several decades, oxytocin has been used to get animals in captivity to mate. We now have scientific studies of oxytocin levels during orgasm among humans. Mary Carmichael's team from Stanford University in California has published a study in which oxytocin levels among men and women during masturbation and orgasm were measured in blood samples collected continuously via indwelling venous catheters.1 Levels during self-stimulation before orgasm were higher amongst women than men. Indeed, they were higher during the second phase of the menstrual cycle than during the first phase. During orgasm, women reached higher levels of oxytocin than men, and multi-orgasmic women reached a higher peak during the second orgasm. During male orgasm, the release of oxytocin helps to induce contractions of the prostate and seminal vessels.

The immediate effect of the release of oxytocin during female orgasm is to induce uterine contractions which help the transportation of the sperm towards the egg. This was shown as early as 1961 by two American surgeons during a gynecological operation. Before making the abdominal incision, they

introduced particles of carbon into the woman's vagina close to the cervix, and, at the same time, gave her an injection of oxytocin. Later, they found particles of carbon in the Fallopian tubes.2 As many anthropologists have done, Margaret Mead noticed that many societies have totally ignored female orgasm, but explained that it has no biological function.3 At the same stage in the history of biological sciences, Wilhelm Reich was also unable to account for the reproductive role of the female orgasm.4 Today the scientific data we have at our disposal suggests an absolutely new vision of the female orgasm.

Altruistic love hormone

Of course, a release of oxytocin is needed during the birth process: obstetricians have been aware of this for a long time. But until now they have not been interested in the peak of oxytocin which is released just after the delivery of the baby. The importance of this peak is highlighted when it is linked with the knowledge that oxytocin can induce maternal behavior. When it is injected into brain of virgin or male rats, they begin to take care of pups and to behave like mothers. If, on the other hand, antagonists of oxytocin are injected into the brain of mother rats just after delivery, they do not take great care of their babies. It can be claimed that one of the greatest peaks of love hormone secretion a woman can have in her life is just after childbirth if the birth happens without intervention with hormone substitutes. It also seems that the fetus releases oxytocin which could contribute to the onset of labor, and this may shape the baby's own ability to release the love hormone.

We also know more about the release of oxytocin during lactation. It has been recently shown that as soon as a mother hears a signal from her hungry baby, her level of oxytocin increases. A parallel can be made with sexual arousal which starts before there is any skin stimulation. As the baby sucks, the levels of oxytonin released by the mother is about the same as it is during orgasm--another parallel between these two events in sexual life. Furthermore, there is oxytocin in human milk. In other words, the breastfeeding baby absorbs a certain quantity of love hormone via the digestive tract. Further, when we share a meal with companions, we increase our level of oxytocin: the only possible conclusion is that oxytocin is an altruistic hormone, a love hormone.

So, any episode of sexual life is characterized by the release of an altruistic hormone; it is also rewarded by the release of morphine-like substances. These "endomorphins are hormones of pleasure as well as natural painkillers. During intercourse, both partners release high levels of endomorphins. Certain migraine sufferers know that intercourse is a natural remedy for headache. The endomorphin release during copulation among different species of mammals is well documented. For example, beta endorphin levels in the blood of male hamsters after their fifth ejaculation was 86 times higher than those of control animals.

The release of endorphins during labor and delivery has been studied among humans. The new data we have at our disposal have radically changed the basis of debates which we commonplace 40 years ago: is pain during labor and delivery physiological or is it the result of cultural conditioning? Today, the concept of physiological pain is accepted, but there is a compensatory system of protection in the release of natural opiates. This is the beginning of a long chain of reactions: For example, beta endorphins release prolactin, a hormone which adds the final touch to the maturation of the baby's lungs and is necessary for the secretion of milk by the breast. At the same time, oxytocin aids in milk ejection.

This release of endorphins during the birth process gives the opportunity to emphasize that in the 1990s, one cannot separate the study of pain from the study of pleasure. The system which protects us against pain is one which also gives us pleasure. Hormones of pleasure and attachment During the birth process, the baby releases its own endorphins: In the hour following birth, both a mother and her baby are impregnated with opiates. Since opiates create a state of dependency, when a mother and her baby are close to each other before they have eliminated their opiates, they are creating a mutual dependency or attachment relationship. When sexual partners are close to each other and impregnated with opiates, another kind of dependency is created: this dependency is chemically similar to the attachment relationship of a mother and her baby.

Since lactation is necessary for the survival of mammals, it is not surprising that a built-in reward system encourages a mother to breastfeed. When a woman is breastfeeding, her level of endorphins peaks in twenty minutes. The baby is also rewarded for nursing since human milk contains endorphins. This is why some babies behave as if they are "high" after they have been breastfed.

Our knowledge of endorphins is still new. Only 20 years ago, Pert and Snyder published a historic article in Science revealing the existence of opiate-sensitive cells in the nervous tissues of mammals. If the human nervous system contained cells which were sensitive to opiates, then it followed that the human body must be capable of producing a substance or substances very similar to those produced by the opium poppy.5 When all the published scientific data is fully understood, we will have a new basis from which to consider such issues as the relationship between pleasure and pain, masochistic and sadistic behavior, the philosophy of suffering, religious ecstasy, and substitutes for sexual gratification, to name but a few.

Oxytocin, the love hormone, and endorphins, the hormones of pleasure, are part of a complex hormonal balance. For example, in the case of a sudden release of oxytocin, the need to love can be directed in different ways according to the hormonal balance. For example, if a nursing mother has a high level of prolactin, she tends to concentrate her ability to love toward her baby. If a woman has a low level of prolactin, as is normal when she is not breastfeeding, she has a tendency to direct her love toward a sexual partner. Prolactin, the hormone necessary for the secretion of milk, depresses sexual arousal. When a man has a tumor which releases prolactin, the first symptom is sexual impotence. Antiprolactin drugs can induce erotic dreams. It is well-known that among many species of mammals, a lactating mother is not receptive to the male. In most tribal societies, love-making and breastfeeding are considered to be incompatible. Since the advent of the Graeco-Roman model of strict monogamy, there has been a tendency to reduce maternal breastfeeding, using slaves, wet-nurses, animal milks, or formulas.

Adrenaline--Eye-to-eye contact

Another aspect common to the different episodes of sexual life is that they are inhibited by the hormones of the adrenaline family--the hormones released when mammals are frightened or cold. These are the emergency hormones which give us the energy to protect ourselves by fighting or running away. If a female mammal is threatened by a predator while she is in labor, the release of adrenaline tends to stop the birth process, postponing it in order to give the mother the energy to fight or to escape. Farmers know that it is impossible to milk a frightened cow.

The effects of adrenaline secretion are more complex during the birth process. During the very last contractions preceding birth, both a mother and her baby have a peak release of adrenaline hormones. One of the effects of this sudden adrenaline release is that the mother is alert when her baby is born. It is an advantage among mammals to have enough energy to protect the newborn baby. Another effect of this adrenaline release by the fetus is that the baby is alert at birth, with wide-open eyes and dilated pupils. Mothers are fascinated by the gaze of their newborn babies. It seems that, for humans, this eye-to-eye contact is an important feature of the beginning of the mother-baby relationship. Let us stress that even the hormones of the adrenaline family--often seen as the hormones of aggression--have a specific role to play in the interaction between mother and baby in the hour following birth.

Not only are the same hormones involved in the different episodes of sexual life, but the same patters, the same sort of scenarios are reproduced. The final phase is always an "ejection reflex" and terms such as "sperm ejection reflex," "fetus ejection reflex," and "milk ejection reflex" suggest this likeness. I have adopted the term "fetus ejection reflex" (which had previously been used to refer to non-human mammals) to refer to the very last contractions before the birth of humans when the birth process has been undisturbed and unguided. During a typical "fetus ejection reflex," women have a tendency to be upright, have a need to grasp something or someone, and are full of energy. Some women seem to be euphoric, others seem to be angry, while others express a transitory fear. All of these behaviors are compatible with a sudden release of adrenaline. They are associated with two or three strong contractions.6 This reflex is almost unknown in hospital delivery rooms, and it is seldom seen even at home births if another person takes on the role of "coach," "guide," "helper," "support person," or "observer."

The primitive brain

For human beings, the main gland at work during each kind of sexual conduct is the brain. In modern biological sciences, the brain is seen primarily as a gland which releases hormones. But only the primitive brain structures in and around the hypothalamus--those which we share with even the most

primitive mammals--are active in mating, birthing, and lactating. Humans have a neo-cortex--a recently-developed brain structure--which supports the intellect over and around the primitive brain structure. When this rational brain is overactive, it tends to inhibit the primitive brain. During the birth process, there is a time when a laboring woman behaves as if she were on another planet. To get to the "other planet," she has to change her level of consciousness by reducing the activity of her neo-cortex. Inversely, during the birth process and during any kind of sexual experience, any stimulation of the neocortex has an inhibiting effect: logical discussion, feeling observed, bright lights, etc. Few couples can make love if they feel observed or if their neocortex is stimulated by bright lights or by logical thinking.

It is ironic that non-human mammals, whose neocortex is not as developed as ours, have a strategy for giving birth in a state of privacy. A feeling of security is a prerequisite for a state of privacy. To feel secure, you have to feel protected. Let us remember that the original midwife was usually the mother of the woman who was giving birth. Other midwives were substitutes for the mother-figure who is, first and foremost, a protective person.

To look at sexuality as a whole has many implications. In societies where genital sexuality is highly repressed, women are less likely to have easy births. Conversely, routine over-control of the birth process, probably influences other aspects of our sexual life. We should need a whole article to study these correlations, which are found in many anthropological texts from the very beginnings of modern ethnology, like Malinoski's The Sexual Life of Savages 7 and studies by Margaret Mead. We see the same correlations when we compare late 20th century childbirth statistics in European countries: births are easier in Sweden than in Italy.

Of course, love and sexuality are not synonymous. Nobody can define love, nor can anyone analyze different forms of love with any precision. The ultimate form of love among humans may be the love of Nature, a great respect for Mother earth. The first hour following birth, the baby's first contact with its mother may be a critical period in the development of respect for Nature. There may be a link between the relationship with the mother and the relationship with Mother Earth. There have been a few, albeit rare, cultures in which there were no excuses found for interfering with the first contact between mother and baby. In such cultures, the need to give birth in privacy was always respected. Such cultures developed in places where humans had to live in harmony with the ecosystem, where it was an advantage to develop and maintain a respect for Mother Earth.

A revolution will occur in our vision of violence when the birth process comes to be seen as a critical period in the development of the capacity to love.

References

1. Carmichael, M.S., Humber, R., et al., *(1987). Plasma oxytocin increases in the human sexual response.* J. Clin. Endocrinol. Metab. 64: 27.

2. Egli, G.E., Newton, M. *(1961). Transport of carbon particles in human female reproductive tract.* Fertility and Sterility, 12: 151-155.

3. Mead, M. *(1948). Male and Female.* New York, William Morrow and Co.

4. Reich, W. *(1968). The Function of Orgasm.* London: Panther Books.

5. Pert, C.B. and Snyder, S.H. *(1973). Opiate receptor: A demonstration in nervous tissue.* Science 179: 1011-1014.

6. Odent, M., *The foetus ejection reflex (1987). Birth 14:104-105.* See also Odent, M. (1991). Fear of death during labour. J.of Reproductive and Infant Psychology, 9:43-47.

7. Malinoski, B. (1919). *The Sexual Life of Savages.* New York, Harvest Books.

This article was published in Primal Health Research