It's a Boy!

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Posted: 09/01/2010

Introduction

> But if you be desirous to know whether the conception be man or woman: then let a drop or two of her milk be expressed on a smooth glass or a bright knife, or else on the nail of one of her fingers. If the milk flows and spreads widely upon it, by and by then is it a woman child: but if the drop continues to stand still upon that which it is milked on, then is it sign of a man child.[1]

Humans have long sought to foretell the sex of an unborn child. Although the socially correct notion in the contemporary United States is, "I don't care what it is, as long as it's healthy," most people do have a preference, and only the rare couple will pass up an opportunity to discover the baby's sex before birth.

The fact that boys remain the first choice of parents worldwide, now and in the past, is no secret. Viewers of the television miniseries "The Tudors" saw how King Henry VIII's desire for a male heir influenced world history. In late 16th-century France, Louise Bourgeois, midwife to Marie de Médicis (the second wife of King Henri IV), was paid 500 écus to deliver a son, but only 300 for a daughter.[2]

For centuries, the sex ratio at birth showed a small preponderance of boys: 103-106 boys for every 100 girls. The stability of this ratio in all societies is assumed to be nature's method of compensating for the increased mortality of young males and balancing the sexes by the time of puberty. A provocative article from *The Economist*, "Gendercide: The Worldwide War on Baby Girls,"[3] suggests that human interference during the past 20 years has created a preponderance of males in many countries. For example, the sex ratio in China was 124/100 during 2000-2004. Nick Eberstadt, a demographer at the American Enterprise Institute, believes that this preponderance is not due to any country's particular policy, but to "the fateful collision between overweening son preference, the use of rapidly-spreading prenatal sex determination technology, and declining fertility."[3] This trend may have more effect on society than the bedroom antics of ancient royals has.

From a modern perspective, it seems apparent that historical methods for predicting the fetal sex were no better than chance, and thus more innocuous. The obstetrician François Mauriceau (1637-1709) admitted as much:

> Many women want us to tell them if it is a boy or a girl -- which is absolutely impossible. Yet there is scarcely a midwife who does not brag about her predictive skills; and when they are right, it is surely as much by luck, as from any possible science...But we are sometimes pressured by women or their husbands into giving an opinion, and must indulge them as best we can by looking for some rather uncertain signs.[4]

Hippocratic Teachings

Mauriceau described the 2 principal signs attributed to Hippocrates (460 BC-ca. 370 BC):

Book 5, Aphorism 42: The woman pregnant with a boy has good color; but if it is a girl, she is pale.

Book 5, Aphorism 48: The male fetus is usually inclined to the right side, the female to the left.

These beliefs were passed down in obstetric texts until the 1800s. In 1771, Professor D. De la Brousse affirmed his faith in Hippocrates's Aphorism 48 and correctly predicted the sex in 27 of 30 cases by palpating the maternal pulse. He theorized that the inclination of the fetus toward one side exerts pressure on the ipsilateral abdominal blood vessels and diminishes the mother's pulse on that side. Thus, the side on which the fetus lies has a fainter pulse; because a male fetus usually lies to the right, a weaker right pulse predicts a boy.[5]

In addition, a woman carrying a boy was often said to seem happier, more energetic, have less nausea, be aware of movement earlier, have her right nipple become larger and firmer than the left, and have thicker milk.

Mauriceau was skeptical of those who linked conception during various lunar phases with fetal sex. He also discredited the idea that boys were produced by sperm from the right testicle by describing the case of a man who had both a son and a daughter after losing his right testicle during a hernia operation.

Ambroise Paré (1510-1590), the "father" of French surgery, described all the traditional signs mentioned above and acknowledged the natural superiority of males over females, but he also offered the following admonishment:

> It is by God's Will that males and females are produced. It seems to me unwise for husbands to blame their wives or girlfriends for producing girls. For it is not within the power of man or woman to conceive a male or a female at will.[6]

The notion that the mother determines the infant's sex was prevalent throughout the ages and explains why nobles were quick to discard women who could not bear sons. As late as 1900, the London obstetrician E. Rumley Dawson combined this belief with the Hippocratic tradition and published a theory on sex determination:

> The sex of the fœtus is not due to the male parent, but depends on which ovary supplied the ovum which was fertilised, and so became the fœtus. I find that a male fœtus is due to fertilisation of an ovum that came from the right ovary, and a female fœtus is due to fertilisation of an ovum that came from the left ovary. This I shall now proceed to prove.[7]

Despite Mauriceau's doubts about the accuracy of the various methods in vogue, he showed a keen understanding of human nature when he gave the following advice to midwives who insisted on predicting the fetal sex:

> I would first ascertain the couple's wishes before making a recommendation, and then predict the opposite. In this way, if the midwife is right (even if only by chance), she will be judged to be a skilful woman; if the guess is wrong (as will happen one out of two times) the couple will be happy to get what they wanted and be much less critical, since we tend to be well disposed when an unexpected gift comes our way.[4]

Fetal Heart Rate

In 1833, Evory Kennedy wrote the first systematic publication on fetal heart auscultation. In 1859, Ferdinand Frankenhauser delivered a paper before the Obstetrical Society of Berlin, suggesting that a more rapid fetal pulse (ie, an average of 144 beats/min or more) during the last trimester of pregnancy foretold that a girl would be born, whereas a rate of 124 beats/min or less signified a boy. Numerous publications on this subject appeared over the next 50 years, with inconsistent results. Perhaps the largest published study was reported by John Cyril Holdich Leicester in 1907. Working in Calcutta, he measured the fetal heart rate at term, immediately before active labor, in 550 women of various races. The findings were correlated with both the sex and weight of the newborn. His conclusions were that:

- Sex has practically no effect on the frequency of the fetal heart beat;
- It is impossible, in any given case, to form even a rough judgment with regard to sex using the fetal heart rate; and
- As a general rule, weight seems to exercise a distinct influence, because the slower the fetal heart rate, the bigger the child is likely to be. However, numerous exceptions exist.[8]

Surprisingly, many clinicians and patients today seem to still believe in this relationship between sex and fetal heart rate.

Other Cultures

Thomas R. Forbes devoted several pages of his 1959 article[9] to more ancient and diverse customs. A method of the early Egyptians that possibly dates back to the Old Kingdom (3000-2000 BC) can be found in the Berlin Papyrus:

> A mixture of dates and sand was placed in two flasks. To one flask was added barley or spelt; to the other, wheat. The grains had previously been soaked in the urine of the pregnant woman. If the wheat sprouted first, a son would be born; if barley, a girl.[9]

Forbes concluded his paper thus:

> Thus the record of man's constant, driving curiosity to know the sex of the unborn child. Of course he need wait only a few weeks or months to have the indisputable answer. But curiosity, in ancient Egypt as now, has little patience; then and now, man has foretold the future as best he can.[9]

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