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NEWS, VIEWS AND COMMENTS

Multiple Birth Watch

The news of the last year has been replete with stories of multiple births. The most prominant, of course, was the story of the McCaughey septuplets of Carlisle, Iowa, born 19 November 1997. Another set of septuplets was born in January of this year to 40-year-old Hasna Mohammed Humair of Saudi Arabia. Not to be outdone, a Mexican woman was reported in mid-February this year to be carrying nine foetuses, but the estimate was reduced to seven before she finally gave birth to a mere six healthy babies on the last day of the same month. All three women had been taking fertility drugs (Pergonal in the US and Mexico, and Clomid in Saudi Arabia), but the Saudi woman was already a mother of six, did not wish to have more children, and took the drug only to regulate her menstrual cycle. This rash of news reports on high-order multiple births leaves the impression that there has been an increase in the rate of these events. Systematic studies confirm that this impression is well founded.

The Centers for Disease Control and Prevention (CDC; http://www.cdc.org/) and the National Center for Health Statistics (NCHS; http://www.cdc.gov/nchswww/) have tracked trends for the United States in multiple birth and have made statistics and methodological information available through their web pages. Links to many of these resources can be accessed quickly from http://www.cdc.gov/nchswww/about/major/natality/natality.htm. For a more complete and current listing of sources, go to http://www.cdc.gov/search.htm and search for 'multiple birth' or 'triplet birth'.

According to CDC and NCHS reports based on 100% of birth certificates in the United States, the number per annum of triplet and higher-order multiple births increased nearly five fold from 1971 (1034 multiples) to 1995 (4973 multiples – 4233 triplets, 315 quadruplets, 46 quintuplets). Triplet births per 100 000 births increased by 272% between 1980 and 1995.

According to the CDC report, one third of the increase in triplet births can be attributed to a shift upward in maternal age, but the remaining two thirds are due to increased use of ovulation-enhancing drugs, in vitro fertilisation, and other assisted reproduction techniques. The CDC also noted that, compared with infants born in single deliveries, triplets have 12 times the risk of dying within the first year of life – even today after a 40% decline in the rate of triplet-infant mortality between 1981 and 1991. A longitudinal study of 11 mothers of triplets reported in Fertility and Sterility (1997; 67: 1162–1165) revealed an additional risk of triplet birth – emotional distress. Four of the eleven mothers were taking medication for depression, and as a group they appeared fatigued and psychologically distressed. Newer techniques of assisted reproduction might reduce the risk of high-order births. One such method, called FASIAR (follicle aspiration, sperm injection and assisted rupture), makes use of ovulation-stimulating drugs, but a needle is used to remove eggs directly from follicles so that multiple births are made less likely. The technique has been used successfully at least once (Fertility and Sterility, 1997; 68: 1148–1151).

The CDC also reports that the rate of twin birth increased 30% in the United States from 1980 to 1994. Just as for higher-order multiple births, they attribute the increased rate of twinning to later maternal age and increased use of fertility drugs. Thus, as one would expect, the dramatic change is not observed in monozygotic twins, but there may be a slow, small increase in MZ twinning rate, at least in England and Wales from 1938 to the present (Murphy and Hey, Lancet, 10 May 1997). Surprisingly, the rate of dizygotic (DZ) twinning may be declining once new fertility treatments are taken into account (Tong et al., Lancet, 22 March 1997). A decreasing rate of DZ twinning was seen both in Hong Kong and in England and Wales from about 1960 to 1980, after which time the rate increased rapidly. Fertility drugs probably caused the increase in DZ twinning after 1980, but the decline during the 1960s and 1970s is of uncertain origin.

A new form of twinning

A curious and controversial offshoot of the growth of biomedical technology was observed recently at the intersection of surrogate mothering and in vitro fertilisation. As reported by Reuter Information Service in March 1997, Italian Gynaecologist Pasquale Bilotta announced that a 37-year-old Italian mother, identified only as 'Angela', had been implanted with two embryos created from the sperm and eggs of four individuals. Angela had agreed, without being paid for anything except her expenses, to act as a surrogate mother simultaneously for two infertile couples. The procedure was carried out in Switzerland because such procedures are not allowed by the Italian medical code of professional conduct. The announcement created an uproar in Italy as the Roman Catholic church vehemently opposes both in vitro fertilisation and surrogate motherhood. The surrogate mother reported that she was a Roman Catholic herself, but that she disagreed with the Church's view and saw her effort to help others to be undeserving of condemnation. The continuing story was carried by The Lancet (1 November 1997) where it was reported that Angela gave birth to a healthy boy and girl after 36 weeks gestation. Parentage was confirmed by DNA fingerprinting. This 'five-person pregnancy' may be the first example of twins who share none of their genes identical by descent from their parents (because they share no parents). Rare cases of half-sibling twins have been reported before, but these are surely the first non-sibling twins.

Web watch

The Behavior Genetics Association (BGA) maintains a home page at http://www.bga.org/. The BGA annual meeting will be held in Stockholm, Sweden, from 8–10 June 1998. More information about the meeting, abstracts of the presentations, information about future meetings and about BGA membership are all available through the BGA home page. This year's BGA meeting follows closely on the Ninth International Congress on Twin Studies in Helsinki, Finland, 4–6 June 1998. Information about the latter meeting is available from the home page of the International Society for Twin Studies at http://kate.pc.helsinki.fi/twin/. The author of the present article maintains a web page at http://taxa.psyc.missouri.edu/-mbmiller/ that includes links to resources of use to geneticists and twin researchers.

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