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IN THIS ISSUE:

The Hazards of Amniocentesis and Ultrasound



Dr. Robert Mendelsohn

I've long had my suspicions about amniocentesis (the drawing of fluid by needle from the mother's womb) and ultrasonography (diagnosis by means of ultrasound waves). Unfortunately, those suspicions are fast being confirmed as these techniques come into more widespread usage and thus are more frequently abused. Women as young as 30 are beginning to think that no pregnancy can be complete until amniocentesis is performed, regardless of the fact that, if something indeed is wrong with the fetus (and if the laboratory findings are correct), there is no remedy other than abortion. Just how well my suspicions have been confirmed is illustrated by the first question in this month's Newsletter, one I answered for the first time in 1976. And that is followed by my next remarks which illustrate the reality of what has happened in the years since 1976.

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Q

There must be others like me who have more than one child of the same sex and would give anything for just one of the opposite sex. Some time ago I read about timing sexual relations so that one can control the sex of the fetus. Can you tell me at what time during a woman's cycle she has a greater chance of conceiving a female?—M.K.

A

Predetermining sex by amniocentesis my suspicions in 1976 I have heard all kinds of advice about timing, positions and emotions during intercourse. Unfortunately, to my knowledge, none of these theories has been statistically or scientifically substantiated.

A prominent obstetrician who used to practice in the Chicago area could examine an expectant mother and then announce his prediction of the child's sex, emphasizing that he was writing it down so he could prove his crystal ball capabilities. On the paper, he always wrote the OPPOSITE of what he told the mother.

He was always right; if the mother gave birth to the desired sex, who would ever refer to the paper? But if she delivered a boy instead of the girl the doctor had predicted verbally, he would produce his written prediction. Even if the mother remembered what he had told her, how could she challenge the written word of an esteemed physician?

Today, by a technique known as amniocentesis, it is possible to predict the sex of an unborn infant. Despite the salesmanship of some doctors who use this procedure, and despite its value in certain rare instances, no one knows the long-term effects of amniocentesis.

In our culture, it seems that whatever can will be done, regardless of value or lack thereof. I hope that, in spite of the fact that we are able to determine the sex of a fetus, we will refrain from using technology for technology's sake.

I'm sure that whatever sex your baby turns out to be, you'll love it very much.

Aborting babies of the wrong sex—my suspicions confirmed in 1979 Modern medicine has done it again. Holding fast to the dictum that "Whatever can be done will be done," doctors are performing everincreasing numbers of abortions in cases where amniocentesis has revealed that the sex of the soon-to-be baby isn't quite what mom and dad had in mind. In medical centers like Johns Hopkins, Yale, UCLA, and George Washington (as well as in hospitals throughout the country where private physicians practice), doctors have turned to amniocentesis and abortions to control the gender of the child to be born. Of course, these medical centers only permit this second-trimester needling of the uterus "in carefully selected cases," and the doctors perform abortions on children of the wrong sex "with great reluctance." And probably they accept their fees with similar reluctance.

Despite the inroads sexual equality has made in recent years, the age-old preferences for sons in many cultures leads me to predict that it will be primarily females who are killed, aborted, eliminated, terminated, or whatever euphemism one prefers. This is an issue that the Woman's Movement would do well to consider in its concern about sex discrimination.

The ethical systems of traditional religions find this kind of action abhorrent. Even Joseph Fletcher, the father of modern situational ethics, who has condoned the withholding of life-saving surgery from mongoloid babies, is worried about this latest medical trick. However, the ethics of modern medicine, the dominant religion of our secular society, merely requires that we deliberate, even "agonize," over this problem while the physician-priests continue their lethal work in the inner sanctums of the temples of medicine.



Both my husband and I are 37 years old and in good health. We have two children aged 10 and 14. For a year, we've been considering having another child. Because of our ages, we are aware of the possibility the child may be retarded.

What advances have been made in detecting mental retardation during the early stages of pregnancy, and how accurate are the findings?-Concerned Parent



Benefits and risks of amniocentesis I presume you are asking me about amniocentesis, a method of detecting mongolism and other deformities prenatally. If so, you will rapidly discover the controversies surrounding this technique of inserting a needle into the fluids surrounding the fetus. Rather than my detailing all the benefits and risks of amniocentesis, I would advise you to speak to pediatric specialists who practice this technique for the most enthusiastic views on amniocentesis. You may have to search a little more diligently for information on the considerable risks to both mother and baby from amniocentesis. However, your own doctor should be able to easily provide a number of articles from scientific journals describing these dangers. One good place to start is an article entitled "The Risk

of Amniocentesis" in the British medical journal, The Lancet, December 16, 1978. Or he may want to direct you to the research of Dr. Hymie Gordon of the Mayo Clinic. Dr. Gordon states that the procedure of amniocentesis stands a 15 percent chance of being technically unsatisfactory: the sample of amniotic fluid may be inadequate, the culture may fail to grow, or the laboratory analysis may be wrong. Even if amniocentesis were able to determine the absence of the specific disorder for which it was administered, it could not guarantee that the fetus would be free of other disorders. According to Dr. Gordon, the two percent risk of damaging either the baby or the uterus is not justified by a couple's natural concern about the unborn baby's health, especially since there is no known prenatal treatment for the vast majority of defects detectable through amniocentesis. Finally, you should also discuss with your doctor the scientific evidence showing that the birth of babies with Down's Syndrome is due not so much to the age of the parents as to the amount of medical and dental x-rays they have received throughout their lifetimes.

When I was about four weeks pregnant, I was accidentally sprayed in the face with a herbicide. What effects might this have on my unborn child? Would amniocentesis show any birth defects caused by this? Are any other tests available for testing fetuses for birth defects?--D.R.

What does amniocentesis show?

Even if amniocentesis were 100 per cent safe, which it most certainly is not, it would not help in your case, since no defects resulting from environmental poisons, including herbicides, have been discovered as a result of this fairly new technique. I know of no safe tests that would provide an answer to your question. However, if you are able to identify the ingredients of the herbicide, you may wish to consult one of the many toxicologists either at universities or at state health departments. One such national expert in pediatric toxicology is Mark Thoman, M.D., of Des Moines, Iowa.

Dangers of amniocentesis, fetoscopy, fetal monitoring and ultrasound

Writing on "Technologic Intervention in Obstetrics: Has the Pendulum Swung Too Far?" in the prestigious medical journal Obstetrics and Gynecology (February 1978), R. Alan Baker, M.D. and fellow of the American College of Obstetrics and Gynecology, presents the documented references, as well as his personal concerns, about some highly touted obstetric intervention procedures. Dr. Baker analyzes the hazards of amniocentesis which include pneumothorax (air in the baby's chest from multiple puncture wounds), gangrene of a fetal limb, hemorrhage, and sudden fetal death. He examines fetoscopy (directly looking at the fetus through an instrument) and notes the possible hazards to the fetus from the intensity of the light in the instrument, as well as the damage which may occur from rupture of the amniotic sac. He criticizes fetal monitoring, referring to ominous scientific reports of fetal death in monitored labors, scalp abscess, uterine perforation, and maternal damage due to both the monitoring and the resultant Caesarean sections. Dr. Baker also questions the unknown long-term effects of ultrasonography.

These dangers and others were earlier described and documented by Fred Ettner, M.D., in "Safe Alternatives in Childbirth" and "21st

Century Obstetrics Now." both published by NAPSAC Inc., Marble Hill, Mo. Apparently, this kind of important scientific information is beginning to influence the policy of such national organizations as the National Foundation-March of Dimes which recently announced the phasing out of its support of amniocentesis.

Q

I have read your comments about the hazards of modern obstetrics in which you quote from Dr. R. Alan Baker's article in <u>Obstetrics and Gynecology</u>. I have also read Dr. Baker's article, and I must certainly agree with his questions regarding technologic intervention and the need for critical review and objective assessment of advocated techniques.

My concern comes from your paraphrasing of his "findings" and the subsequent impact on patients who have undergone amniocentesis for diagnostic purposes. Any intervention carries risk, and clearly the risk must be made known to the patient prior to the procedure. At our institution, we make every effort to explain and answer questions far in advance of scheduled procedures with as much review as possible. To deny amniocentesis to patients who are seeking information regarding the normalcy of a subsequent pregnancy when they have experienced a previous disaster is just as inappropriate as is intervening when it is not required.

I must comment on fetal monitoring with reference to fetal death in monitored labors, scalp abscesses, uterine perforation and maternal death being reported with no perspective as to the decrease in the number of unexpected fetal deaths in monitored labors, the benignity of scalp abscesses reported, the very rare occurrence of uterine perforation, and the vagueness of "maternal damage" referred to. In our experience, although the incidence of Caesarean section has risen dramatically over the past five years, as has the percentage of monitored labors, the instance of Caesarean sections performed for fetal distress has remained at exactly the same percentage as it was five years ago.

I must agree with your questioning of the blind acceptance of technology, but I hope all opinions will be tempered by reason.—
B.W. Jr., M.D., Associate Professor, The University of Michigan Medical School, Ann Arbor, Mich.



I appreciate your pointing out our areas of agreement, and I will try to shed additional light on our main areas of difference.

You may have seen Judith Randall's learned article in the April 16, 1978, Washington Post, titled "Is Fetal Monitoring Safe?" in which she takes to task monitoring enthusiasts who overstate the advantages and understate the risks of their technology. For example, she points out the concern of scientists about ultrasound, which after all, is a form of radiation that may have delayed detrimental effects on the child. Ultrasound, to which as many as one million women may be exposed annually and which often is advertised by its advocates as completely safe, recently has been the object of warnings by the Food and Drug Administration to medical professionals because of the lack of studies which demonstrate its safety.

Ms. Randall also brings evidence of the inability of fetal monitors to distinguish normal stress from abnormal fetal distress, thus leading to the ever-escalating Caesarean section rate. The C-section rate of some hospitals and doctors has become so frightening that I now recommend that pregnant women who are shopping for doctors include among their first questions, "What is your percentage of Caesarean sections?" Although enthusiastic dependence on monitoring has

helped produce C-section rates as high as 30 to 40 percent in some places, I know there are lots of good doctors throughout this country whose section rates are still respectable at 5 to 6 percent.

We don't seem to be in basic disagreement on the hazards of amniocentesis, but you apparently object to my publicizing this information. However, bringing this kind of information into public view is my stated purpose in writing my syndicated column, my Newsletter, and my book, "Confessions of a Medical Heretic" (Contemporary Books, 1979). As a matter of fact, if anything, I have held back from sharing ALL the contents of my thick file on amniocentesis with my readers. The file includes articles and case reports from the most distinguished medical journals and from neonatologists and geneticists (who would be most likely to harbor a bias in favor of the procedure) describing the significant medical complications and moral questions surrounding amniocentesis.

The Los Angeles County University of Southern California Medical Center, long considered to be one of the finest high-risk birth centers in the country, reported in April 1978 that its neonatal mortality rate had increased by 50 percent in the last three years. The directors of that program attributed this increase to the rise in malpractice insurance, the increasing numbers of Mexican women without prenatal care, a shortage of nursery personnel, the county bureaucracy, and economic and social developments beyond the control of the center's staff.

Even though they claim that the forces contributing to this increased mortality have nothing to do with obstetric and neonatal care, I think it is high time for careful studies (by those who do not make their living from promotion and utilization of these techniques) that investigate whether the risk of monitoring, ultrasound, amniocentesis, high rate of Caesarean sections, routine induction of labor and all the rest of the recently introduced technology are now outweighing the benefits and are leading to a surprising increase in mortality.



I am six months pregnant, and my doctor wants to take an ultrasound test to measure the baby's size. Is this procedure safe?--D.H.



Risks of ultrasound

Ultrasound, like practically everything else in medicine, is controversial. Thus, if you read "The Complete Book of Birth" (Simon and Schuster \$10.95) co-authored by a journalist, a nurse and an obstetrician, the unqualified answer is, "Ultrasound is free of radiation and has no known hazards."

However, if you read "Compulsory Hospitalization," a publication put out by a consumer group, the National Association of Parents and Professionals for Safe Alternatives in Childbirth (NAPSAC, Marble Hill, Mo 63764 \$6.50), you will find a chart which summarizes nine scientific studies carried out between 1967 and 1976 on the experimental effects of ultrasound. These animal and laboratory studies showed chromosome damage, breakdown of DNA, and a variety of changes in circulation, liver cells, brain enzymes, electroencephalographic tracings, nerve reflexes, and emotional reactivity. In addition, experimental rats exposed to ultrasound demonstrated delayed neuromuscular development and reduction of antibodies involved in immune responses. The author of the section on fetal monitoring concludes, "Many expectant parents refuse to be monitored because they are not convinced of the safety of diagnostic ultrasound, which is used in the external monitor."

Q

Two years ago, my then 20-year-old daughter delivered a healthy, magnificent baby girl. She attended natural childbirth classes and delivered normally with her husband at her side.

Yet even though she was a tall, strong, excellent athlete who was in good health and was having a normal pregnancy within a normal pelvis, she was coaxed into having an ultrasound test during her ninth month. The test was performed at no cost to her which leads me to wonder whether she was part of some sort of research experiment (she was not told that).

I am a registered nurse. I recently attended a seminar on prenatal care where it was disclosed that, when ultrasound was first used, there was some fear of chromosomal damage to the fetus, but this was later disproved. Do you know anything about these studies? The lecturer left before anyone could confront him, but you can imagine my anger!

My son and daughter both are highly gifted people with I.Q.'s in the upper one percentile, and their children also show signs of being gifted. How tragic if chromosomal damage were to be caused their offspring as a result of absolutely unnecessary testing!

There was no apparent fetal pelvic disproportion, and the baby's position was normal. Why then the need for ultrasound examination?--R.N.



Your daughter's experience indicates how even a healthy person, using ordinary medical care, is exposed to the kinds of dangers one encounters when walking through a minefield.

James A. Stockman III, M.D., associate editor of the 1979 Year Book of Pediatrics (Year Book Medical Publishers, Chicago), states, "Whether ultrasound is as safe as it appears to be remains to be seen. Ultrasound can produce breakages in purified DNA." Even though the dosage producing this damage is higher than that used in diagnostic testing, Dr. Stockman concludes: "Until all the answers are in, ultrasound should be reserved for instances where this is the test of choice for an indication that warrants its use." Stockman recalls: "The use of ultrasound reminds me of the days when every shoe salesman had a fluoroscope in his store. It was fun watching your toes wiggle, but I do not think I would do it again...."

If you want to learn about nine scientific studies which show dangers of ultrasound (chromosome damage, changes in circulation, liver cells, brain enzymes, electroencephalographic tracings, nerve reflexes and emotional reactivity, delayed neuromuscular development, and reduction of immune antibodies), read "Compulsory Hospitalization" (NAPSAC).

Once you have studied these documented pieces of research, you will be in a position to challenge any doctor who practices this "just-in-case" medicine to produce comparable studies proving that ultrasound is safe. After all, one of the rules in modern medicine is that doctors do not make the same mistake over and over: They simply make a different set of mistakes.

Q

I am enclosing a recent newspaper article which says that ultrasound tests involve no radiation. Is this true?--A.L.



Your brief question indicates how careful one always must be about partial truths. It is indeed true that ultrasound does not involve radiation; certainly, ultrasound is not x-ray. Ultrasound methods use mechanical properties of sound waves as opposed to electrical properties of electromagnetic fields.

However, the vital question is not whether ultrasound is x-ray radiation, but rather whether ultrasound can damage your baby. While some doctors (such as the one mentioned in the newspaper article you enclosed) claim that there are "no known medical side effects to the human," they may fail to fully inform the patient of the side effects already identified in experimental studies.

W. B. Jarzembski, Ph.D., associate professor of Biomedical Engineering and Computer Medicine, Texas Technical University, presents the evidence from investigators who have found that ultrasound may affect the growth of human cells. Ultrasound irradiation of red blood cells may change the ability of the cell membrane to pick up oxygen, thus impairing capacity of the cell to transfer oxygen to body tissues.

Other experimental studies between 1967 and 1976 have shown chromosome damage and breakdown of DNA. Animal studies have demonstrated circulatory problems, liver cell changes, alterations in brain enzymes and EEG patterns, delayed reflexes, emotional reactivity, reduction in immune antibodies, and delayed neuromuscular development. There is a woeful dearth of careful long-term studies in humans who were bombarded with ultrasound before birth.

One of the basic principles in modern medicine is that doctors never give up one dangerous procedure without taking on another. In accord with this precept, as x-rays--their dangers now recognized--are abandoned, there is no reason for blind confidence in their newly-introduced successor--ultrasound. Armed with complete knowledge of ultrasound's scientifically-established risks, pregnant women can strategically challenge their doctors to prove that this form of diagnostic energy is absolutely essential in their case.



Sugarcoated vitamins hard to digest

A researcher at the University of California claims that 50 per cent of all sugar-coated, hard-shelled vitamins are useless because they cannot be digested. Such sugar-coated vitamins now make up three-fourths of all the vitamins on the market.

Dr. Orville Miller, professor of pharmacy at the University of California, points out that vitamin manufacturers apply a waterproofing substance to vitamin capsules before they put on the sugar coating. The purpose of the waterproofing is to keep the syrupy sugar coating from seeping into the vitamin core. However, the waterproofing substance frequently adheres to the vitamins, preventing them from being completely absorbed by the digestive system. The best way to utilize vitamins in a pill, Dr. Miller notes, is to chew the pill thoroughly.

[&]quot;MalePractice: How Doctors Manipulate Women," Dr. Mendelsohn's latest book, is now available in paperback from Contemporary Books (\$6.95).

[&]quot;Confessions of a Medical Heretic" is available from WarnerBooks (\$3.25).

Dr. Mendelsohn now writes a regular column for $\underline{\text{Let's Live}}$ Magazine as well as a monthly column for $\underline{\text{RN}}$ Magazine.



by Marian Tompson President, La Leche League International



"You know, it's really getting scary to be pregnant nowadays" said Sybil who is expecting her first baby soon. "There's just too much emphasis on the possibility of the baby being damaged or of something going wrong during labor. My mother talks about her pregnancies and deliveries as some of the happiest times in her life but I think that's because she didn't have to face things like amniocentesis or fetal monitoring."

"Oh, I know what you mean," Mary chimed in. "My mother was in her 40's when my youngest sister was born, and yet today just being in your 30's puts you into a high risk category and makes you a prime candidate for amniocentesis." "And what's the purpose of having it done," wondered Debbie, "unless you are willing to have an abortion if your baby is defective?"

The questions raised by these three young women at a church picnic were some of the very issues discussed earlier this year at a conference called by the National Institute of Child Health and Human Development to assess the status of prenatal diagnosis and its contribution to the health and well-being of children. A report of the conference just issued by HEW, entitled "Antenatal Diagnosis," admits that changing social attitudes toward abortion and family size have served to facilitate the development and utilization of antenatal diagnosis techniques. Yet the report states that even if a patient would not consider abortion, it is helpful to know ahead of time that the baby will be defective so that preparations for its care can be made in advance (!!!).

But what surprised me most (aside from the cost which may be up to \$500) was the revelation that of the 40,000 amniocenteses performed to date in the United States, 95% of the fetuses were unaffected with the condition for which the test was performed.

So when deciding whether or not to have this procedure, parents must balance this information against the known hazards of amniocentesis and the possible hazards of ultrasound (used to determine the position of the baby before delivery) to which they will be exposing their probably well babies. This report clearly states that, while most studies on the use of ultrasound indicate no harmful effects, these results do not guarantee absolute safety since there is an unlimited number of alterations in human development that could be examined. The scientists recommend, in fact, that records be kept of exposed and control infants for evaluation at the time of birth and for years thereafter. It seems to me that at this point there are more questions than answers as to the wisdom of this technology. When parents agree to amniocentesis and ultrasound, they should be aware that their own babies may well be part of the research to determine the possible deleterious effects of these procedures.

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