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\*\*\*\*\*\*\*'This is a happy story.''

Norman Gant, M.D. chairman

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DALLAS--Fletcher is not an ordinary baby--he is the child his mother thought she would never have.

"Prenatal testing gave me the courage," says Fletcher's mother, Marcia Purdy.

Marcia Schramm, as she is known professionally, is one of the growing number of women,
mostly middle-class, urban and established in their careers, who are part of a trend
toward delayed pregnancies. First-time mothers in their late thirties--and even in
their forties--are no longer rare.

Marcia was 44 when she had Fletcher. A native of Iowa, she had come to Dallas to start the graduate program in dance at Southern Methodist University five years ago. Here she met and married Hareld Purdy, "a very gentle, very honest man." Hareld was already the father of three children in their late teens and twenties. Nevertheless, both Purdys wanted to bring a child into their new home.

Both, too, were aware of the possible dangers, both to mother and child, of pregnancies in women of advanced child-bearing age. More prevalent in older women are maternal complications such as toxemia, high blood pressure and kidney problems. Babies born to these mothers have a higher incidence of certain congenital disorders. Some of these are chromosomal disorders like Down's syndrome (formerly called mongolism) and neural tube defects like spina bifida (open spine).

In 1970, it was estimated that 13 percent of pregnancies in women over 35 resulted in 50 percent of the infants born with this genetic disease. According to The New England Journal of Medicine, one woman in 800 bears an infant with Down's syndrome; the incidence rises to one in 300 at 35 and to one in 50 at age 40.

Amniocentesis (drawing amniotic fluid from the fetal sac) is being recommended more and more to women like Marcia Purdy as well as those aware of a family history of genetic diseases. Also, patients who are already parents of one handicapped child are being encouraged to have genetic counseling and amniocentesis as well.

One of the few places in the North Texas area where this kind of amniocentesis is routinely performed is at The University of Texas Health Science Center through its Dallas Regional Perinatal Program.

Funded by the Robert Wood Johnson Foundation and supplemented by grants from Health, Education and Welfare, these regional programs are located in only four states. All resources of the team are aimed at identifying, evaluating and treating high-risk pregnancies. The Dallas center is one of the national forerunners in medical care to both mother and child.

Amniocentesis has been used at the center since 1970 to check the maturity of the fetus' lungs or kidneys and to detect and treat Rh incompatibility problems at a late stage of the pregnancy. Since 1972, earlier amniocentesis for prenatal diagnosis of genetic problems became a part of the perinatal program, which offers services to all private physicians as well as to the center's teaching hospitals.

Relatively painless, the procedure, including sonography, takes less than an hour. The location chosen for insertion is deadened with a local anesthetic. Most patients report, at most, a sharp cramp as the needle enters or a sensation much like a gas pain. Last year 154 amniocenteses were performed on patients from a large area of the state. Here scientific advances, such as amniocentesis, genetic counseling, sonography and high-risk care of both mothers and newborns, are allowing more wanted babies to be born to mothers over 35.

Women of today who postpone having children for economic and professional reasons might never have conceived a child or would have aborted a pregnancy due to fear of agerelated birth defects. Thus amniocentesis is truly a life-giving process.

'We are able to give our patients information on which to base real choices about continuing or terminating a pregnancy, and it is very reassuring to them during the remainder of their pregnancies," says Dr. Norman Gant, chairman of Obstetrics and Gynecology at the health science center.

Dr. Stewart Stone, a Dallas obstetrician, says he has seen no increase in abortions due to amniocenteses. In fact, he says, the number has remained constant since abortion for non-medical reasons became legal.

Not all patients who are given a negative report on their ammiocentesis choose to terminate their pregnancies. Stone says some, especially those who know they are greater risks because of their genetic histories, want ammiocentesis. "These patients say they want to know so they can 'get their heads ready' in case the test shows they will have a handicapped child."

However, Stone warns that amniocentesis should not be viewed as a panacea. "It's unfortunate laymen have too often gotten the idea that you just plug in the (amniotic) fluid for the test and everything will be fine."

There are risks. No matter how carefully done, bleeding or leakage of amniotic fluid from the fetal sac may lead to miscarriage. If the placenta is injured, an Rhincompatibility reaction may be triggered.

Nor is the test perfect. In a study reported in <u>The England Journal of Medicine</u>, there were 14 diagnostic errors in 3,000 procedures, six serious enough to affect the parents' decisions about whether to abort or give birth. Either parent may be a "carrier" of Down's syndrome, but there is no test for a male.

Before performing amniocentesis for genetic problems, genetic counselors Dr. Mary

Jo Harrod and Dr. Jan Friedman explain the procedure and its risks and interpret the

chances of having a handicapped child on an individual basis to each patient. They also

explain that in a few instances the test must be repeated if cells fail to grow in culture.

The whole prenatal-testing procedure, including sonography (picture of the fetus by ultrasound on a TV-like screen) costs around \$450. Charges for more complicated and unusual
genetic tests are not included.

Testing is offered to all patients who see faculty members and residents at the center and its teaching hospitals. At present about one-half of the physicians seeing obstetrical patients in the Dallas area refer appropriate patients to the center for these prenatal services. The geneticists agree that there will be an increase in the number of referrals in the future because of a January, 1979, court decision. The New York Court of Appeals has held physicians liable for additional medical costs because they did not warn the prospective parents of possible higher-than-usual risks for defects in their offspring.

This kind of accurate information is what the UT genetic counselors strive to provide. It is upon this information and the genetic interpretations made by the counselors that each set of parents must base their joint decisions. 'We never tell a couple what to do or what not to do,' says Harrod. 'We explain the possibilities and chances and let them decide.'

The culture from the amniotic fluid will tell whether the child is male or female. But Friedman and Harrod stress that sex determination is not considered an appropriate reason for prenatal diagnosis except in cases of sex-linked disorders like hemophilia. Sometimes the counselors may refer a couple for artificial insemination in certain cases of sex-linked genetic disorders.

Physicians at the center believe that amniocentesis is best accompanied by sonography, a painless procedure which translates echoes into shapes on a TV-like screen. Sonography is used to gain information about the pregnancy in order to avoid injuring either the fetus itself or the placenta during amniocentesis. Dr. Rigoberto Santos-Ramos, the center's sonography expert, also performs sonography for other medical reasons.

Women with special medical problems during pregnancy need special care. Dr. Peggy Whalley, professor of obstetrics and gynecology, established one of the early wards for 'high-risk' mothers in the country at Parkland Memorial Hospital in 1973, in order to head off major complications to both mother and child. She started a second high-risk program at nearby St. Paul Hospital this year. Patients in these centers average two-month stays.

Among problems that bring women to a high-risk ward are high blood pressure, which can cause convulsions and result in kidney damage, and diabetes, which is often accompanied by circulatory problems. These conditions are not only dangerous to the mother but also to the fetus. And both can lead to premature delivery, the single largest cause of infant death in the U.S.

Major advances in both perinatal and neonatal care have lowered the neonatal mortality rate as a whole in this country. A great deal of credit for saving neonatal lives in Dallas, says center neonatologist Dr. Charles Rosenfeld, goes to the obstetricians aware of high-risk pregnancies and the availability of more neonatal and pediatric intensive care units. These units are not only saving infants' lives, but producing healthier babies. There highly specialized equipment with highly trained staffs are key to the premature infant's survival.

What happens to parents like Marcia and Hareld Purdy if after going through counseling and prenatal testing, they were to have a handicapped child? Are they left to deal with the problems of the child and resulting problems to the family alone?

No, says Dr. Doman Keele, associate professor of pediatrics, who heads the University Affiliated Center and acts as assistant director for the Birth Defects Center at Children's Medical Center. The two centers offer services to these parents which include immediate consultation, medical evaluation and follow-up by the birth defects team and other specialists; genetic counseling for parents; referrals to local agencies where parents can find help and support; and "crash courses" at the University Affiliated Center, a training program for health professionals who will be working with handicapped children.

"Grief counseling is also offered to these parents, for often when a child with a birth defect is born, the parents go through exactly the same stages of grief as for a death. But through counseling, parents find that having a handicapped child is not the 'end of the world.'

"There is a great variability in the severity of many handicaps," Keele points out.

And some handicaps are slight and treatable, such as cleft palates and club feet. A few disorders may even be treated in utero during the mother's pregnancy. Also, there are many degrees of severity in the mentally retarded child, and many of these children bring joy to their families and function well as adults.

fourth add saving babies

Marcia agrees. Fletcher was born with a clubbed foot, one of the defects which do not show up with prenatal testing. His problem, however, is slight and is being corrected by a special brace and exercise.

"It's a small price to pay for the child I thought I would never have. And wouldn't you know a dancer would have a baby with a club foot?" She adds with an impish grin.

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