

INSTITUTE: National Institute of Child Health and Human Development

STUDY NUMBER: 00-CH-0219 PRINCIPAL INVESTIGATOR: Carolyn A. Bondy, M.D.

STUDY TITLE: Turner Syndrome: Genotype and Phenotype

Continuing Review Approved by the IRB on 5/27/09

Amendment Approved by the IRB on 5/27/09 (V)

Date Posted to Web: 6/26/09

Parent of Patient with Turner Syndrome

INTRODUCTION

We invite you to take part in a research study at the National Institutes of Health (NIH).

First, we want you to know that:

Taking part in NIH research is entirely voluntary.

You may choose not to take part, or you may withdraw from the study at any time. In either case, you will not lose any benefits to which you are otherwise entitled. However, to receive care at the NIH, you must be taking part in a study or be under evaluation for study participation.

You may receive no benefit from taking part. The research may give us knowledge that may help people in the future.

Second, some people have personal, religious or ethical beliefs that may limit the kinds of medical or research treatments they would want to receive (such as blood transfusions). If you have such beliefs, please discuss them with your NIH doctors or research team before you agree to the study.

Now we will describe this research study. Before you decide to take part, please take as much time as you need to ask any questions and discuss this study with anyone at NIH, or with family, friends or your personal physician or other health professional.

Nature of the Study

Your daughter is participating in a clinical research study at the National Institutes of Health to evaluate the clinical and genetic (inherited) factors related to Turner syndrome. During this study, we will compare the genotype (specific genes each individual carries) with the phenotype (specific physical and mental characteristics of each individual) in individuals with Turner syndrome.

Genotype refers to the entire genetic makeup of an individual. Phenotype refers to a group of traits or characteristics, resulting from both genes and the environment. Our genes provide the messages that instruct the cells of our bodies what to do and when to do it. Our genes are responsible for the color of our eyes and hair, our height, our development, and many other things. We all have genes that we inherit from our parents, which are located on our chromosomes. These chromosomes are rod-like structures in all the cells of our body. Most cells in the body contain 22

MEDICAL RECORD**CONTINUATION SHEET for either:**

NIH 2514-1, Consent to Participate in A Clinical Research Study

NIH 2514-2, Minor Patient's Assent to Participate In A Clinical Research Study

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pairs of chromosomes called autosomes and one pair of sex chromosomes. The X chromosome represents one of the sex chromosomes, of which women normally have two copies.

Turner syndrome is a common genetic problem, affecting one out of every 2500 females. Those with Turner syndrome often have a single X chromosome, or one normal and one defective X chromosome. X-chromosome problems can cause abnormal physical characteristics, such as a webbed neck, low set ears, and heart or kidney defects.

X-chromosome defects may also lead to short stature, lack of sexual development, and ovaries that do not work properly. Until now, most studies of Turner syndrome have focused on children's problems, such as short stature and delayed or absent puberty. Recently, it has been noted that adult women with Turner syndrome have a much higher risk for developing medical problems, such as high blood pressure, diabetes, and osteoporosis (fragile bones) than women of the same age who do not have X-chromosome defects. It is not known whether these health problems are due to specific, X-chromosome related genetic problems, or to absent or inadequate ovarian hormone effects.

We hope to identify the specific X-chromosome genes that cause many of the medical problems in girls and women with Turner syndrome. By learning more about the genes that cause this disorder, we hope to improve the diagnosis and treatment of individuals with Turner syndrome and possibly of women's health problems, in general.

We are also interested in learning more about how inherited traits are passed on from one generation to the next. Those with Turner syndrome are affected in different ways by the condition. Some have many features characteristic of Turner syndrome, while others have very few. We would like to find out why certain traits of Turner syndrome are expressed in some individuals and not in others. In order to do this, we will require a small blood sample or inner cheek cell sample from you for genetic testing. Your participation is entirely voluntary.

Criteria for Admission to this Part of the Study

Biological parents of individuals with Turner syndrome (who are also participating in this protocol) are eligible for the genetic analysis portion of this study.

Procedures of the Study

To perform the genetic testing, we may obtain a blood sample or an inner cheek cell sample from you, depending on which is more convenient for you. To collect the cheek cell sample, a brush-like swab is used to scrape the inside of the cheek. The cells from the cheek are collected on the swab and allowed to dry. We will remove the DNA from your cells in the laboratory and analyze the X-chromosome sequences. We will not do any other genetic studies without contacting you for permission. It is possible that information obtained from these studies will be published in the medical literature. If this is done, samples will be coded so that they cannot be connected with you and you will not be identified by name.

Risks and Discomforts

For those that contribute DNA from a blood sample, one risk of the protocol is blood drawing. Approximately 10 ml (< 1 tablespoon) of blood may be drawn for genetic testing. This amount is well below the NIH safety guidelines for adults, which limits blood drawn to 450 ml in a six-week period. There is the possibility of a small bruise or bleeding at the site where the needle is inserted for the blood sample. There may also be some discomfort with having blood drawn as the needle is inserted.

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NIH-2514-1 (10-84)

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P.A.: 09-25-0099

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NIH 2514-1, Consent to Participate in A Clinical Research Study

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There is no pain or discomfort with the collection of a cheek cell sample. There are no risks involved with this procedure.

In the course of this study, we may obtain information about family relationships. For example, we may learn that a child is not biologically related to the parent (as in adoption, for example) or that a person believed to be the father of a child is not the actual father. We will not routinely make this information available to family members or to the referring physician. We may make exceptions if this information were important for the medical care of the individual involved. If we are certain of its importance, we will provide the information to the physician providing medical care to the family.

Confidentiality

Any information obtained in the genetic analysis will be kept confidential, and will not be disclosed to any person or institution not collaborating in this research effort. The information from this study about your genetic material is entirely research-oriented and will not be placed in your medical record.

A Certificate of Confidentiality has been applied for / obtained from the Federal Government for this study to help ensure your privacy. This certificate means that the researchers cannot be forced to tell people who are not connected with the study, including courts, about your participation, without your written consent. This protection, however, does not prohibit the investigator from voluntarily reporting information. For example, if we learn something that would immediately endanger you or others, we may discuss it with you, if possible, or seek help.

Benefits

Your participation in this study may be of no direct benefit to you. However, the information that we obtain from your participation may help us better understand the genetics of Turner syndrome. It may also help to improve early diagnosis and treatment of those who have Turner syndrome and possibly others with medical problems in the future.

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OTHER PERTINENT INFORMATION

1. Confidentiality. When results of an NIH research study are reported in medical journals or at scientific meetings, the people who take part are not named and identified. In most cases, the NIH will not release any information about your research involvement without your written permission. However, if you sign a release of information form, for example, for an insurance company, the NIH will give the insurance company information from your medical record. This information might affect (either favorably or unfavorably) the willingness of the insurance company to sell you insurance.

The Federal Privacy Act protects the confidentiality of your NIH medical records. However, you should know that the Act allows release of some information from your medical record without your permission, for example, if it is required by the Food and Drug Administration (FDA), members of Congress, law enforcement officials, or other authorized people.

2. Policy Regarding Research-Related Injuries. The Clinical Center will provide short-term medical care for any injury resulting from your participation in research here. In general, no long-term medical care or financial compensation for research-related injuries will be provided by the National Institutes of Health, the Clinical Center, or the Federal Government. However, you have the right to pursue legal remedy if you believe that your injury justifies such action.

3. Payments. The amount of payment to research volunteers is guided by the National Institutes of Health policies. In general, patients are not paid for taking part in research studies at the National Institutes of Health. Reimbursement of travel and subsistence will be offered consistent with NIH guidelines.

4. Problems or Questions. If you have any problems or questions about this study, or about your rights as a research participant, or about any research-related injury, contact the Principal Investigator, Carolyn A. Bondy, M.D.; Building 10, Room 10/N262, Telephone: (301) 496-4686. Other researchers you may call are: Lea Ann Matura, PhD (301) 451-7164 and Vladimir Bakalov, M.D. (301) 496-3883.

You may also call the Clinical Center Patient Representative at 301-496-2626.

5. Consent Document. Please keep a copy of this document in case you want to read it again.

COMPLETE APPROPRIATE ITEM(S) BELOW:			
<p>A. Adult Patient's Consent I have read the explanation about this study and have been given the opportunity to discuss it and to ask questions. I hereby consent to take part in this study.</p> <p>_____ Signature of Adult Patient/Legal Representative Date</p>	<p>B. Parent's Permission for Minor Patient. I have read the explanation about this study and have been given the opportunity to discuss it and to ask questions. I hereby give permission for my child to take part in this study. (Attach NIH 2514-2, Minor's Assent, if applicable.)</p> <p>_____ Signature of Parent(s)/Guardian Date</p>		
<p>C. Child's Verbal Assent (If Applicable) The information in the above consent was described to my child and my child agrees to participate in the study.</p> <p>_____ Signature of Parent(s)/Guardian Date</p>			
<p>THIS CONSENT DOCUMENT HAS BEEN APPROVED FOR USE FROM MAY 27, 2009 THROUGH MAY 26, 2010.</p>			
<p>_____ Signature of Investigator</p>	<p>_____ Date</p>	<p>_____ Signature of Witness</p>	<p>_____ Date</p>

PATIENT IDENTIFICATION

CONSENT TO PARTICIPATE IN A CLINICAL RESEARCH STUDY (Continuation Sheet)

• Adult Patient or • Parent, for Minor Patient

NIH-2514-1 (12-08)

P.A.: 09-25-0099

FAX TO: (301) 480-3126

File in Section 4: Protocol Consent