IRB APPROVED
Dec 04, 2020

INFORMED CONSENT STATEMENT FOR RESEARCH

TITLE:	A Prospective Double-Blinded Randomized Controlled Trial Examining the Effectiveness of a Connective Tissue Matrix Implant in Reducing Post-operative Pain and Narcotic Use in Patients Under 55yo After Outpatient Rotator Cuff Surgery
PROTOCOL NO:	None IRB Protocol #20203260
SPONSOR:	CTM Biomedical
INVESTIGATOR:	Brian Badman 8607 E US 36 Avon, Indiana 46123 United States
STUDY-RELATED PHONE NUMBER(S):	Brian Badman MD 317-208-3866 (24 hours)

ABOUT THIS RESEARCH
You are being asked to participate in a research study. Scientists do research to answer important questions which might help change or improve the way we do things in the future.

This consent form will give you information about the study to help you decide whether you want to participate. Please read this form, and ask any questions you have, before agreeing to be in the study.

TAKING PART IN THIS STUDY IS VOLUNTARY
You may choose not to take part in the study or may choose to leave the study at any time. Deciding not to participate, or deciding to leave the study later, will not result in any penalty or loss of benefits to which you are otherwise entitled, and will not affect your relationship with your treating physician.

WHY IS THIS RESEARCH BEING DONE?
The purpose of this research is to evaluate the differences in pain scores and opioid medication use in patients undergoing rotator cuff repair with use of an investigational connective tissue matrix injection.

Flowable, placental-derived connective tissue matrix (pECM) is a potential option to supplement damaged tissue prone to inflammation as it introduces nascent, hydrated components of the inflammatory phase, including structural proteins and growth factors, which

allow for efficient repair. They have been shown to greatly reduce inflammatory cell influx and inflammatory cytokines present in dermal and mucosal surgical sites post-operatively. Moreover, placental-derived pECM reduces expression of prostaglandin E2, a potent pain mediator, *in vitro.* The purpose of the current study is to determine if pain and, more importantly, narcotic consumption is different in patient receiving the connective tissue matrix injection.

HOW MANY PEOPLE WILL TAKE PART?
A total of 70 patients will be enrolled into the study at all research sites with half (35) serving as the control (those treated without the graft) and the other 35 patients randomly selected to be treated with the connective tissue matrix injection.

HOW LONG WILL I BE IN THIS RESEARCH?
We expect that your taking part in this research will last 6 weeks.

WHAT HAPPENS TO ME IF I AGREE TO TAKE PART IN THIS RESEARCH?
You will be put into a study group by chance (like picking an envelope).

<u>You cannot choose your study group</u>. Both you and your surgeon (Dr. Badman) will be blinded to the group you are randomized to. This means that both Dr. Badman and you will not know what group you are placed in and the process of picking a group will be by chance. You will select an envelope (beginning with a total of 70) that has been sealed which has your group noted on the inside. The envelope will be opened towards the end of your rotator cuff surgery to determine if the injection is administered by Dr. Badman's physician assistant (Jenna Nowlin). Dr. Badman will not be present for the injection but will place the needle in the proper place at the end of the surgery so that if you are to receive the injection it is placed in the proper position. If your envelope states you are in the control group the needle will simply be removed at the end of surgery and nothing will be injected. Your grouping will be sealed and stored in a locked container at the surgery center until the study is finalized and all 70 patients are enrolled. After surgery, you will be prescribed a standard regimen of pain medications consisting of oxycodone IR 5mg tablets that will be taken as needed. These will be prescribed as 1-2 tablets every 4-6 hours as needed for moderate to severe pain. You will keep track of how many pain pills you take in an 8 hour period for the next 6 weeks after surgery.

	Group 1 (Control) Standard	Group 2
	Routine rotator cuff repair	Rotator cuff repair +ECM Graft
	35 subjects	35 subjects

During the research, you will not know which group you are in. (Your study doctor can find out in case of an emergency).

WHAT ARE MY RESPONSIBILITIES IF I TAKE PART IN THIS RESEARCH?
If you take part in this research, you will be responsible to:

- Receive the text message or email and respond to the questionnaires in a timely fashion. Surveys include assessment of your pain, general questions pertaining to function of your operative arm and the total number of narcotic pain pills you take at specific points in time.

- Perform routine follow-up visits. Most of these visits would be a standard part of routine follow-up exam for your rotator cuff surgery.

Participation in the study does include the potential loss of confidentiality of your medical record information and privacy. Such risks will be reduced by 1) removing direct participant identifiers (i.e. names, medical record numbers, date of birth) from information stored; 2) securing, in a separate location, and limiting access to the master list that links participant ID numbers to their information with direct participant identifiers; and 3) limiting access to information collected during the study.

You and your insurance company will be charged for the health care services that you would ordinarily be responsible to pay. In some cases, insurance will not pay for services ordinarily covered because these services were performed in a research study. You should check with your insurance to see what services will be covered by your insurance and what you will be responsible to pay. There will be no additional charge billed to you if you fall into the treatment group and the nanofiber graft is used.

WHAT ARE THE RISKS OF TAKING PART IN THE STUDY?

While participating in the study, the risks, side effects, and/or discomforts include:

- Risk of rotator cuff surgery with ECM graft: The extracellular matrix graft is sterilely processed. The primary risk of rotator cuff surgery is failure of the repair or incomplete healing. Other common risk of rotator cuff surgery include stiffness, pain, hardware complications and the low probability of infection. Possible risks of using the extracellular matrix graft include allergic reactions and infection. To date, no allergic reactions have been reported.

- Oxycodone may be prescribed for pain after your surgery and the potential risks of oxycodone may include an allergic reaction, vomiting, constipation, weakness, sweating, lightheadedness, dizziness, and drowsiness. Oxycodone has the potential to be abused.

- Risk of text alerts: A HIPPA compliant and password protected database called Surgical Outcomes System managed by Arthrex is the application that will help gather and collect the data. Texting is not a secure form of communication and there is a risk of loss of privacy by entering the information on your phone. One way to protect your privacy on your phone is to lock it with a password. Check with your phone carrier to find out what you can do to protect the information on your phone.

- Loss of confidentiality: Due to the multicenter nature there is a risk of loss of confidentiality in the review of your MRI and medical record. All measures to minimize the risk of this will be taken and assured including removing all identifying data for purposes of data analysis.

- There could be unknown risks that may occur from participating in this research.

WILL I BE PAID FOR PARTICIPATION?
You will not be paid for participating in this study.

ARE THERE ANY FINANCIAL DISCLOSURES BY STUDY STAFF?
Dr. Brian L. Badman has received consulting fees and holds equity with the sponsor. Please feel free to ask any further questions you might have about this matter.

WILL IT COST ME MONEY TO TAKE PART IN THIS RESEARCH?
Your insurance company will be billed as usual for your surgery. You will be responsible for costs your insurance does not cover. There will be no added cost to you for inclusion in this research. There is no added cost for individual study groups or for the group being administered the ECM graft. Based on your cell phone data plan, there may be fees associated with the text alerts that you may incur.

WILL BEING IN THIS RESEARCH BENEFIT ME?
We cannot promise any benefits to you or others from your taking part in this research; however, possible benefits to you include lessened pain and narcotic consumption following your shoulder surgery. Possible benefits to others is from the knowledge gained from this study.

WHAT ARE THE OTHER TREATMENT OPTIONS?
Participation in research is completely voluntary. You can decide to participate or not to participate. Your alternative to participating in this research study is to not participate and undergo standard rotator cuff repair.

HOW WILL MY INFORMATION BE PROTECTED?
Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. No information which could identify you will be shared in publications about this study.

Your information entered is also being stored in a password protected database called PatientIQ which is HIPAA compliant and only accessible by your doctor and research staff. All identifiable information including your name will be removed at the end of the study to allow for data analysis by the research staff. All information will be kept confidential.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the Western Institutional Review Board® (WIRB®), and (as allowed by law) state or federal agencies, specifically the Office for Human Research Protections (OHRP), and the Food and Drug Administration (FDA), etc. who may need to access your medical and/or research records.

WILL MY INFORMATION BE USED FOR FUTURE RESEARCH?
Information collected from you for this study may be used for future research studies or shared with other researchers for future research. If this happens, information which could identify you will be removed before any information is shared. Since identifying information will be removed, we will not ask for your additional consent.

WHO WILL PAY FOR MY TREATMENT IF I'M INJURED?
In the event of physical injury resulting from your participation in this study, necessary medical treatment will be provided to you and billed as part of your medical expenses. Costs not covered by your health care insurer will be billed to you. Also, it is your responsibility to determine the extent of your health care coverage. There is no program in place for other monetary compensation for such injuries. However, you are not giving up any legal rights or benefits to which you are otherwise entitled.

WHO SHOULD I CALL WITH QUESTIONS OR PROBLEMS?
If you have questions, concerns, or complaints, or think this research has hurt you or made you sick, talk to the lead researcher, Brian Badman MD at 317-208-3866 (24 hours). After business hours, please call the on-call physician at 317-208-3866 (24 hours).

In the event of an emergency, you may contact Dr. Badman at 317-208-3866 (24 hours).

This research is being overseen by WCG IRB. An IRB is a group of people who perform independent review of research studies. You may talk to them at 855-818-2289, researchquestions@wcgirb.com if:

- You have questions, concerns, or complaints that are not being answered by the research team.
- You are not getting answers from the research team.
- You cannot reach the research team.
- You want to talk to someone else about the research.
- You have questions about your rights as a research subject.

CAN I BE REMOVED FROM THIS STUDY WITHOUT MY APPROVAL?
The person in charge of this research can remove you from this research without your approval. Possible reasons for removal include:

- It is in your best interest
- You fail to reply to the required text alerts or email alerts

We will tell you about any new information that may affect your health, welfare, or choice to stay in this research.

WHAT HAPPENS IF I AGREE TO THIS RESEARCH BUT DECIDE TO WITHDRAW LATER?
You can leave the research at any time it will not be held against you. If you decide to leave the research prior to your surgery occurring, you will not be penalized and you will not lose your benefits.

If you decide to leave the research, contact the investigator so that the investigator can ensure that any information previously collected is removed.

PARTICIPANT'S CONSENT
In consideration of all of the above, I give my consent to participate in this research study. I will be given a copy of this informed consent document to keep for my records. I agree to take part in this study.

Participant's Printed Name:_____

Participant's Signature:_____**Date**:_____

Printed Name of Person Obtaining Consent:_____

Signature of Person Obtaining Consent:_____**Date**:_____