Mr Rishi Chana FRCS (Tr& Orth)
Consultant Orthopaedic Surgeon

Unicondylar medial replacement due to localised osteoarthritis.

Mako Robot Assisted Medial Unicondylar Knee Replacement Treatment Contract/Pro/Cons/Risk & Rehabilitation Profile:

It was a pleasure to review you in my clinic today.

We discussed your symptoms and determined that the knee has localised end stage arthritis of the inner knee but the other 2/3rds of the joint are intact and relatively healthy. We discussed that a partial knee replacement is the best option for your quality of life and function.

There has been a past medical history noted & no history of a DVT or VTE problems.

You have no known allergies and **are not aware of a Nickel allergy.**

On examination today there is a functional problem with the knee and was irritable to examine causing severe knee pain with no evidence of groin and thigh pain or discomfort.

The X-rays show bone on bone arthritis of the inner knee but sparing of the important ligaments and cartilage of the kneecap and outer knee compartments.

I have explained the implications of this to you today and explained that the joint has reduced thickness with regards to the cartilage and in some areas there is bone on bone rather than the articular cartilage which explains the pain and stiffness with the joint. There are also cysts caused on both sides of the joint because of pressure of the bone on bone and this is all part of the arthritis picture.

This is a physical problem, there will have good days and bad days and you may have flare ups which should be managed with analgesia and limited exercise regime and self help programmes which I have directed you towards today. I have advised you to look at the www.surreyimsk.com and arthritis websites, as well as an information sheet today and sent recommend some physiotherapy. I have also advised you to contact your insurer as they may have a self help programme.

If things get worse then one could always consider options including injections and a brace which could temporarily help the pain. Depending on how things progress, ultimately if you need to have a more long term definitive option we have touched on the implications and outcomes of joint replacement surgery and again you has been given an information sheet on this. I have explained that at this moment in time there is no need to do anything at the moment and one should monitor the symptoms and continue with the self help and self education programme that we have agreed on at the moment. Please come and see me at your convenience once you have had time to reflect and digest the information above and we will have further consultations in order to come up with treatment agreement plan.

I have explained that the options would be to continue with conservative treatment, have a local anaesthetic and steroid injections which could last for up to three months at a time but then would cause the pain to come back or consider a partial knee replacement. There is a small risk of infection or the steroid flaring up the pain before making it better. The risk is 1 in 1000. An infection may need a washout and antibiotics.

Having exhausted the conservative options above, we talked about the option of a knee replacement as this is the one and only form of long term definitive care that will offer an improved quality of life and long term pain relief.
I have explained that the knee replacement would use a cemented metal femoral or thigh bone resurfacing part with cemented metal tibial baseplate and a plastic liner inbetween to form a sloppy hinge joint of metal on plastic. This does not stop progression of arthritis within the rest of the joint but does give you the function and pain relief back to get your life back on track. At some point in the future, you may need a full knee replacement if the other parts wear out or if the plastic wears thin after several years (10 to 15 years).

You must inform the surgeon if you have any sensitivity to costume jewellery or a known Nickel allergy.

Your options here are to go for a standard replacement which do very well and my track record for results is excellent. My infection rate is 1 in 500 and dislocation risk of explained in the information attached.

The other option that I mentioned was including the use of a robot arm to assist with the accuracy of the bone cuts and preparation. I have been trained and certified to do these procedures, they do involve an extra 20 minutes of operative time and an extra cut and pins into the bones. The risks for these extra pins include infection 1in 500, pain which is normal due to the wound and lowest risk but significantly; fracture and vessel perforation but these are in very remote numbers of 1 in 10000 cases.

The benefit for the robot is pin point accuracy and knowing the digital measurement on the table rather an analogue measurement which is 1mm accurate rather than 4 to 5mm. There is also good evidence that the results for function, pain relief and how long the implants remain stable and functional for are better with eth robot assisted surgery due to the accuracy of placement.

As I also said, this is new to the UK. It has been in use in the USA for two years and has been involved in many successful hip and knee operations.

If we do go ahead with the robot, your case will be personally looked after by me and a dedicated robot specialist to plan your surgery after the CT scan is done. I want to reassure you that I have done around 1000 successful standard hip and knee replacements with great results and also used the navigation technology involved for around 100 cases so this is not unchartered territory for me or you! I also would like to stress that you are under no pressure at all to go with the robot option if you want a standard replacement which will invariably do very well anyway.

For completeness, please read the info below and arrange your booking with my secretary on 02031304050 as necessary.

The procedure itself takes about an hour, you will be with us for approximately two days in hospital and then will be discharged when safe to recover and mobilise with crutches for a few weeks in your own home. The clips come out at two weeks and most people at the three to four week stage feel 80% better and most people at three months feel 90% better. You can drive after 4 to 6 weeks.

I have explained it takes the rest of the year to get fully better to a 100%. It is normal for the leg to ache and swell for a few months after the operation, especially if you have been on your feet all day. The outside half of the scar is numb as the nerves come from the inside of the leg and the scar causes a shadow of numbness across the outside part of the knee.

After the operation, you will see and receive physiotherapy to move the new knee replacement. It is very important to keep moving the knee to prevent scar tissue building up, inside the new joint which will cause stiffness. When lying in bed, please keep the knee fully straight and do not allow any pillows or rolled up towels to sit behind the knee as this will cause it to heal bent and stop it from fully straightening. When sitting, please bend the knee to at least 90 degrees and use the opposite leg to push it back further by crossing your non-operated leg in front of the operated side at the ankles. This has been shown to you in clinic.

The risks involved in this operation include having a scar, there is a 1% risk of infection, there are also risks involved with having myocardial infarction or CVA (a stroke) and this as well as other complications can result in fatality but according to past medical history this is low in this patient's case. I have explained that the wear rates cause the knee to wear out after about 15 to 20 years, and there is also a small risk of loosening and fracture if one were to fall over and if this happens then you would need revision surgery. If a deep infection occurred then again one would need revision surgery and then this again happens in 1 in 200. We always try and get the legs to match up with the length but during the surgery I always achieve stability and balance first and then leg length secondary, although more than 95% of the time the legs are measured within 5mm of each other which is an acceptable standard and a normal within the population. Another risk is stiffness and you will have patient education with the physiotherapist about bending and straightening the knee after the operation to avoid this. The risk of this is 25% or higher if you do not comply. The other risks involve bleeding or nerve injury, about 1% of the time the tibial or peroneal nerves or tibial blood vessels can also become involved during the surgery and these are usually resolved if they become injured within six to nine months, the risk of this is 1 in 200, if the sciatic nerve is more permanently involved this can result in a foot drop and as an outpatient you will have crutches and orthotics to help with this. If there is severe injury to the nerve or blood vessel structures, immediate emergency surgery during the knee replacement operation may be required and can lead to amputation if unsuccessful. This risk is less than 1 in 1000. At the time of surgery, instruments are inserted into the thigh bone (femur) to hollow them out so we can insert the stem. During this, bone marrow can become dislodged into the blood stream and this can cause injury to the lungs in the form of a fat embolism. This can become worse if cement is also used for the stem preparation. This happens in all

cases to a very minor extent but rarely, especially if you have a weaker respiratory system this fat embolism syndrome can cause the lungs to become inflamed and congested with fluid. This may require high dependency unit support and monitoring and possible assisted breathing whilst the lungs recover, which may take a few days but can also increase the risk of a chest infection.

We have discussed our risk assessment for VTE and I have explained the NICE guidelines will be to use TED stockings, mobilisation for four weeks and chemical prophylaxis for 14 days and we will stick to these guidelines in order to minimise risk of a DVT and PE.

A risk of using chemical injections to thin the blood (clexane or fragmin, a form of heparin or aspirin) is that the blood becomes too thin and forms a haematoma or collection of blood around the joint. This may require a further operation to wash out the blood and prevent an infection. This can happen in 1 out of 200 cases. If an infection takes hold, this can lead to further surgery and even amputation in 1 in 1000 cases. The other thing to keep in mind is that up to 1 in 500 of people using clexane or fragmin can develop Heparin Induced Thrombocytopenia (HIT). This is a condition where the blood platelets become consumed due to the blood thinning injections. This can be an emergency where you need to be admitted and treated for generalised clots within the body which can lead to multi-organ failure in severe cases as well as a platelet transfusion. A blood test to measure your levels will usually be performed to check your platelet levels are fine. The other option is to take Aspririn 75mg once a day for two weeks which is relatively safe.

Patient instructions

We discussed and talked about signs and symptoms suggesting VTE (e.g., swelling, pain, redness, or venous distension in a limb, as well as pleuritic sharp chest pain or dyspnea; difficulty breathing) because 75% of postoperative VTE occurs following discharge from hospital. Please consult your physician immediately if you experience any of these symptoms or any experience necrotic reactions (black skin, not bruising) at an injection site, because this may suggest HIT. Finally, you should seek immediate medical attention for symptoms suggesting a severe allergic reaction, such as breathing difficulty, wheezing, and swelling of the face, lips, tongue, or throat.

Early mobilisation should be encouraged to diminish the likelihood of developing a VTE. If long-term prophylaxis is given, pre-arranging for patients to practise injections or for community-based organisations to be involved in giving the injections is recommended.

The patient is happy with these explanations and the risk profiles, I have also advised them to look at the Surrey Orthopaedic Clinic and iwantgreatcare.org websites and BMI knee replacement leaflet, I have given them my card with a 24 hour hotline should there be any problems after recovery so that they can contact us if there was a situation and I will see you due course for surgery.

Kind regards

Yours sincerely

Mr Rishi Chana
Consultant Hip & Knee Surgeon

I have read, reflected and understood the conversation above. As part of my Treatment Contract I have discussed and conveyed my specific goals, worries, concerns and questions with Mr Chana. These are outlined below and by signing this confirm that a shared decision about all aspects of my care have been completed to my entire satisfaction.

My goals or outcomes expected of the treatment including surgery are:

Get mobility and function to allow me to continue my lifestyle with keeping active and walking.

I understand the rest of the knee cartilage may wear out in time. This may then require a full knee at that time if symptomatic.

My specific concerns pertinent to my personal circumstances are:

Allow enough time to recover to get back to life and independence!

I accept the risk profile and procedure tailored to my personal circumstances and concerns raised through the consultations and give Mr Chana informed consent to perform the agreed surgery / treatment plan specified above. I have also reinforced my understanding of the plan above by explaining what I am going to say to my family at home about things back to Mr Chana so we are both happy with our understanding.

VTE Plan:
TEDS and Fragmin injections once daily for two weeks as per NICE guidelines.

Signed