Mark S. Sanders MD FACS
Presurgical Information for Fractures and Dislocations
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All surgery carries risks. This document has been compiled to educate patients on the risks/complications of **fracture osteosynthesis**. At the Sanders Clinic we recognize these risks and take preemptive action to minimize their occurrence. **THE MOST IMPORTANT RISK FACTOR FOR POST OPERATIVE COMPLICATIONS IS ENTIRELY UNDER THE PATIENT'S CONTROL. <u>THESE PROCEDURES CAN NOT BE SUCESSFULLY DONE ON THOSE THAT CONTINUE TO USE TOBACCO OF ANY FORM.</u>**

1. **Nerve or Vessel injury.** These are uncommon complications. Avoidance of these problems is best accomplished by careful surgical technique. Immediate recognition and repair of an injured structure if indicated in such cases. Sometimes temporary interruptions of nerve function occurs secondary to swelling around the nerve which may occur when the collarbone is lengthened. The vast majority of these will resolve with the passage of time.

2. **Thrombosis/embolism.** This is a complication that can occur after surgery. It is a blood clot that travels through the vein and becomes lodged in either a vein, somewhere in the body, or the lungs. It is more commonly seen in the lower extremities (thigh or calf), but may also occur in the upper extremities (arms). For surgically appropriate cases, spinal anesthesia has been shown to reduce the risk of blood clots. To further reduce the risk, Dr. Sanders' post operative plan may include early motion, ambulation, therapeutic exercise and the use of compression stockings, foot pumps, mechanical venous compression devices, aspirin and other blood thinning medications. All patients must discontinue the use of tobacco (nicotine constricts blood flow by constricting the veins) and all patients must be up walking no later than the day after their procedure.

   <u>It is important for patients to understand the warning signs of Thromboembolic disease</u>.

   The most likely signs and/or symptoms that the patient can notice and report include: **Excessive swelling of the limb**—this does not include ecchymosis or black and blue marks which are common and expected to be seen under the skin; **Soreness in the calf or arm; Rapid Heart Rate; Rapid Breathing Rate; Shortness of breath; Chest pain; Fever.**

   If you experience a rapid heart rate, rapid breathing, shortness of breath and or chest pain—these symptoms are serious and require immediate medical attention—call 911 and Dr. Sanders at 713-907-6076.

3. **Disturbed wound healing.** This problem is preemptively dealt with by assuring that patients are on a high protein diet with adequate caloric intake. Placing Platelet Rich Plasma (spun down from the patient's own blood) into the wound has been shown to accelerate wound healing. Avoiding certain anticoagulants in the early period leads to less accumulation of blood in the wound.

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Patient Initials

4. **Early or late infection.** This is a very serious event can occur in less than 1% of patients when antibiotics are given before surgery. The incidence is further reduced by preoperatively culturing the noses of patients looking for Staphylococcus bacteria. Those patients who harbor these bacteria can be treated with nasal antibiotic ointment and a different preoperative antibiotic. Furthermore, regular care of the surgical wound by showering with Hibiclens soap, and then placement of an antibiotic ointment will keep the wound from being colonized. Treatment of a deep infection involves intravenous antibiotics for no less than six weeks, and possible removal/replacement of implanted devices or materials.

5. **Hematoma.** This is blood that accumulates in the wound and may require a return trip to the operating room for evacuation. We strive to prevent this problem by taking down the tourniquet (when applicable) to electrocoagulate the small bleeding vessels in all surgeries, use of Platelet Rich Plasma to jump start the coagulation and healing process, and an adequate cold/compression dressing. This device is called the Cryocuff* and is a mandatory part of the process.

6. **Need for later plate and screw removal.** Approximately 15% of our patients, particularly the slender ones can feel a clavicle plate under the skin, and in shoulder cases It sometimes becomes problematic when carrying a knapsack. In these cases, an out patient procedure is done to remove the plate. After a few weeks, patients may resume athletic activities. Refracture after plate removal can occur in the immediate post operative period if the patient immediately returns to high risk activities.

7. **Medical Complications**. Surgery always carries risk of complications remote to the operated part. Older people may have heart, circulatory, pulmonary, kidney, arterial, venous, and diabetic problems. These patients typically are seen before surgery by an internal medicine doctor, a cardiologist and may undergo vascular tests read by a vascular surgeon /or radiologist.

8. **Nonunion/Malunion**. Surgeons cannot impose union on a fracture. We can do appropriate carpentry, encourage patients to avoid tobacco products, prescribe the correct amount of therapeutic stress to the bone, and supplement the diet with high protein, Vitamin D, and Calcium. Beyond that, we have no control. One in twenty operatively treated fractures will not heal and will require a secondary surgery.

I have read this document and have had my questions answered by Dr. Sanders and his staff. He has further discussed with me all nonsurgical options and other surgical options that may differ from the procedure that I am going to undergo. I agree to completely avoid any and all tobacco products from this day forward.

_____ Patient signature

_____ Date

_____Witness