Adam J. Farber, MD

Consent for surgical fixation of clavicle fractures

All surgical procedures are associated with certain risks such as pain, bleeding, infection, scarring, damage to blood vessels or nerves, anesthetic-related complications, thromboembolic complications, and medical complications (such as heart attack, stroke, or death).

- Pain: In an effort to decrease pain you will be adequately anesthetized during surgery and will receive pain medications post-operatively.
- Bleeding: Given the fact that a tourniquet is used at the time of surgery, the risk of bleeding is minimal.
- Infection: The risk of infection is approximately 1%. You will receive antibiotics through your IV during surgery. In addition the surgery will be performed under sterile conditions. Finally, you will be prescribed antibiotics for the first 24 hours after your surgery.
- Thromboembolic complications: Anytime surgery is performed there is a theoretical risk of developing a blood clot in the legs or the lungs. This risk is less than 1 in 5,000 cases. As a result, the routine use of blood thinners following surgery is not routinely recommended because the risk of developing complications related to thinned blood and excessive bleeding and swelling outweighs the potential benefit of preventing a blood clot. If, however, you have a personal or family history of a blood clot or a clotting disorder, blood thinning medications are recommended; please be sure to discuss this with your surgeon. If you develop calf pain, chest pain, or shortness of breath after your surgery, please notify your surgeon immediately or proceed to the emergency department for further evaluation as these are symptoms sometime associated with the development of a blood clot.
- Medical complications or anesthetic complications: Anytime surgery is performed there is a risk of medical complications (such as heart attack or stroke) or complications related to the anesthesia. Although these risks are minimal they are not zero. If you are healthy these risks are extremely unlikely. If you have a history of advanced age or medical problems, you likely will have been referred to your primary care doctor to assess your risk for general anesthesia. Please ask questions to the anesthesiologist on the day of surgery regarding potential anesthetic complications.

Potential complications more unique to clavicle fracture fixation include the following:

- Nonunion (the fracture fails to heal), malunion (the fracture heals in poor position), delayed union (the fracture heals very slowly): Although these risks exist anytime a fracture is fixed, these risks are **lower** with surgery than with non-surgical treatment because at the time of surgery we are able to position the bones in

near anatomic position so that they are more likely to heal, more likely to heal in the correct position, and more likely heal in a timely fashion.

- Painful hardware: During the fixation of a clavicle fracture, a plate and screws are used to hold the bone fragments in the correct position while the healing process occurs. Although the plate and screws are thin and small, there is not much soft tissue padding around the clavicle. It is possible that the plate and/or screws may be prominent and irritate you after your surgery. If this occurs, the painful hardware can be removed at a minimum of 6-12 months after the surgery. This hardware removal does require another surgery however. If the hardware is not painful there is no reason to remove it.

- Neurovascular injury: Numerous blood vessels and nerves are in close proximity to the clavicle. It is possible to damage any of these structures during the dissection process. The nerves that provide sensation to the skin of the upper chest wall (just below the clavicle) are frequently irritated at the time of surgery and this may lead to mild numbness below the collarbone in the upper chest wall region. This should not affect function of the upper extremity however. Other more significant neurovascular structures are much less likely to be injured at the time of clavicle fracture fixation. If the structures are injured it may lead to numbness or tingling in the arm/hand or persistent swelling.

- Hardware failure: Although the plate and screws used to fix your clavicle at time of surgery are sturdy, if the fracture does not heal or if you attempt to move the shoulder or perform lifting activities prematurely the hardware can break. The broken hardware may need to be removed if it is a source of pain or if the fracture fails to heal.

- Stiffness: Stiffness is a potential, but uncommon, complication as a result of the surgery and the post-operative immobilization process.

- Subsequent arthritis: Depending upon the exact location of the clavicle, the cartilage of the acromioclavicular joint may have been damaged. Although the fracture can be fixed and go on to heal acceptably, the cartilage damage sustained at the time of injury may predispose you to osteoarthritis of the acromioclavicular joint in the future.

- Wound healing complications: As there is not much soft tissue around the clavicle, it is possible that the incision may open up or fail to heal adequately. If this occurs you may need to take antibiotics and perform dressing changes to this area or may even require further surgery to allow the incision to fully heal. The risk of incisional issues is higher in patients who smoke or have diabetes. In addition this risk is higher if there is significant swelling, bruising, or abrasions prior to you surgery. Minimizing shoulder range of motion after surgery and keeping the dressing clean and dry as instructed will limit your risk for wound healing complications.

Please print and sign your name below if you have read the information listed above and would like to proceed with surgery.

Patient Signature: _____ Date: _____

Printed Patient Name: _____