The scaphoid is a crucial carpal bone in the wrist joint while also being the carpal bone most frequently fractured (Brauer 1997). The scaphoid bone gets its name from the Greek word, skaphos, which is a boat. The carpal bone is named after its shape, which resembles a scaphoid fractures. The first being the Herbert Classification. This type of fracture is named after Harvard Medical School’s Dr. William Herbert. This classification is based on the amount of displacement of the bone. The Herbert classification is the most commonly used method of classifying scaphoid fractures. The first fracture type is the Herbert Type A, where the fracture is undisplaced. The second fracture type is the Herbert Type B, where the fracture is partially displaced. The third fracture type is the Herbert Type C, where the fracture is completely displaced. The Herbert classification is useful for predicting the risk of non-union and the need for surgery. A Type A fracture has a low risk of non-union and can be treated non-operatively. A Type B fracture has a moderate risk of non-union and may require surgery. A Type C fracture has a high risk of non-union and requires surgery. This classification is useful for treatment planning and decision-making. In conclusion, the Herbert classification is the most commonly used method of classifying scaphoid fractures and it helps predict the risk of non-union and the need for surgery.

Mechanism of Injury and Clinical Presentation

The scaphoid fracture is a common injury in athletes, particularly in contact sports such as football. The mechanism of injury is usually a fall onto the outstretched hand (FOOSH). According to the American Academy of Orthopaedic Surgeons, the most common mechanism of injury is a fall onto the outstretched hand (FOOSH). This mechanism of injury is also common in other sports such as basketball, volleyball, and tennis. The FOOSH mechanism of injury is also common in other sports such as basketball, volleyball, and tennis.

Injury, it has been indicated that early treatment is best, however this can be a challenge because of the lack of diagnostic procedures to predict a scaphoid fracture. The challenges do not cease when the injury is diagnosed. The scaphoid has a unique shape that allows it to articulate with all of the surrounding bones, the radius, capitae, lunate, tripeum, and the trapezoid. Additionally, the scaphoid is located mostly in cartilage. Cartilage tissue does not have blood vessels or innervations within, therefore it must get its blood supply via diffusion from outside cells. Because of this, the scaphoid has a very limited blood supply and is typically the first bone to be non-union.

The mechanism of injury in scaphoid fractures is most commonly predicted based on the presence of anatomical snuffbox tenderness, swelling over the anatomical snuffbox, and 50% diminution or pain with this area. These are the most common signs of scaphoid fracture.

Nonoperative Treatment

Fractures of the lunate or distal scaphoid are often treated non-operatively. Because of this area of bone has optimal blood supply, there have been many successful outcomes with cast immobilization. Evidence has shown that a successful union will occur in 90% of the fractures treated with cast immobilization. The patient is in the cast for anywhere from 4-12 weeks. Unfortunately, scaphoid fractures are very hard to immobilize because of the importance of the specific carpals in most movements of the arm. Therefore, there are multiple castings that can be used depending on the type of fracture.

Operative Treatment

There are a variety of options that can be used to treat a scaphoid fracture depending on the patient and severity of the injury. The treatments are divided into operative treatment and non-operative treatment. While non-operative treatment is less invasive and painful, it only carries a 90% union rate. On the other hand, operative treatment is known to have some potential negative long-term effects that have not been fully investigated yet. Other risks include pseudo-arthritis, and carpal collapse have all been linked to operative treatment.

Diagnostic Procedures

There is no gold standard of diagnosing a scaphoid fracture. It is commonly predicted based on the presence of anatomical snuffbox tenderness, swelling over the anatomical snuffbox, and 50% diminution or pain with this area. These are the most common signs of scaphoid fracture.

Discussion and Summary

While the evidence does not support one treatment over the other, there are positives and negatives to both treatments. While non-operative treatment is less invasive and painful, it only carries a 90% union rate. On the other hand, operative treatment is known to have some potential negative long-term effects that have not been fully investigated yet. Other risks include pseudo-arthritis, and carpal collapse have all been linked to operative treatment.

References