COMBINED ESSEX-LOPRESTI AND GALEAZZI FRACTURES

INTRODUCTION

We present the case of a patient who sustained an injury that was a combination of Essex-Lopresti and Galeazzi fractures. His injuries consisted of a radial shaft fracture, a radial head fracture, and disruption of the distal radioulnar joint with an ulnar styloid process fracture. Only two cases have been reported previously in the English literature. Following case presentation, we discuss the biomechanics, pathoanatomy, and the surgical management of this rare injury.

CASE REPORT

A 30-year-old man, right-hand-dominant carpenter, presented to the Port-of-Spain General Hospital after he fell off from a height of about 10-12 feet and sustaining injury to the left upper limb. He complained of pain and swelling at the left elbow, forearm, and wrist with loss of function at the elbow and wrist joints. The patient stated that when he fell, he tried to break the fall by landing on the left hand. He sustained no other injuries. His past history revealed that he was treated for a right forearm both bone fracture about 20 years ago. He was treated by closed manipulation and casting. Past medical history was noncontributory. He smoked up to 15 cigarettes a day and drank socially.

On examination, of the left upper limb, there was diffuse swelling on the lateral aspect of the elbow, the forearm, and the wrist associated with tenderness. There was a small laceration at the dorso-medial aspect of the wrist. There was gross limitation of the movements at the elbow, the forearm and the wrist. There were no open wounds. Neurovascular examination of the limb was normal and there were no features of compartment syndrome.

Radiological examination revealed a displaced, short oblique fracture at the middle and distal half of the radial shaft, a displaced radial head fracture without elbow dislocation, and subluxation of the distal radioulnar joint with mildly displaced fracture of the base of the styloid process of the ulna (Figure 1). An above elbow back slab was applied after closed manipulation under intravenous diazepam sedation. Post manipulation radiographs showed reduction of the
CORE DECOMPRESSION FOR OSTEONECROSIS OF THE HIP

INTRODUCTION
Osteonecrosis of the femoral head is caused by ischemic death of the bony and marrow tissues, characterized by the accumulation of minifractures within the subchondral bone plate, and associated with a rapidly progressive arthropathy after collapse of the articular surface. Unfortunately, without operative treatment, greater than 85% of patients will go on to have severe collapse of the femoral head.

The ultimate goal of treatment of osteonecrosis of the hip is preservation of the femoral head. However, the development of a successful strategy to treat this disease has been difficult because neither the etiology nor the natural history of osteonecrosis of the hip has been defined clearly. Core decompression of the hip is one of the most commonly done surgical procedures to treat the early stages of osteonecrosis of the femoral head. However, there is no general consensus among investigators regarding either the specific indications for this procedure, or the specific technique of core decompression that would optimize results.

We present a case of a patient with a bilateral osteonecrosis of the femoral head at different stages of the disease with different results after core decompression. After the case presentation this article will review the current literature regarding etiology, pathophysiology, diagnosis, classification and staging and outcome of core decompression.

CASE REPORT
A 45-year-old patient, a self-owned businessman, presented to the orthopaedic clinic with a chief complaint of bilateral hip pain. The pain was first started in the left hip approximately three years prior to presentation, for which several general practitioners saw him. There was no history of trauma. The pain emanated from the left groin area and extended to the trochanteric region and to the anterior thigh. During the 3-year period the pain had gradually worsened and further exacerbated by increased activity and relieved by rest. Pain was also worse at night and he has to take narcotic analgesics. The patient’s family practitioner believed that his symptoms were related
EPIDEMIOLOGY AND CLASSIFICATION OF EXTENSIVE VOLAR WRIST LACERATIONS: THE "SPAGHETTI WRIST"

INTRODUCTION *

Extensive volar wrist lacerations, also known as ‘spaghetti wrist’, ‘suicide wrist’ or ‘full-house wrist syndrome’ has been described extensively in the current literature, although there is no standard definition as to what constitutes a spaghetti wrist (Chin et al, 1998). The so-called “minimal definition” describes spaghetti wrist as an extensive volar wrist laceration involving a minimum of three completely transected structures (nerve, artery and tendon) to at least 10 divided structures inclusive of both ulnar and median nerves and ulnar and radial arteries (Hudson and Delager, 1993; Puckett and Meyer, 1985; Widgerow, 1990).

Despite their relatively frequent occurrence in the civilian population, few data are available in the literature to classify these injuries; thus, a uniform reporting, severity of disability and prognosis are not available. A few reports attempted to categorize spaghetti wrist injuries as mild, moderate and severe, depending upon the number of volar structures involved. These reports do not include the commonly associated extensor tendons and bony injuries (Chin et al, 1998; Hudson and Delager, 1993; Kabak et al, 2002; Puckett and Meyer, 1985; Widgerow, 1990). Transections of cutaneous nerves, major veins, and crush or avulsive lacerations of the tendons, nerve, and blood vessels were excluded or not relevant in these studies.

OBJECTIVES

The objectives of this study are to; (1) analyze the local epidemiological data of spaghetti wrists at the General Hospital, Port-of Spain, Trinidad; (2) redefine the minimal definition of spaghetti wrist to a comprehensive definition to include all variants; (3) classify spaghetti wrists according to number and type of structures transected, type of lacerations, and type of repair; (4) compare and contrast the prognostic implications of our classification with those in the literature.

FLOATING KNEE INJURIES

INTRODUCTION

Ipsilateral fractures of the femur and tibia or floating knee injuries are serious injuries and may include combinations of diaphyseal, metaphyseal, and intra-articular fractures. Besides being caused by high-energy trauma with extensive skeletal and soft tissue damage, they are also associated with potentially life-threatening injuries. Although treatment planning for each fracture in the extremity should be considered individually to achieve the optimal result, the effect of that decision must be considered in light of the overall injury status of the entire extremity. Better results and fewer complications are observed when both fractures are diaphyseal than when one or both are intra-articular. We present two cases of floating knee injuries and discuss the classification and operative management of the fractures.

CASE REPORTS

Case 1

A 26-year-old male was brought to the emergency room of the hospital after being involved in an automobile accident. The patient was a front seat passenger, and was thrown out of the vehicle upon collision with a lamp pole. There was a brief loss of consciousness. There was pain, swelling and deformity in the right thigh and leg. There was restriction of movement at the right hip, knee and ankle because of pain and deformity. He also suffered right-sided chest trauma and a large scalp laceration. There was no history of chronic illnesses. He consumed alcohol socially and did not smoke.

He was tachypneic with a patent airway. Glasgow Coma Scale was 15/15. He was resuscitated at the emergency room with intravenous fluids and oxygen via a facemask. His scalp laceration was irrigated, debrided and closed primarily. Chest radiographs showed right sixth and seventh rib fractures with no hemopneumothorax. Examination of the abdomen was normal. Radiographs of the cervical spine, skull and pelvis were normal.
GIANT CELL TUMOR OF THE TALUS

INTRODUCTION
Giant cell tumor of the talus is uncommon and treatment options are ill defined. Though it represents a unique clinical and radiographic entity with less aggressive natural history than the more common sites, the talus offers a distinct anatomic setting and presents unusual problems of surgical management with avoidance of recurrence, fracture, avascular necrosis, and restoration of function. A case of giant cell tumor of talus is discussed with a review of the literature.

CASE REPORT
In September 2001, a 23-year-old black male presented with a chief complaint of a painful swollen right ankle joint after he landed on his feet while playing basketball. Ten to twelve months prior to presentation, he had noticed gradual mild swelling and chronic mild ache in the ankle but never sought medial attention. The pain was aggravated by activity but not entirely relieved by rest or simple analgesics. The patient’s past medical history was noncontributory.

Physical examination of the right ankle and foot revealed swelling with slightly increased temperature and localized tenderness over both malleoli and over the talar neck, as well as slight decrease in passive and active dorsiflexion and plantarflexion range of movements. Range of motion of the ankle and subtalar joints was noncrepitant but mildly painful. There was no ankle instability. Neurovascular status was normal.

Screening radiographs (Figure 1) showed an eccentric, expansile, cystic, and well-marginated radiolucent lesion involving head, neck and the body of the talus with expansion of the cortex laterally. The patient was admitted with a presumptive radiographic diagnosis of giant cell tumor (GCT) and/or aneurysmal bone cyst with possible pathological fracture of talus and/or ankle sprain. He was prescribed an ankle splint, rest, and elevation and NSAID analgesics.

Laboratory investigations consisting of complete blood count with differential, sedimentation rate, serum alkaline phosphatase, calcium and phosphorus, prothrombin time, partial thromboplastin time, urine analysis and chest x-ray were all with in normal range. A
HUMERAL DIAPHYSEAL NONUNION

INTRODUCTION
Nonunion of the humeral shaft occurs in 2% to 10% of nonsurgically treated fractures and in up to 15% of fractures treated by primary open reduction and internal fixation (Rosen, 1990; Sarmiento et al, 2000; Ward et al, 1998). Although fractures of the shaft of the humerus generally heal by nonoperative treatment, nonunion can lead to marked morbidity and functional limitation. Successful surgical management of humeral nonunion requires stable internal fixation that allows early joint motion and uses autogenous bone graft to promote healing. Advances in preoperative evaluation and surgical reconstruction have improved functional outcomes. We present two cases of humeral diaphyseal nonunion and discuss the etiology and management.

CASE REPORTS

Case 1
A 45-year-old right-handed, female presented to the Port-of-Spain General Hospital after sustaining a direct blow to the left arm in a vehicular accident. She complained of pain and swelling in the arm with a flail limb. There were no open wounds. Neurovascular examination of the limb was normal.

She was a healthy obese woman, weighting 102 Kg and height 5 feet 4 inches. History for the medial illnesses was negative and review of systems was non-contributory.

Physical examination of the left arm revealed significant tenderness at the injury site, abnormal mobility and loss of function. Radiological examination of the arm showed a transverse fracture of the distal shaft of the humerus with displacement and varus angulation (Figure 1). She was treated with analgesics and plaster-of-Paris U-slab.

At an outpatient clinic follow-up visit, the U-slab was changed to a hanging cast. Eight weeks later she was fitted with a prefabricated humeral fracture functional brace. Even after 6 months, repeat x-rays showed no signs of healing and a grossly displaced and distracted fractured
IPSILATERAL FEMORAL NECK AND SHAFT FRACTURES

INTRODUCTION

Fractures of the femoral neck and fractures of the femoral shaft are both common, however ipsilateral femoral neck and shaft fractures are uncommon injuries occurring in 2% to 6% of all femoral shaft fractures (Zettas et al, 1981; Winquist et al, 1984). Ipsilateral femoral neck and shaft fractures present a surgical challenge to the treating surgeon. Several treatment options are described in the literature, but no clear consensus exists regarding the optimal treatment of these complex fractures. The goal of any treatment plan should be anatomic reduction of the neck fracture, and stable fixation of both fractures, so that the patient can be mobilized.

We present a case of ipsilateral femoral neck and shaft fracture, who was a victim of high-energy trauma and discuss the management based on a review of current literature, biology and severity of this injury, and technical aspects of surgical treatment.

CASE REPORT

A 39-year-old, unrestrained male driver was brought to the Port-of-Spain General Hospital emergency room after being involved in a motor vehicle accident. The patient was intoxicated and Glasgow coma scale was 13. He was resuscitated with intravenous fluids and blood transfusion. His extremities had no neurovascular deficits except for weak distal pulses in the left lower limb. The patient’s computed tomography of brain was a normal study.

After clinical and radiological examinations his major injuries included Gustilo-Anderson type 3A open fracture of left proximal tibia with hemarthrosis of the knee; ipsilateral right femoral neck undisplaced fracture (Garden type A) and mid-shaft femoral displaced fracture (Winquist type IV) (Figure 1); bilateral hemopneumothorax secondary to rib fractures.

Surgical treatment of his left open tibial fracture consisted of irrigation and debridement, fasciotomy and a Hoffmann spanning knee external fixator application from distal femur to distal tibia. Because of extensive contamination and loss of skin and subcutaneous tissue, the wound was not closed primarily. Treatment of his right femoral fractures consisted of tibial skeletal traction.
LUMBAR MICRODISCECTOMY

INTRODUCTION
The standard laminectomy and discectomy gradually is being replaced by microdiscectomy and it is the procedure of choice for herniated lumbar disc. Everything that can be accomplished through the standard laminectomy and discectomy can be accomplished more easily with the assistance of the microscope. A microsurgical approach facilitates outpatient procedures and more cost-effective surgical care. We present a case of lumbar disc herniation treated by microlumbar discectomy and discuss the advantages and disadvantages and the techniques of the procedure.

CASE REPORT
A 54-year-old male, a self employed plumber, presented to the Mt Hope Medical Sciences Hospital with a chief complaint of acute exacerbation of chronic low back pain after he lifted a heavy weight about 8 weeks previously. He sought the help of a chiropractor initially who helped him through the acute pain, but then came to the hospital because of numbness and weakness in his right lower limb. Eight weeks previously at the onset he had difficulty getting up and the pain was predominantly at the lower back radiating to the right lower limb.

At presentation, the leg pain was greater than the back pain radiating to the posterolateral thigh, anterior knee and medial leg. Pain was increasing with activity, especially sitting and relieved by rest in the supine position. Straining, sneezing, or coughing also exacerbated the pain. Numbness and weakness especially of the right quadriceps was intermittent and variable with activity. He noted buckling of his right knee. Driving a car and sleeping were all difficult. Past medical history was positive for hypertension, which was well controlled with atenolol and hydrochlorothiazide. He smoked 10-12 cigarettes a day.

On examination, the patient had difficulty in bending forward and leaning to the right. He walked with a noticeable limp. Heel walking and toe walking was difficult on the right but he was able to perform both. There was slight tenderness over L3, L4 and L5 spinous processes and straight leg raising test was restricted to 40 degrees in right lower limb. Crossed straight leg
NONUNION OF THE FRACTURED CLAVICLE

INTRODUCTION
Clavicle fracture is a common injury in all age groups. Although often viewed as benign injuries with high rates of healing and excellent functional results, clavicular fractures can lead to complications, particularly nonunions and malunions. A clavicular nonunion is rarely asymptomatic and often results in disability from pain at the site of the nonunion, altered shoulder mechanics or a compression lesion involving the underlying neurovascular structures. Successful treatment of a clavicular nonunion is often a difficult task and requires a thorough understanding of the anatomy and function of the clavicle, the etiology and the symptomatology of nonunion, and the wide array of treatment options.

CASE REPORT
A 35-year-old, right-handed woman presented with complaints of pain and limited motion in her right shoulder. Her history was remarkable for a displaced, closed, mid-third clavicle fracture, which had occurred 24 months previously. The patient was an aerobic exercise instructor, sustained the injury in a fall. She was treated conservatively with a figure-of-eight bandage and sling. She resumed work two months after the fracture and was discharged from the clinic.

Twenty-four months later, the patient presented with chronic shoulder pain and weakness in the shoulder as well as dissatisfaction with the appearance of the shoulder. She complained that her right shoulder was narrow and the straps easily slipped off. She reported rapid fatigability and shoulder pain and weakness, which were exacerbated by repetitive physical activity at work. She had seen other orthopedic surgeons following what she perceived as a failure of initial treatment as well as symptoms unresponsive to conservative treatment. Past medical history was non-contributory except for smoking 10 to 12 cigarettes per day.

On examination, she was a well-nourished female with clinical findings confined to her right shoulder. The 100-point DASH (Disabilities of the Arm, Shoulder and Hand) score was 46 points. The ranges of motion of the right shoulder were $150^\circ$ of flexion, $160^\circ$ of abduction, and $70^\circ$
OPEN TOTAL DISLOCATION OF THE TALUS

INTRODUCTION

Open total dislocation of talus with disruption of the talonavicular, subtalar, and ankle joints and extrusion out of the skin without a concomitant fracture is an extremely rare injury. Although reduction of the talus is ideal to preserve function and length of the extremity, several complications can occur including avascular necrosis and infection. A 20-year-old male suffered from this rare injury, which was treated conservatively. A literature survey concerning mechanism of injury, diagnosis, treatment, and prognosis is presented.

CASE REPORT

A 20-year-old black male, 5 feet 10 inches tall, weighting 195 lbs, injured his right ankle while running down the hill to retrieve a cricket ball. The patient was able to recall that he landed on the lateral aspect of his right foot, while the left foot was in the air. Simultaneously, he had turned his trunk to the right to watch his teammates. The foot went into maximal inversion and extreme plantar flexion. He ended his fall landing on his both hands. He experienced sudden severe pain and noted a bleeding wound at the right ankle and could not bear weight on the limb. He was immediately taken to the Tobago Regional Health Authority Hospital where he was resuscitated and the right leg was splinted as the ankle and foot lay without any attempt at reduction. He was later transported to Port-of-Spain via an air ambulance and arrived in Port-of-Spain General Hospital about 4 hours after the injury.

The radiographs of the right ankle from frontal and lateral views (Figure 2) showed an empty mortis, with missing talus. The talus was lying anterolaterally. No fractures were seen.

The patient’s right lower limb was examined under general anesthesia. The ankle was swollen with a wide lacerated wound extending from the anterolateral to the posterior aspect of the ankle. The wound was grossly contaminated with dirt and grass. The completely extruded talus was lying free outside the wound with a string of soft tissue attached. Before the tourniquet was inflated the circulation of the foot was found to be adequate. The talus and the wound was
INTRODUCTION
Primary pyomyositis is a rare, subacute, suppurative infection, which commonly manifests as a local abscess but may also present as a diffuse inflammatory or rapidly progressing myonecrotic process. It occurs within a fascial covering of the skeletal muscle and is not secondary to a contiguous infection of the skin, bone or soft tissue. It is believed to be a complication of transient bacteremia. Pyomyositis in adults is commonly associated with an underlying disease or condition that might impair their immune system. The commonest organism that causes primary pyomyositis is Staphylococcus aureus but it is also occasionally caused by Streptococcus species, Escherichia coli, Salmonella enteritidis and Mycobacterium tuberculosis.

We report a unique case of Enterobacter species primary pyomyositis that involved the both the flexor and extensor muscles of the right forearm in an adult with systemic lupus erythematosis. To our knowledge this is the first case of this kind in the English-language literature.

CASE REPORT
A twenty-nine-year-old, right-handed man who was being treated for systemic lupus erythematosis (SLE) for the past 12 years was admitted to the medical ward with a 7-day history of generalized edema and ascites. He was being managed for acute on chronic renal failure secondary to lupus nephritis. The patient was on prednisolone ever since he was diagnosed with SLE and recently the dose was increased up to 40 mg/day. In the past he was also given the immunosuppressive agent cyclophosphamide during relapses. Four days after admission, an orthopaedic consultation was requested because the patient had developed worsening pain and swelling in the right forearm with loss of function of the right upper limb.

On further enquiry, the patient conceded that the swelling of the forearm was preceded by pain at least 5 weeks prior to his hospital admission and a few days after completion of a course of cyclophosphamide for a relapse. He had seen a local general practitioner who prescribed
RUPTURED HAEMORRHAGIC POPLITEAL CYST CAUSING POSTERIOR COMPARTMENT SYNDROME

INTRODUCTION

One of the common causes of acute calf pain is deep vein thrombosis. Pseudothrombophlebitis is a condition in which the clinical features resemble deep vein thrombosis with no thrombus in the veins. The commonest cause of pseudothrombophlebitis is a ruptured popliteal or Baker's cyst. In an unsuspected patient, treatment of a ruptured popliteal cyst as deep vein thrombosis can result in a calf hematoma and acute compartment syndrome. Prompt recognition, fasciotomy, and drainage of the haematoma can prevent complications of compartment syndrome.

CASE REPORT

A 55-year-old healthy female, a school principal, was referred to the Port-of-Spain General Hospital by her private physician for the treatment of deep vein thrombosis (DVT) after she presented to him with a 2-week history of pain and swelling in the left calf. Venous Doppler duplex scan requested by the physician reported that there was dilatation, loss of compression, and flow void in the popliteal, peroneal, and posterior tibial veins with echogenic contents. The duplex scan also reported that the common and superficial femoral veins were normal. The patient was then referred to the hospital for the treatment of DVT.

She was admitted to the medical ward and anticoagulated with low-molecular weight heparin and warfarin. Figure 1 shows the chronology of patient (P) and control (C) values of prothrombin time (PT) and activated partial thromboplastin time (APTT). Similarly, figure 2 shows chronology of haematocrit (Hct) and haemoglobin (Hb) values. She was also prescribed narcotic analgesics for pain. Both her calf pain and swelling increased over the next four days which, required more analgesics for pain relief. There was mild swelling of the knee joint. The left calf circumference had increased from 40.5 cm to 47 cm. Seven days after anticoagulation therapy started; a repeat venous duplex scan was negative for DVT but showed a large calf haematoma. Haematocrit had fallen from 35.6% on admission to 26.7% on day seven. Anticoagulants were
IPSILATERAL SIMULTANEOUS FRACTURES OF THE DISTAL RADIUS AND SCAPHOID

INTRODUCTION
Simultaneous fractures of the distal radius and scaphoid are rare injuries occurring in less than 2% of isolated fractures of each bone. Treatment of this uncommon injury is controversial. Three cases of simultaneous fractures of distal radius and scaphoid are presented. Closed reduction and cast immobilization produced excellent results in two patients. In the other, open reduction and internal fixation of the intra-articular, unstable distal radial fracture was performed. All three scaphoid fractures healed without complications. After presentation of the cases we discuss the mechanism, treatment, and review of literature of this rare injury.

CASE REPORTS

Case 1
A 47-year-old, right-handed, man was brought to the hospital after sustaining a fall on his outstretched right hand. He reported pain, swelling, and deformity of the distal forearm and the wrist. His past medical history was not significant. He smoked 8 to 10 cigarettes a day.

Physical examination of the right upper extremity revealed diffuse swelling of the distal forearm and wrist. There was a mild dinner-fork deformity of the wrist with no open wounds. Diffuse tenderness over the distal end of the radius and wrist joint was present. An examination for neurovascular functions of the extremity was normal.

Anteroposterior and lateral view radiographs of his injured wrist showed a Colles-type fracture with radio-dorsal displacement. It also showed an undisplaced fracture through the anatomical waist of the carpal scaphoid (Figure 1).

Under intravenous sedation the radial fracture was reduced by gentle closed manipulation and sugar-tong plaster-of-Paris cast was applied. Post manipulation and two-week follow-up radiographs (Figure 2) showed acceptable position of the distal radial fracture and the scaphoid fracture remained undisplaced. After the swelling decreased the fractures were immobilized with a
TENDINOPATHY OF TENDO ACHILLES

INTRODUCTION

Achilles tendinopathy is one of the common overuse syndromes. The vast majority of cases occur in runners, particularly distance runners. Although the etiology is considered to be associated with overuse of the aged tendon, scientifically, the etiology and pathogenesis are unknown. Treatment of Achilles tendinopathy is difficult. We present a case of Achilles tendinopathy and discuss the various types and the etiopathology underlying the conditions before outlining current biologic evidence for clinical assessment and treatment.

CASE REPORT

A 34-year-old long-distance runner presented with complaints of burning pain in the posterior aspect of the calf and ankle, often worse at the beginning of the training session and after exercise. She had pain during activities of daily living, including prolonged walking and stair climbing. The patient’s coach made a diagnosis of chronic overuse Achilles tendinitis and referred her for further consultation and management.

Twenty-six months of conservative management had failed which included rest, nonsteroidal antiinflammatory drugs, physical therapy, ultrasound therapy, orthosis, and stretching and eccentric exercises. Also, she had received at least five local injections of steroids, but the pain had not significantly subsided or it had returned within a short period after the injection. She was unable to resume running at her desired level.

General and systemic clinical examinations were normal. Diagnosis of Achilles tendinopathy was formulated after local clinical examination. On inspection there was very mild calf muscle atrophy and diffuse swelling of the Achilles tendon at 3 cm to 5 cm above its insertion of calcaneal insertion. Palpation revealed focal tenderness that essentially reproduced the patient’s pain. The classic painful arc sign was not conclusive although the area of tenderness diminished when the Achilles tendon was palpated with the ankle in neutral position and again when the ankle
TRAUMATIC BILATERAL ASYMMETRIC FRACTURE DISLOCATION
OF THE HIP JOINTS

INTRODUCTION
Bilateral traumatic dislocation of the hip joints is a rare injury, accounting for approximately 1% to 2% of all cases of traumatic hip dislocations. A much more uncommon injury occurs when one hip dislocates anteriorly and the other posteriorly. We report such a case and discuss the mechanism, treatment and review of similar cases in the English literature.

CASE REPORT
A 39-year-old physically fit male presented to our emergency room shortly after being involved in a motor vehicle accident. He was the unrestrained driver of the vehicle unrestrained when it had a head-on collision with a truck, overturned, and was completely wrecked. It took 45 min for emergency paramedics to retrieve the patient with great difficulty from the mangled vehicle. One passenger died at the accident site and the other two passengers were severely injured.

On arrival, the patient was conscious, had no airway problems and his Glasgow Coma Scale score was 15. He was hemodynamically stable after fluid resuscitation in the emergency room with a blood pressure of 182/86 mmHg and pulse of 94 beats per minute. Examination of his abdomen and chest were normal with a respiratory rate of 22 per minute. His lower limbs were splinted as they lay. The neurocirculatory status of the lower limbs was normal. His pelvis and thighs had a windswept appearance. There were multiple superficial lacerations found on his right patella and infrapatellar regions. The pelvis was grossly stable to palpation and there was considerable bilateral tenderness of the hip joints. There was an obvious lower limb length discrepancy. The right lower limb was found adducted, internally rotated with relative shortening as compared to the left lower limb. The left lower limb was found abducted, externally rotated and relatively longer than the right lower limb (Figure 1).

The initial radiographs of the pelvis showed an anterior-inferior dislocation of the left hip, and posterior-superior dislocation of the right hip. The right hip also showed fracture of the
ACQUIRED HALLUX VARUS

INTRODUCTION

Hallux varus is a deformity of the great toe that is characterized by medial deviation and subluxation of the first metatarsophalageal joint. Acquired hallux varus most commonly occurs after hallux valgus surgery. Congenital hallux varus is rare. Successful management depends on a comprehensive evaluation of the patients’ symptoms, the severity of the deformity, and the effect of the deformity on function. We report a case of symptomatic acquired hallux valgus and discuss the anatomy, incidence, pathogenesis, classification, evaluation, and treatment of hallux varus.

CASE REPORT

A fifty-two-year-old woman was seen in August 2002 because of pressure symptoms on the dorsum of the left great toe at the interphalangeal joint. She had had a left bunionectomy of the modified McBride procedure about 7 years ago elsewhere. About 15 years ago she was treated for an open fracture of the head of the left fifth metatarsal. She complained of difficulties with shoe wear as well as weakness with push-off. Irritation from shoe gear had caused localized erythema to the digit and the toenail. Over the years the patient noted increasing severity of the deformity and worsening symptoms from shoe wear. This discomfort and difficulty with shoe wear continued despite extra-depth oblique toe shoes and a custom built orthotic device. The patient was also upset because of the cosmetic appearance of the toe and foot. History of trauma was negative and the past medical history revealed no medical illnesses.

Upon examination of the left foot a severe hallux varus deformity with associated clawing of the left great toe was noted. The first metatarsophalageal (MTP) joint was extended and the interphalangeal (IP) joint was flexed. There was a callosity on the dorsum of the IP joint. Active extension and flexion were limited and weak. Full passive correction of all elements of the deformity was easily accomplished. No features of synovitis or inflammation were noted.

Blood chemistry and complete blood count were within normal limits and the Westergren method erythrocyte sedimentation rate was 10 mm/hr. Serologic testing was negative for both
INTRODUCTION

Stress fractures are focal structural weakness in the bone occurring in response to the repeated application of submaximal fracture threshold stresses (Burr, 1997; Grimston and Zernicke, 1993; Matheson et al, 1987). It commonly occurs in the proximal metaphysis of the tibia and heals readily with rest. Stress fractures of the middle third of the tibia, on the other hand are uncommon, and are associated with atypical clinical and radiographic findings. They have a propensity for nonunion and can result in complete fracture. We report a case of a patient who had a middle third anterior cortex tibial stress fracture.

CASE REPORT

A twenty-five-year-old college basketball player was seen for complaints of 12 to 14 months history of recurrent pain in the right shin. Initially, the pain only occurred with prolonged training or competition and was relieved with activity cessation. He stated that the pain was most severe during jumping activities. Eventually, the pain occurred while at rest and was unrelieved with nonsteroidal anti-inflammatory mediation and activity modification. At presentation, he had continuous symptoms of 6 months’ duration and his competitive ability was severely compromised. His medical history was unremarkable.

Clinical examination revealed a focal area of point tenderness along the anterior tibial cortex of the right leg approximately at the mid-portion of the leg. A palpable enlargement was noted directly over the tender area. Associated mild erythema was noted. Examination of his standing revealed no limb abnormalities. Pain in the leg was exacerbated with single-leg standing. The remainder of the musculoskeletal examination was unremarkable.

Anteroposterior and lateral view radiologic examination revealed horizontal “V” shaped radiolucencies opening anteriorly, in the anterior cortex of the tibia in the mid-third. Associated cortical hypertrophy and medullary canal narrowing was noted with no evidence of callus formation. Right anterior tibial stress fracture was diagnosed and treatment options were
INTRODUCTION

Bone and joint infection has long been a formidable foe of orthopedic surgeons. Soft tissue infections and septic joints usually are treated with parenteral antibiotics for 2 to 4 weeks; whereas chronic osteomyelitis and infected arthroplasties are treated for 4 to 6 weeks or longer. The advantages of systemic therapy include, (1) the ability to deliver antibiotics to areas that cannot be reached with topical therapy, (2) the large selection of antimicrobial agents, and (3) the possibility to arrest or eradicate infection. Disadvantages include the potential for systemic toxicity, difficulty in achieving high concentrations of antimicrobial agents at the site of infection, and poor compliance. To combat these disadvantages, newer methods for the delivery of antimicrobial agents such as antimicrobial-impregnated cement beads and spacers have been investigated. Presented are their preparations, mechanism of action, and their use in clinical settings.

CASE REPORTS

Case 1

An 18-year-old male patient presented to Port-of-Spain General Hospital with chief complaints of painful swelling of the right thigh, malaise and fever. He was unable to bear weight on the limb because of pain. He reported that he was treated for bone infection at a pediatric hospital several years ago with intravenous antibiotics for a month. No surgical procedures were performed at that time. He also stated that he missed further follow-up visits after discharge from the pediatric hospital. Furthermore, he stated that he suffered from chronic bone pain exacerbated by physical exertion after he was treated for bone infection. Two months before presentation he stopped all sporting activities. His parents gave him painkillers regularly. His medial history was noncontributory. There was no history of sickle cell disease or substance abuse.

On examination, the patient was febrile, pale and dehydrated. His Temperature was 40°C, pulse, 105 per minute, and blood pressure, 100/68 mmHg. Significant findings of the
AVULSION FRACTURE OF THE ISCHIAL TUBEROSITY
-A FREQUENTLY MISSED DIAGNOSIS-

INTRODUCTION

Avulsion fracture of the ischial tuberosity is a rare injury in comparison to mid-substance tears of the hamstrings, and its diagnosis is often missed. Prompt diagnosis of a displaced avulsion fracture of the ischial tuberosity will enable early surgery where appropriate. This in turn will prevent the development of chronic pain on sitting and walking and an inability to return to sporting activities.

We report a case of an adolescent patient who sustained an ischial tuberosity avulsion fracture, treated by open reduction and internal fixation with an excellent outcome after failed conservative treatment.

CASE REPORT

A 15-year-old junior secondary school sprinter presented to the orthopaedic clinic complaining of left buttock pain. He came to the clinic for a second opinion after an initial examination by his private doctor who advised him to rest to allow the presumed hamstring injury to settle. Despite nonsteroidal anti-inflammatory drugs, ice, and rest followed by physiotherapy, he still had pain when he jogged and unable to resume sprinting activities.

The patient stated that he hurt his buttocks about 6 weeks previously during take-off at a sprinting competition. He felt a tearing and sharp pain in the buttocks. He collapsed to the ground in pain and could not complete the race.

The sprinter walked into the clinic with a limp. Clinical examination showed wasting of the hamstrings. Palpation revealed extreme point tenderness at the ischial tuberosity. Neurovascular examinations of the limbs were with in normal limits. Goniometric measurements showed hip extension to neutral. In the sitting position, he had 45 degree of hip flexion. In the prone position, he had 90 degrees of active knee flexion. Hip abduction, internal rotation, and external rotation were normal although it was mildly painful. The sprinter had normal quadriceps strength. Hip
BONE GRAFT SUBSTITUTES IN THE TREATMENT OF BENIGN BONE LESIONS

INTRODUCTION

Bone grafts are widely used by surgeons to correct bone defects resulting from a variety of causes, including tumors, trauma, and infection. Autogenous bone remains the ideal material for grafting because it is not antigenic and it has both osteoinductive and osteogenic properties. However, because autogenous grafting is associated with several shortcomings and complications including limited quantities of bone for harvest and donor-site morbidity, alternatives have been used in a wide range of orthopaedic pathologic conditions.

We report a case of successful treatment of a bony defect, after excising a nonossifying fibroma, filled with composite bone graft substitute and discuss the bone grafting substitutes currently available including many preparations of ceramics, demineralized bone matrix, and bone marrow in the treatment of benign bone lesions.

CASE REPORT

An 11-year-old boy was seen in the outpatient department with a history of sustaining injury to his right leg after jumping off the trampoline one week previously. He was initially seen at a local hospital and placed in a cast and advised nonweightbearing. He had no complaints before the fall and medical history was noncontributory.

On examination there was diffuse soft tissue swelling over the distal third of the leg and ankle with no open wounds. The tenderness was elicited over the distal third of the tibia. The ankle was stable for range of movements and ligamentous stressing with in the pain tolerance of the patient. Neurovascular examination revealed normal sensation throughout the foot with normal pedal pulses. Musculoskeletal examination of other parts of the limb was normal.

Radiographic evaluation of the right leg and ankle revealed a large eccentric, radiolucent lesion in the distal tibia, proximal to but not involving the distal epiphysis (Figure 1). The lesion measured 5 cm in length and 2 cm in its widest diameter. There was thinning of the cortex