بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

النكروز اللاحموني لرأس عظمة الفخذ

بعد الاصابه

رسالة مقدمة

تمهيدا للحصول على درجة الماجستير في جراحة العظام

من الطبيب

* طارق سعيد الجيزاوى

بكالوريوس الطب و الجراحة

تحت إشراف

* أ . د على عثمان المفتى

أستاذ م جراحة العظام

كلية طب القصر العيني - جامعة القاهرة

* د شريف عمرو

مدرس جراحة العظام

كلية طب القصر العيني - جامعه القاهرة

جامعة القاهرة / كلية الطب
القطاع الهندسي

محضر

اجتماع لجنة الحكم على الرسالة المقدمة من
الطبيب / [illegible]
توطئة للحصول على درجة الماجستير / ~~الدكتوراة~~
في جراحة العظام

عنوان الرسالة : باللغة الانجليزية :
post traumatic avascular necrosis femoral head.

باللغة العربية : النخر اللادموي لرأس عظمة الفخذ بعد الاصابة.

بناء على موافقة الجامعة بتاريخ ١٢ / ٢ / ٢٠٠٢ تم تشكيل لجنة الفحص والمناقشة للرسالة المذكورة أعلاه على النحو التالي :-

١) أ.د/ [illegible] أستاذ جراحة العظام — عن المشرفين
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بعد فحص الرسالة بواسطة كل عضو منفردا وكتابة تقارير منفردة لكل منهم انعقدت اللجنة مجتمعة في
يوم .... بتاريخ ٥ / ٦ / ٢٠٠٢ [illegible]
بكلية الطب - جامعة القاهرة وذلك لمناقشة الطالب في جلسة علنية في موضوع الرسالة والنتائج التي توصل اليها وكذا الأسس العلمية التي قام عليها البحث .

قرار اللجنة : تمت المناقشة بتاريخ [illegible] والرسالة [illegible]
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توقيعات أعضاء اللجنة :-

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[signature]	[signature]	[signature]

([illegible])

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Tarek Said El-Gezawy

INTRODUCTION

Introduction

Several terms have been used to describe the phenomenon of dead bone within a living patient , including aseptic , idiopathic , avascular and osteonecrosis . Since the bone is truly avascular only in the end stage of the disease , the term *ischaemic necrosis* is preferred which underscores a period of ischaemia preceding the actual death of bone .

A septic bone necrosis is becoming an increasingly common cause of disability . It is a frequent complication of many clinical conditions .

The most important traumatic causes of avascular necrosis of the femoral head are fracture neck femur , dislocation of the hip joint and acetabular fractures. These causes result in local damage to the blood vessels of bone and so to limited amount of bone death . Due to the anatomy of the of the blood supply of the femoral head , it is considered a common site of bone necrosis (**Catto, 1973**) .

The incidence of ANFH due to fracture neck femur for example depends on the age of the patient , the site and the type of fracture wether displaced or not also the time of reduction plays an important rule in the occurance of ANFH .

Experimental evidence suggests that bone cells die within 12-48 hours of removal of their blood supply , while histological changes develop soon in the cells of the haemopoietic marrow . The loss of osteocytes from lacunae tends to be slower and not complete for 2-4 weeks (**Catto M ., 1976**) .

The early diagnosis of ANFH is a very difficult problem . The early diagnosis is the most important factor in the treatment . The treatment depends on the stage of the disease at the time of diagnosis .

Unfortunately , the early stages often pass unnoticed . The patient always seeks medical advise late , even those who do they are told frequently that they are all right because the radiographs are normal (**Hungerford , 1983**) .

The aim of the assay is to discus the aetiology , pathology and the treatment options for avascular necrosis of the femoral head .

Anatomy of the proximal part of the femur

The femur is the longest and strongest bone in the body it possesses a shaft and two extremities. The shaft is almost cylindrical in most of its length and is curved with a *forward convexity*. The upper end of the femur comprises a head, a neck, a greater and a lesser trochanter.

The head

Forms rather more than half a sphere; it is directed upwards, medially and slightly forward, to articulate with the acetabulum of the hip bone. Its surface is smooth, and is marked a little below and behind its center by a small-roughened bit or *fovea*.

The head of the femur is entirely intracapsular and is encircled immediately lateral to its greatest diameter by the acetabular labrum. Its circumference is sharply defined, except on the anterior surface, where the cartilage-covered surface extends on to the front of the neck. The fovea, which marks the head below and behind its center, gives attachment to the ligament of the head of the femur. The inferomedial part of the anterior surface of the head is related to the femoral artery, from which it is separated by the tendon of the Psoas major and the articular capsule.

The neck

It is about 5 cm. long, connects the head and the shaft, with which it forms an angle of about 125°. This angulation facilitates the movements of the hip joint and enables the lower limb to swing clear of the pelvis.

The neck is narrowest at its middle and is wider at its lateral than at its medial end. Its two borders are rounded. The upper border is nearly horizontal and is gently concave upwards. The lower border is straight but oblique, and is directed downwards, laterally and backward to meet the shaft near the lesser trochanter. The anterior surface of the neck is flattened and its junction with the shaft is marked by a prominent rough ridge,

termed the *intertrochanteric line.* The posterior surface is convex backwards and upward in its transverse axis, and concave in its long axis, and its junction with the shaft is marked by a rounded ridge, termed the *intertrochanteric crest.* The neck of the femur is marked by numerous vascular foramina especially on its anterior surface and on the upper part of its posterior surface. The neck-shaft angle is widest at birth and diminishes steadily until the adult condition is reached. It is less in the female than in the male, owing to the increased breadth of the lesser pelvis and the greater obliquity of the shaft of the femur. The anterior surface of the neck is entirely interacapsular and on this surface the capsular ligament extends laterally to the intertrochanteric line. On the posterior surface the capsular ligament does not reach the intertrochanteric crest, and only a little more than the medial half of the neck lies within the capsule. The part of the interior surface adjoining the head is covered with cartilage and is related to the iliofemoral ligament in the erect posture. The neck of the femur does not lie in the same plane as the shaft, but is carried forwards as it passes upwards and medially. On this account the transverse axis of the head of the femur makes an angle with the transverse axis of the lower end of the bone which is termed the *angle of femoral torsion.*

The greater trochanter

It is a large quadrangular eminence, situated at the upper part of the junction of the neck with the shaft. Its posterosuperior part projects upwards and medially so as to overhang the adjoining part of the posterior surface of the neck; in this situation its medial surface presents a roughened depressed area, termed the *trochanteric fossa.* The upper border of the greater trochanter lies one handbreadth below the tubercle on the iliac crest, and is on a level with the center of the femoral head. The anterior surface of the trochanter presents a roughened impression; its lateral surface is divided into two areas by an oblique, flattened strip, wider above than below, which runs downwards and forwards across it.

The lesser trochanter

It is a conical eminence, which projects medially and backwards from the shaft at its junction with the lower and posterior part of the neck. Its summit and anterior surface bear a roughened impression, but its posterior surface, which lies at the lower end of the intertrochanteric crest, is smooth. It is placed too deeply to be felt in the living subject.

The intertrochanteric line

Marks the junction of the anterior surface of the neck with the shaft of the femur. It is a prominent roughened ridge, which commences in a tubercle at the upper and medial part of the anterior surface of the greater trochanter and runs downwards and medially. It reaches the lower border of the neck on a level with the lesser trochanter, but in front of it. Below, it is continuous with the spiral line.

The intertrochanteric crest

Marks the junction of the posterior surface of the neck with the shaft of the femur. It is a smooth rounded ridge, which commences at the posterosuperior angle of the greater trochanter and runs downward and medially to terminate at the lesser trochanter. A little above its middle it presents a low rounded elevation, termed the *quadrate tubercle.*

Acetabulum

which is a cup-shaped depression on the lateral aspect of the hip bone. It presents a C-shaped articular strip called the *lunate surface.* The lower part of its margin presents a gap known as the *articular notch.* The floor is non-articular and is called the *acetabular fossa.*

The lunate surface is widest above where the weight of the body is transmitted through the joint into the lower limb. The acetabular notch is bridged over by a ligament known as the transverse ligament of the acetabulum. This ligament converts the notch into the acetabular foramen through which vessels and nerves enter the joint.