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

Arterial Extremity Trauma : Prognostic Indicators

Thesis

Submitted for partial fulfillment of M.D degree in General Surgery
By

AYMAN M ATEF EL SAMADONI
MB. Bch. (Cairo) M Sc. Surgery (Cairo)

Supervised By

Prof. Dr: MOHAMMED HELMY H. EL BATANONI
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B ٨٧٠٧

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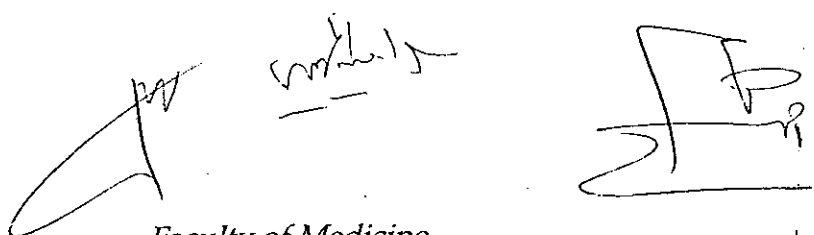

Faculty of Medicine
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1999

جامعة القاهـــرة / كلية الطب

القصـــر العينـــى

محضـــر

اجتماع لجنه الحكم على الرسالة المقدمة من

الطبيب / أيمن محمد عاطف السعدونى

توطئه للحصول على درجة الماجستير / الدكتوراه

فى الجراحـــة العامـــة

تحت عنوان: باللغة الانجليزية : ARTERIAL Extremity Traumas: PROGNOSTIC Indicators

: باللغة العربيه : المحاليل كمؤشرة فى نتائج أصابات الشرايين بالأطراف

بناء على موافقة الجامعة بتاريخ ١ / ٤ / ١٩٩٩ تم تشكيل لجنه الفحص والمناقشة للرساله المذكورة اعلاه على النحو التالى : ـ

١) ا.د/ محمد حلمى حسن لبيازى استاذ الجراحة العامة وجراحة الاوعية الدموية - جامعة عين شمس المشرفين

٢) ا.د/ أحمد سالم عمار استاذ الجراحة العامة وجراحة الاوعية الدموية - جامعة القاهرة متحن داخلى

٣) ا.د/ نبيل أمين شهرى استاذ الجراحة العامة وجراحة الاوعية الدموية - جامعة عين شمس متحن خارجى

بعد فحص الرسالة بواسطة كل عضو منفردا وكتابه تقارير منفرده لكل منهم انعقدت اللجنه مجتمعه فى يوم الخميس بتاريخ ١٥ / ٤ / ١٩٩٩ بقسم ـــــــ مدرج ابن الهيثم بكليه الطب ـ جامعة القاهرة وذلك لمناقشه الطالب فى جلسة علنيه فى موضوع الرسالة والنتائج التى توصل اليها وكذلك الاسس العلمية التى قام عليها البحث.

قرار اللجنه : ـــــــ

توقيعات اعضاء اللجنه : ـ

المشرف الممتحن ..... المتحن الداخلى ..... الممتحن الخارجى .....

INTRODUCTION

Extremity vascular injuries can result in limb loss, serious life long functional disability or even death in characteristically young victims *(Rutherford RB 1988)*

The field of vascular trauma is one of the youngest surgical disciplines. Although physicians have long encountered the challenges of hemorrhage and ischeamia from the injured vessels, most of our current knowledge of the principles and techniques involving arterial injuries had developed over the past 50 years *(Frykberg, ER. 1995)*

Experience obtained from the major wars of the twentieth century provides the basis for the present approach to civilian peripheral arterial injury's management *(De Bakey. et al 1946)* where 90% of those injuries occur in the extremities *(Rich, N M. et al 1970)*

During World War II, ligation of the injured artery was the routine procedure as attempt for life saving. For the popliteal artery this routine resulted in amputation rate of 73% *(De Bakey et al 1946)*

In spite of the very early attempts of arterial injury repair as that recorded by ***Sir Halliwell*** *1759* who repaired lacerated brachial artery and that by ***Prof. Dr Murphy;*** *Chicago 1879* who successfully repaired a totally transected femoral artery *(William Hunter. 1986)*. The formal application of arterial injury repair principles was only implemented at the Korean conflict. And in spite of the time lag of 10 hours average between injury and transfer, the application of this techniques resulted in drop of the amputation rate to 13% *(Rich, N M. et al 1969)*.

Continued further improvement during the Vietnam War, where victim transfer time was reduced to 3 hours, together with the liberal use of autogenous vein grafts and improvement of the vascular repair skills, the amputation rate was kept the same (12.7%). *(Rich, NM. et a!1970)*

Physical limb trauma could be penetrating, iatrogenic, or blunt. Around 90% of all extremity arterial injuries are of penetrating variety, which are either high velocity or low velocity injuries. The formers are characterized by energy dissipation together with tissue cavitation that result in more damages than the original wound trajectory. Unlike the latter where the insult is mostly

confined to the wound trajectory (where the velocity is less than 1500 ft. /sec) *(Perry MO. et al 1995)*

Iatrogenic injuries present another form of arterial trauma mechanism specially to the femoral and brachial arteries due to their common use in interventional techniques e.g. cardiac cath.; angiography; angioplasty ...etc. This procedures carry 2-5% injury rate where females are more prone to injury due to their smaller arterial size *(Feld R. et al 1992)*

Blunt arterial injuries in spite of constituting only 10% of all arterial injuries. Yet it represent more morbid injury owing to the associated fractures, dislocation and crushed soft tissues as well as other systems affection. Motor vehicle accidents and fall from heights represent the most common causes *(White .RA et al 1987)*

In spite of the wide diversity of the etiological factors, the types of arterial injuries are usually contusion, intimal disruption, punctures, lateral disruption, arteriovenous fistula or transection of the artery *(Modrall JG et al 1993)*

Timing is a very crucial factor in prognosis of the limb salvage following arterial limb trauma. Clinically an extremity trauma should be examined thoroughly for arterial injuries where presentation of such injuries could be either Frank "Hard" or Doubted "Soft"

Hard signs of arterial injuries include: absent pulses; active hemorrhage; expanding heamatoma; audible or palpable thrill or; distal ischeamia with pain pallor parathesia paralysis pulslessness coldness and color changes *(Frykberg et al 1995)*

Soft signs; ***unlike*** hard signs; denote only that the probability of the presence of arterial injury can not be over looked. Which includes: small or stable heamatoma in the course of the artery; injury to anatomically related nerve; unexplained hypotension at presentation; history of active hemorrhage that no longer present and proximity of the wound trajectory to a major artery *(Frykberg et al 1995)*