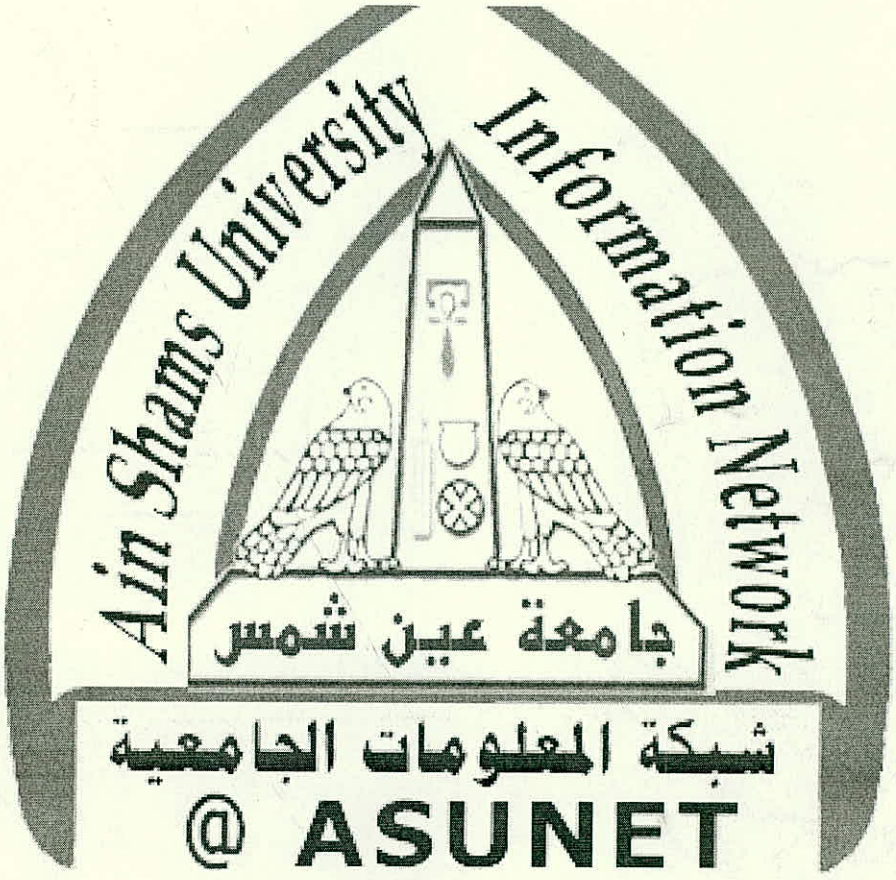
شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

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

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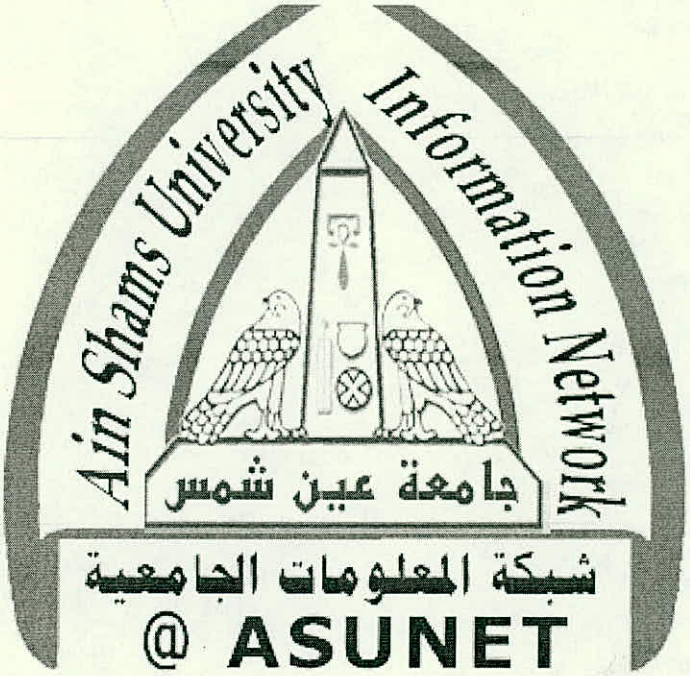
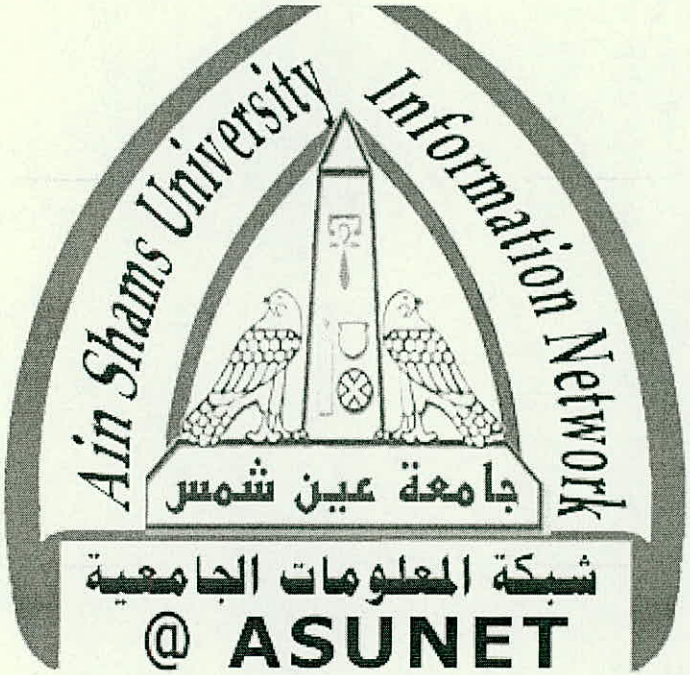
To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %



بعض الوثائق الأصلية تالفة



بالرسالة صفحات

لم ترد بالأصـــل

ULTRASTRUCTURAL CILIARY CHANGES OF MAXILLARY SINUS MUCOSA FOLLOWING FUNCTIONAL ENDOSCOPIC SINUS SURGERY (FESS)

THESIS SUBMITTED FOR PARTIAL FULFILLMENT OF MD DEGREE IN OTORHINOLARYNGOLOGY

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محضـــــــر

اجتماع لجنة الحكم علي الرسالة المقدمة من
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في الأنف والأذن والحنجرة

تحت عنوان : باللغة الإنجليزية : Utrastructural Ciliary Changes of Maxillary sinus mucosa following functional endoscopic sinus surgery .

باللغة العربيـــة : التغييرآت التركيبية متناهية الدقة في أهداب الغشاء المخاطي المبطن للجيب الأنفي الوجني بعد جراحة منظار الجيب الأنفي الوظيفية .

بناء علي موافقة الجامعة بتاريخ ٢٠٠١/٥/٢م تم تشكيل لجنة الفحص والمناقشـــة للرسالة المذكورة أعلاه علي النحو التالي : -

١) أ . د / أحمد مصطفي بسيوني — عن المشرفين
٢) أ . د / محمد ماجد توفيق الشناوي — ممتحن داخلي
٣) أ . د / إلهام إبراهيم سيف — ممتحن خارجي

بعد فحص الرسالة بواسطة كل عضو منفرداً وكتابة تقارير منفردة لكل منهم انعقـدت اللجنة مجتمعة في يوم الاثنين بتاريخ ٢٠٠١/٧/٩م بقسم الأنـــف والأذن والحنجـرة بكليـة الطب- جامعة القاهرة وذلك لمناقشة الطالب في جلسة علنية في موضوع الرســالة والنتـائج التي توصل إليها وكذلك الأسس العلمية التي قام عليها البحث .

قرار اللجنة : قبول الرسالة .

توقيعات أعضاء اللجنة :-

المشرف الممتحن	الممتحن الداخلي	الممتحن الخارجي
أ . د / أحمد مصطفي بسيوني	أ . د / محمد ماجد الشناوي	أ . د / إلهام إبراهيم سيف

ABSTRACT

This work was conducted on 20 maxillary sinuses to prove if FESS is associated with cilary regeneration and increase in the number of cilia in the maxillary sinus or not and to confirm the Messerklingers theory.

Biopsies were obtained from the maxillary sinus superolateral wall and from the maxillary sinus ostium at the time of the surgery and studied by scanning electron microscopy,light microscopy and image analysis to calculate cilary area.patients were rebiopsied after 6-12 months after the operation from the same places.FESS was found to to be associated with ciliary regeneration and increase in the values of ciliary area and this confirm the validity of the functional theory upon which this surgery is based.

Key words :Cilia,FESS,Ciliary area,Scanning electron microscopy,Image analysis.

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Introduction and Aim of the work

Introduction

The concept of functional surgery in the region of the osteomeatal complex as a treatment modality of chronic sinusitis was based on the outstanding research work of Messerklinger in the 1950s and 1960s.Messerklinger studied the pathways of secretion transport in the paranasal sinuses , and then he established the theory of endoscopic sinus surgery,which was then popularized by Stammberger and Kennedy separately in the 1980s.

This theory states that improving the drainage in the critical area of the osteomeatal complex by infundibulotomy, ethmoidectomy, middle meatal antrostomy with or without clearance of the frontal recess area , often restores normal physiological functions to all sinuses, with restoration of normal mucociliary clearance , enabling sinus mucosa to return to its normal condition after FESS procedure.

Since that time many authors have published a lot of articles in the literature, trying to evaluate the efficiency of FESS (Levine 1990 and Lawson 1991).They utilized the following parameters:-

1- Symptomatic evaluation of the patients using subjective scores.

2- Radiological evaluation of the patients using preoperative and postoperative CT scans.

3- Pathological evaluation of the patients by studying specimens from the sinuses before and after surgery.

But to our mind the two sound proofs of the success of FESS and the validity of the Messerklinger 's theory are :-

1- Proving that clearing the osteomeatal complex region is associated with ciliary regeneration, and increase in the number of the cilia in the large sinuses i.e. the maxillary sinus , and the frontal sinus.

2- Proving that the regenerating cilia are well functioning, and that the parameters of mucociliary clearance, and ciliary beat frequency have improved.

Aim of the work

The aim of this work is to study the regeneration and increase in the number of the cilia in chronic maxillary sinusitis following FESS. To do this using a scientific objective method, we utilized the scanning electron microscopy (which is a fascinating technique to study the surface of relatively large areas i.e. up to about 1 cm^2 under high magnifications) , and then we applied the image analysis software technique to calculate quantitatively the ciliary area, which is the area of the maxillary sinus mucosa occupied by cilia on the surface of the epithelium ,and then we compared the results before and after the operation to check the validity of FESS and the Messerklinger's theory concept, by showing if FESS is associated with ciliary regeneration or not.

REVIEW OF LITERATURE