

قال تعالى :

وَتَرَى الشَّمْسَ إِذَا طَلَعَتْ تَزْوُرُ عَنْ كَهْفِهِمْ ذَاتَ
الْيَمِينِ وَإِذَا غَرَبَتْ تَقَرِّضُهُمْ ذَاتَ الشِّمَالِ وَهُمْ فِي فَجْوَةٍ
مِنْهُ ذَلِكَ مِنْ آيَاتِ اللَّهِ مِنْ يَهْدِ اللَّهُ فَهُوَ الْمُهْتَدِ وَمَنْ
يُضِلِلْ فَلَنْ تَجِدَ لَهُ وَلِيًّا مُرْشِدًا ﴿١٧﴾

صورة الكهف الاية ١٧

Dedication

To: My parent for their patience and

Encouragement My brothers, sisters and

teachers for their help and support My friends

For their valuable supports I dedicate this work

Acknowledgements

First and foremost, I would like to express my deepest gratitude to

Dr. Husain Ahmed, without his help this work could not have been

accomplished

My thanks also go to Medical Modern Center.

Deep thanks to my family for their consistent mental support.

Abstract

This study was aimed to evaluate the effect of focal spot size on image quality, this study was done in Modern Medical Center, and The X-ray machine modality is digital radiography. Before collection of data x-ray machines calibrated, This study proved that fine focal spot images were sharp in outline compared to broad focal spot images, the image quality was evaluated by visual perception by questionnaire 100 professional Radiologist were asked to evaluate the image quality for fine focal image compared to broad focal image, the result was 62% of from the asked group evaluated fine focal spot image better than broad focal spot size image were 28% of from the asked group evaluated fine focal spot size image same quality to broad focal spot size image and 10% from the asked group evaluated broad focal spot size image better than fine focal spot size image. The result is same as in previous study, the relative large part of the study (28% + 10%) that presents broad focal images is same quality and better than fine focal spot may be due to the digital image processing.

ملخص البحث

تهدف هذه الدراسة لتقييم تأثير حجم فوهة الأنبوب على جودة الصورة الإشعاعية، أجريت هذه الدراسة في المركز الطبي الحديث، قبل عملية جمع البيانات تمت معايرة أجهزة الأشعة السينية، أثبتت هذه الدراسة ان جودة الصورة الإشعاعية تعتمد على حجم فوهة أنبوب الأشعة السينية كلما زادت فوهة الأنبوب قلت جودة الصورة الإشعاعية ، في هذه الدراسة تم تقييم جودة لصورة الإشعاعية عن طريق الإستبيان بالتقييم البصري ، حيث تم استبيان ١٠٠ خبير متخصص في مجال الأشعة التشخيصية لتقييم جودة الصورة الإشعاعية ، وكانت نتيجة الإستبيان ٦٢% من المجموعة قيمت الصور المأخوذة بفوهة أنبوب ضيقة أجود من الصور المأخوذة بفوهة أنبوب واسعة ، ٢٨% من المجموعة قيمت الصور المأخوذة بفوهة أنبوب واسعة لها نفس جودة الصورة المأخوذة بفوهة أنبوب ضيقة ، ١٠% من المجموعة قيمت الصور المأخوذة بفوهة أنبوب واسعة أجود من الصور المأخوذة بفوهة أنبوب ضيقة.

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