الآية

بسم الله الرحمن الرحيم

هَلْ أَتَى عَلَى الْإِنسَانِ حِينٌ

مِّنَ الدَّهْرِ لَمْ يَكُن شَيْئاً

{مَّذْكُوراً{ 1

صدق الله العظيم

سورة الانسان

DEDICATION

To all whom support me:

My father

My mother

My family

My friends

Acknowledgement

I am grateful to our god. Also I would like to thank my supervisor Dr: Caroline Edward, the staff

of Fedail Hospital for helping me in collecting data. Finally I would

Like to thank everyone who has participated in the

Completion of this study.

Abstract

The thoracic diaphragm is an important organ that separates the thoracic organ from the abdominal viscera.

The study was done in Fedail hospital at time from January to march 2013 using major x-ray machine and computed radiography processing unit. The study was done to determine the distance between right and left hemidiaphragm in normal Sudanese adult. The study sample was 100_sample 50 (50%) males and (50%) females, with different ages starting from 18 to 82, all subjects was with normal abdominal ultrasound and normal chest x-ray.

The measurement was done on ideal PA chest radiograph by identify the measurement point clearly and measure the distance from the highest point of right hemidiaphragm to highest point of the left hemidiaphragm.

the study found that the right hemidiaphragm was higher than the left in 98% of total sample and the left was higher in 1% and they were in the same height in 1% of total sample. The right was higher in range of 1cm to 2.5cm in 79%.

The study found that there was a correlation between the distance between right and left hemidiaphragm and subject age, body mass index (BMI), height and weight. The distance the

distance increased as body mass index, height and weight increased, while the distance decreased as the age increased.

Computed radiography was useful in such measurement of the because measurement point can be identified accurately and easily by manipulating the image resolution, contrast and zooming.

خلاصة البحث

الحجاب الحاجز عضو مهم جداً في جسم الانسان حيث انه يفصل الاعضاء الصدرية من الاحشاء البطنية.

أجريت الدراسة في مستشفى فضيل في الفترة من يناير 2013 وحتى مارس 2013 باستخدام جهاز الاشعة السينية ووحدة المعالجة بالحاسوب.

اجريت الدراسة على 100 شخص 50 رجال و 50 نساء بمختلف الاعمار ابتداء من 18 حتى 82سنة لتتحديد المسافة بين النصف اليمين للحجاب الحاجز والنصف اليسار. تم عمل موجات صوتية للبطن لجميع العينات شخصت بانها طبيعية واشعة الصدر شخصت طبيعية. اجريت القياسات على صورة الصدر الخلفية-امامية المثالية وذلك بتحديد نقاط القياس بوضوح وقياس المسافة بين اعلى نقطة من نصف الحجاب الحاجز الايمن و اعلى نقطة من النصف الايسر .

وجدت الدراسة ان النصف الايمن للحجاب الحاجز اعلى من النصف الايسر في 98% من الحالات والايسر اعلى في 1% من الحالات وتساويا في البعد في 1% من الحالات.

وجدت الدراسة ان هنالك علاقة بين المسافة بين نصفي الحجاب الحاجز و العمر, مؤشر كتلة الجسم, الطول والوزن . ووجدت ان المسافة تزيد بزيادة مؤشر كتلة الجسم والوزن والطول بينما تقل بزيادة العمر.

جهاز المعالجة بالحاسوب مفيد جداً في مثل هذه القياسات لان نقاط القياس يمكن ان تحدد بدقة وسهولة ويمكن ذلك بمعالجة وضوح الصورة والتباين والتكبير.

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Abbreviation

Cm	Centimeter

CR	Computed Radiography
CXR	Chest x-ray
F	Female
IP	Imaging palate
Kg	Kilogram
M	Male
mm	Millimeter
PEM	Original equipment manufacturer
PA	Postero-anterior
PN	Pherenic Nerve

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