

الآية

أعوذ بالله من الشيطان الرجيم

: قال تعالى

اللَّهُ الَّذِي خَلَقَكُمْ مِنْ ضَعْفٍ ثُمَّ جَعَلَ مِنْ بَعْدِ ضَعْفٍ قُوَّةً ثُمَّ جَعَلَ مِنْ

بَعْدِ قُوَّةٍ ضَعْفًا وَشَيْبَةً يَخْلُقُ مَا يَشَاءُ وَهُوَ الْعَلِيمُ الْقَدِيرُ (54)

(سورة الروم :الاية 54)

Dedication

To everyone whom lightened a dark
spot in my minds...

To my supervisor Ass.prof.
Mahmoud Mohammed Ahmed..
And to my family and friends

Acknowledgment

I would like to express my great thanks & tribute to everyone who support me in my work ; especially who helped me in the family of modern medical center .

Full regardness for my supervisor Ass.prof. Mahmoud Mohamed Ahmed who gave a perfect advice and ideas, in such way that he motivated me to complete the work in success.

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List of abbreviation

CT: Computed Tomography

MRI: Magnetic Resonance Image

Fig: Figure

HND: Herniation Nucleus Pulposus

LSS: Lumbar Spinal Stenosis

HCD : Herniation Cervical Disc

SPSS : Social Program Statistical Analyses

CBR: Canal Body Ratio

RAPT : Ratio Of Anteroposterior To the Transverse Diameter

Min : Minimum

Max : Maximum

STD : Standard deviation

Sig: Significance

MM: Millimetres

ANOVA: Analysis Of Variance

MS: Multiple Sclerosis

GRE : Gradient echo

P: posterior
A: Anterior
L: left
R: Right
SNR: Signal To Noise Ratio
FOV: Field Of View
GMN: Gradient moment nulling
CSF: Cerebrospinal Fluid
CSE: Conventional Spin Echo
RF: Radio-frequency
S-I: superior to inferior
NEX/NSA: Number Of Excitations/ Number Of Signal Average
PD: Proton Density
ROI: Region Of Interest
STIR: Short T_1 Inversion Recovery
Pe gating: peripheral gating
 T_1 : longitudinal Relaxation Time
 T_2 : Transvers Relaxation Time

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Abstract

This study was done to measure changes in cervical spine induce age by using MRI .

Cervical Spine MRI were taken for 263 adult patient investigated in medical modern center, during 2015. The measure way computer. the data were analyzed using mean value and standerd deviation, as well as P-value to detect degree of significance using SPSS (social program for statistical analysis).

Our findings in measurement of Torg ratio, diameter of spinal canal , height of disc , there was significant changes with age .The Torg ratio explain spinal canal stenosis due to degenerative changes due to age especially over 60 year patients the mean \pm std .(73.706 \pm 17.18) .

The Diameter of Body of cervical spine have indirect relationship with diameter of Spinal Canal which decreased By 0.303 for every one mm increate diameter of body cervical spine .these results may explain narrow of cervical spine canal due to degenerative changes of body cervical spine that affected by age.

The Diameter of Body of cervical spine has indirect relationship with height of Disc which decreased By 0.032 for every one mm increate diameter of body cervical spine .And The Height of Disc has indirect relationship with height of body cervical spine which decreased By 0.155 for every one mm increate height of body cervical spine .these result explain narrow of disc space due to Age .

Therefore conclusion of this study The degenerative changes of cervical spine related to age especially in older patient .

الخلاصة

أجريت هذه الدراسة لقياس التغيرات في العمود الفقري العنقي مع التقدم في السن باستخدام التصوير بالرنين المغناطيسي.

اتخذت صور الرنين- المغنطيسي- للعمود الفقري العنقي لمائتان وثلاث وستون مريض بالغ في المركز الطبي الحديث خلال عام 2015. ثم قياس البيانات باستخدام الحاسوب وقد تم تحليل البيانات باستخدام الوسط الحسابي والانحراف المعياري ووجد معامل الارتباط لتحديد دقة القياس باستخدام SPSS (برنامج اجتماعي للتحليل الإحصائي) .

النتائج التي توصلنا إليها في قياس نسبة تورج، قطر القناة الشوكية، وارتفاع القرص، وهناك تغير- مع التقدم في السن. ونسبة تورج توضح ضيق القناة الشوكية نتيجة لتقييم التغيرات التنكسية المصاحبة لتقدم العمر خاصة المرضى الأكثر من 60 سنة . الوسط الحسابي \pm الانحراف المعياري . (17.18 \pm 73،706).

قطر جسم العمود الفقري العنقي له علاقة غير مباشرة مع قطر قناة العمود الفقري الذي انخفض بنسبة 0.303 مع زيادة ملمتر واحد من قطر جسم العمود الفقري. هذه النتائج قد تفسر ضيق قطر قناة العمود الفقري مع التغيرات التنكسية لقطر جسم العمود الفقري العنقي التي تتأثر بالعمر.

قطر الجسم العمود الفقري العنقي له علاقة غير مباشرة مع ارتفاع القرص الذي انخفض بنسبة 0.032 مع زيادة ملمتر واحد من جسم العمود الفقري العنقي. وعلى ارتفاع القرص له علاقة غير مباشرة مع ارتفاع جسم

العمود الفقري العنقي الذي انخفض بنسبة 0.155 مع زيادة مليمتر واحد من جسم هذا العمود الفقري العنقي النتائج قد تفسر- ضيق ارتفاع القرص نتيجة للعمر.

لذلك نستنتج من هذه الدراسة ان التغيرات التنكسية للعمود الفقري العنقي متعلقة بالعمر خاصة المرضى كبار السن .