الآيـــــة

بسم الله الرحمن الرحيم

قال تعالى :

((إِنَّ اللَّهَ وَمَلَائِكَتَهُ يُصَلُّونَ عَلَى النَّبِيِّ يَا أَيُّهَا الَّذِينَ آمَنُوا صَلُّوا عَلَيْهِ وَسَلِّمُوا تَسْلِيمًا))

صدق الله العظيـم

سورة الأحزاب الآية (٥٦)

DEDDICATION

To my beloved family especially to the soul of my mother God forgive her,

my colleagues and committed friends,

and all those who offered me their help

with all respect

I dedicate this work

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First I thank Almighty Allah for giving me the patience, ability and strength to complete this work.

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ABSTTRACT

Streptococcal infections are of paramount public health concern affecting children and adults resulting in further in fatal consequences. Hence their rapid and accurate diagnosis is required.

Antistreptolysin O (ASO) test measures the amount of streptolysin O in the blood. This study was conducted in the Research Laboratory, Sudan University of Science and Technology during the period between from May to August 2012. The study was designed to assess the diagnostic value of ASO test in diagnosis of streptococcal infections.

A total of 100 throat swabs and 100 blood samples were collected from patients suspected of having throat infection. For blood samples ASO test was done qualitative and semi quantitative and swabs samples were inoculated on bacteriological media for primary isolation and processed for identification of the causative clinical agents using cultural characteristics and biochemical tests.

The result showed that 36% of patients were positive for ASO test while culturing of swabs produced 30% positives, 33% of the positive swabs culture had high ASO titers. The most affected gender was the females aged between 2-15 years old.

The study concluded that ASO test was useful and rapid in detecting streptococcal acute or post-streptococcal infections but its more valuable in the latter. However further research work is needed to elucidate the problem and improve the diagnosis of these virulent pathogens.

المستخلص

ان العدوي بالمكورات السبحية القيحية تشكل مشكلة صحية في الاطفال والكبار ولها عواقب صحية خطيرةوعليه يجب تشخيصها بدقة وسرعه.

أختبار قياس مضادات (أ س و) هو عبارة عن اختبار لقياس كمية استربتوليزين (و) في الدم .

وقد أجريت هذه الدراسة في مختبر أبحاث في جامعة السودان للعلوم والتكنولوجيا خلال الفترة ما بين مايو 2012-2012 أغسطس.صممت هذه الدراسة لتقم القيمة التشخيصية لاختبار(أس و) في تشخيص عدوي المكورات السبحية القيحية. وتم جمع 100عينة دم و 100عينة مسحه حلقية من مرضي يشتبه اصابتهم بعدوي القيحية الحلقية.

بالنسبة لعينات الدم تم عمل اختبار (أ س و) نوعي وشبه كمي وبالنسبة لعينات المسحات الحلقية تم الزرع في الاوساط البكتيرية للعزل الاولي للبكترياء وتم تصنيف البكترياء المعزوله من الشكل الظاهري للمستعمرات والاختبارات الكيمائية المختلفه. وقد اعطي اختبار (أ س و) نتائج ايجابية مع 36% من العينات وكانت نتيجة الزرع ايجابية مع 30% من عينات ا لمسحات وان 33% من عينات المسحات التي اعطت نتائج ايجابية في الزرع ايضا كانت ايجابية مع اختبار (أ س و) كانت الاصابة اكثر في الاناث كذالك ان اكثر الفيئات العمرية تاثرا هي من 2-15 سنة. ويعتبراختبار(أ س و) اختبار سريع وله قيمة تشخيصية في تشخيص الاصاب بالمجموعة (أ) الحالة للدم واثارها اللاحقة.هنالك حاجة لمزيد من الابحاث لتطور تشخيص المرض,

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ABBREVIATIONS

ASO	Antistreptolysin O
CO_2	Carbon Dioxide
PYRA	L-pyrrolidonyl-2naphthylamide
CAMP	Christie Atkins Munch –Petrson
Nacl	Sodium Cholride
SPM	*Streptococcus pyogenes* Meningitis
GABHS	Group A β-Hemolytic Streptococcus.
SC	Sydenhams Chorea
TS	Tourette syndrome
EIA	Enzyme linked immunoassay.
ENT	Ear, Nose and Throat Hospital
BHI	Brain Heart Infusion Medium
API	Analytic Profile Index
VP	Voges Proskuar
HIP	Hipurric Acid.
ESC	Esculin
αGAL	α-Glactosidase.
βGUR	β-Glucuronidase.
PAL	Alkaline Phosphatase.
LAP	Leucine Aminopeptidase.
RIB	Ribose.

ARA	Arabinose
MAN	Mannitol.
SOR	Sorbitol
LAC	Lactose
TRE	Trehalose
INU	Inulin
RAF	Raffinose
AMD	Amidon
GlyG	Glycogen
ATCC	American type culture collection
PCR	Polymerase Chains Reaction
DNA	Deoxyribonucleic acid