

DEDICATION

To my
Parents,
Wife,
Son,
and Friends,
with love and appreciation

Acknowledgement.

I would like to express my sincere gratitudes to Dr Shamsoun Khamis Kafi for his keen supervision, valuable advices and encouragement through out the research period.

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Abstract

This study was conducted during the period between November, 2003 to March; 2004 to study the use of dried blood spot on filter paper for detection of HIV antibodies in venous blood samples using ELISA technique. The study was conducted in Khartoum Teaching Hospital AIDS unit.

A total of 100 specimens from known AIDS patients randomly selected and 50 specimens from healthy control were collected on filter paper, and air dried. The collected specimens were subjected to various atmospheric conditions (temperature, etc...) and the effect of time, temperature and humidity, on the stability of antibodies was evaluated.

Phosphate buffer saline eluates from dried spot on filter paper were tested for HIV antibodies. The results were then recorded and compared for the different conditions.

The result showed that the the detection of HIV antibodies in eluate of whole blood impregnated filter paper strips continued to be stable for two months for all specimens stored in refrigerator, incubator at 37°C, and at room temperature. The specimens there after started to deteriorate and by 3 months all specimens revert negative.

The result also showed that dried blood spot on filter paper remained stable for longer time at refrigerator than at room temperature and incubator. The result concluded that collection of blood on filter paper is simple to do, cheap and associated with lower risk of infection and loss or spoiling of specimen compared to the ordinary method of serum collection. Dried blood spot on filter paper are also easier to store and transport with minimum risk and cost.

المقدمة

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أجريت هذه الدراسة في الفترة بين نوفمبر 2003 - مارس ، 2004 لدراسة استعمال بـ قعة الدم المجففة على ورق الترشيح لكشف الأجسام المضادة لفيروس عوز المناعة الانساني في عينات مرضى مصابون بالايـز بإستعمال تقنية الـيزا. أجرت الدراسة في مستشفى الخرطوم التعليمي وحدة الـيزا.

جمعت 100 عينة من مرضى موكد اصابتهم بالايـز تم إختيارهم بشكل عشوائي و 50 عينة من اصحاء غير مصابين بالايـز على ورقه الترشيح وجففت. العينات المجمعة حفظت في درجات حراره مختلفه ولدراسة تأثيرها وتأثير الزمن على إستقرار الأجسام المضادة للفيروس.

استخلص الدم من ورق الترشيح عن طريق محلول منظم فوسفاتي لاختبار الأجسام المضادة للـيز كما هو موضح في طريقه الفحص. ثم قورنت النتائج مع بعضها .

اظهرت النتائج بان كشف الاجسام المضاده للـيز من الدم المستخلص من ورق الترشيح المشبع صالحه للكشف لمدة شهرين بالنسبه لكل العينات التي حفظت في الثلاجه (درجه حرارة 4 مؤويه - 8 مؤويه) والحضانه في درجة حرارة 37 مؤويه وفي درجة حرارة الغرفة . بعد ذلك بدأت العينات تدهور تدريجيا في كمية الاجسام المضاده وبمرور ثلاثة اشهر اصبحت كل العينات سالبه للاجسام المضادة لفيروس عوز المناعة الانساني.

اوضحت نتائج الدراسة ايضا ان الاجسام المضادة للـيز في الدم المجفف على ورقه الترشيح الموضوعه في الثلاجه اكثر استقرارا من الموضوعه في درجة حراره الغرفة وفي درجة حرارة 37 مؤويه.

اوضحت الدراسة ايضا ان استعمال ورقه الترشيح في جمع العينات اكثر سهوله واقل تكلفه وبسيط. ورخيص بالاضافه الى انه اقل خطورة من حيث تعرض العاملين

للعدوى وتقلل من الفاقد فى العينات مقارنة بالطريقة العادية لفحص مصل الدم
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