Dedication

To My Mother & Father

For their subtle support

To My Brothers & Friends

For their kind help and encouragement

Acknowledgment

First thanks to God for every thing.
I wish to express my deep gratitude for all those who help me through the course of this work.
Dr. Humodi Ahmed Saeed, for his expert supervision, encouragement and support throughout the course of work.
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Abstract

This study was carried out in the period from May 2007- March 2008 to detect the presence of *Hafnia alvei* in patients suffering from urinary tract infection. Forty six urine specimens were collected from patients attended Khartoum Teaching Hospital, Ibrahim Malik Teaching Hospital and Omdurman Teaching Hospital. Bacterial DNA was extracted from each urine specimen using Phenol-Choloroform technique. Real time PCR technique was adopted to detect the presence of *Hafnia alvei.*

The results revealed that only one (2.1%) specimen was positive and the rest forty five (97.8%) were negative. The study concluded that real time PCR technique facilitates detection of *Hafnia alvei* in urine without bacteriological culture.

الخلاصة

أجريت هذه الدراسة في الفترة بين مايو 2007م إلى مارس 2008م لتحديد وجود بكتيريا الهافنية النخروبية في عينات البول من مرضى مصابين بالتهاب المجارى البولية.
تم تجميع ستة وأربعون عينة بول من هؤلاء المرضي من مستشفي الخرطوم التعليمي، مستشفي ابراهيم مالك التعليمي ومستشفي أم درمان التعليمي.
تم استخلاص الحمض النووى الريبى منقوص الاكسجين للبكتيريا من عينات البول باستخدام تقنية الفينول كلوروفورم.
وقد استخدم تقنية تفاعل البلمرة المتسلسل الزمنى للكشف عن بكتيريا الهافنية النخروبية وأظهرت النتائج وجود عينة واحدة (2.1%) إيجابية وبقية النتائج خمسة وأربعون (97.8%) سلبية.
خلصت الدراسة إلى أن تقنية تفاعل البلمرة المتسلسل الزمنى تسهل كشف الهافنية النخروبية في البول بدون اللجوء لتقنيات الاستزراع المخبرى.

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