

DEDICATION

To my mother,

to the soul of my father, to my

sisters & brothers

ACKNOWLEDGEMENT

**I would like to thank Allah, Almighty, are
due to thanks and gratitude to my Supervisor
Dr. ABDALSALAM ABDALLA DAFAALLA
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ABSTRACT

Kidney stones are the third most common urological disease affecting both males and females worldwide. Environmental factors, especially diet play an important role in expression of the tendency to stone formation. The present study was aimed to analyze the kidney stones (collected from 20-sudanese patients), and some dietary factors (black tea, tap-water and table salt).

All samples were analyzed by inductively coupled plasma mass spectrometry Optical Emission Spectrometer (ICPOES), X- ray florescence, FTIR, and Ultra violet spectrometer. The results gave indication for the type of stone. Some samples were calcium oxalate stones, others calcium phosphate stones, and uric acid stones.

The study of tap water, black tea and sodium chloride affected on kidney stones formation. The results of elements concentration on different kidney stone samples gave indication to the concentration of element, the rate of elements (Ba, Cu, Fe, K, Mg, Mn, Na, P, Se) is high in dietary factors, probably that reason indicates the kidney stone formation.

Our study has also shown that in both groups (males and females) there was an increase in element content as the age increase.

الخلاصة

أحجار الكلية المرض الأكثر شيوعاً الذي يؤثر على كل الذكور و الإناث حول العالم. العوامل البيئية تلعب دوراً مهماً في تشكيل الحجارة. الدراسة الحالية تهدف لتحليل احجار الكلية (جمعت من 20 مريض سوداني), وبعض العوامل الغذائية (شاي أسود, ماء حنفية وملح مائدة).

كل العينات حللت باستخدام جهاز البلازما (inductively coupled plasma), و اشعة اكس (X-Ray Florescence), الاشعة الحمراء(FTIR), وبالأشعة فوق البنفسجية (U.V). النتائج اعطت اشارة لنوع الحجارة. بعض العينات حساوي اكسلات كالسيوم و عينات اخرى فوسفات كالسيوم ويوريا.

تم دراسة تأثير ماء الحنفية, الشاي الاسود, وملح المائدة على تشكيل احجار الكلية. نتائج تركيز العناصر على عينات الحجارة المختلفة اعطت اشارة لتركيز العنصر, نسبة عالية من العناصر في المواد الغذائية (Ba, Cu, Fe, K, Mg, Mn, Na, P, Se), من المحتمل ذلك السبب يشير الى تكوين حجارة الكلية.

دراستنا ايضا لاحظت في كلتا المجموعات (ذكور و اناث) كان هناك زيادة في محتويات العنصر بزيادة العمر.

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