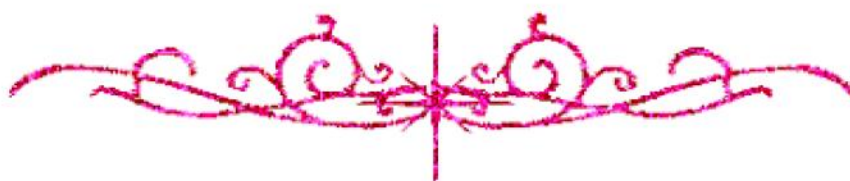


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شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



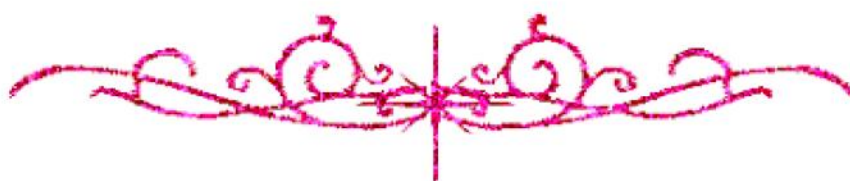
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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

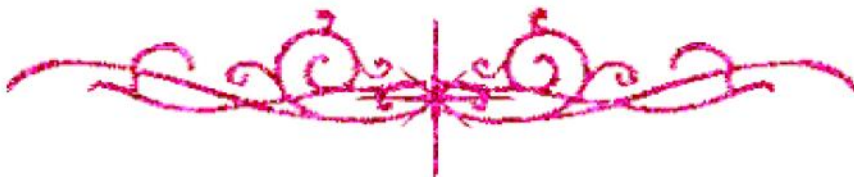
قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



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شبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة



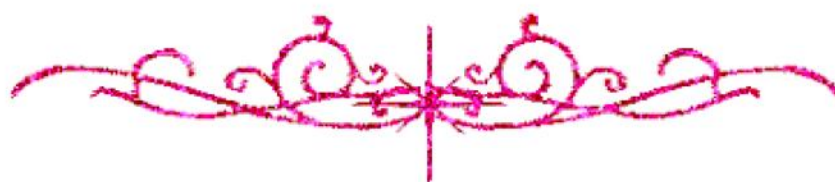
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شبكة المعلومات الجامعية



**بالرسالة صفحات
لم ترد بالأصل**



**Gastric Myoelectrical activity in patients
with End - Stage Renal Disease on
Maintenance Haemodialysis**

B18650

PROTOCOL OF THESIS

Submitted in partial Fulfillment
For the Master Degree in Internal Medicine

By

Azmy Ahmed Ahmed Buomy

M. B, BCh.

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**BENHA FACULTY OF MEDICINE
ZAGAZIG UNIVERSITY**

1998



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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ وَقُلْ رَبِّ زِدْنِي عِلْمًا ﴾

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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INTRODUCTION AND AIM OF THE WORK

Patients with chronic renal failure requiring haemodialysis commonly complain of Gastrointestinal symptoms (Musola et al., 1984). Fluid and electrolytes dysequilibrium, Cerebral Oedema and Volume over load, are proposed causes. Non-dialyzable toxins might delay gastric emptying by autonomic dysfunction or by suppression of smooth muscle contractility. Calcium, Phosphorus, and Magnesium imbalance could also contribute to myogenic failure (Richard et al., 1983).

Many end-stage renal disease patients on maintenance haemodialysis report nausea and vomiting (Dennis et al., 1984).

Although the etiology of these symptoms is unclear, delayed gastric emptying has been proposed.

Recent reports, however, have for the most part failed to demonstrate delayed gastric emptying in haemodialysis patients (Mc Namee et al., 1985 and Soffer et al., 1985).

Gastric myoelectrical activity :

Two kinds of gastric myoelectrical activity can be measured by serosal or intraluminal electrodes. The slow wave (or electrical control activity, basic electrical rhythm, or pacesetter potential) and spikes (or electrical response activity).

The slow wave is present continuously and originates in a

region near the junction of the proximal one-third and distal two-third of gastric corpus along the great curvature. It is characterized by regular recurring changes in potential propagating circumferentially and distally toward, the pylorus with increasing velocity and amplitudes (Danial, 1965 and Sarna, 1975).

The frequency of the slow wave is about 3 cycles / minute (CMP). It is generally believed that the slow wave, controls only, the rhythm and propagation of contractions; but some studies (Morgan et al., 1978 and You and Vhey, 1984). Have shown that the slow wave was also associated with low-amplitude contractions of the antrum. Spikes are directly correlated with antral contractions. When gastric slow wave is followed by spikes an antral contractions occurs (Chen et al., 1993).

Electrogastrography is usually referred to as the non invasive technique of recording gastric myoelectrical activity by placing electrodes on the abdomen.

AIM OF THE WORK

The aim of the present work is to study the gastric myoelectrical activity in patients with end-stage renal diseases on maintenance haemodialysis by using electrogastrography.

PATIENTS AND METHODS

* Twenty patients with end-stage renal diseases under

maintenance haemodialysis.

- * Ten healthy volunteers as control group.
- * Through history for all patients with special stress on age, sex and history of upper gastrointestinal symptoms (Nausea, Vomiting and heart burns), duration of end-stage renal diseases and duration of haemodialysis, history of diabetes mellitus.
- * Physical examination for all patients.
- * Laboratory investigations.
 - Urine analysis.
 - Serum creatinine.
 - Blood urea.
 - Blood picture & haematocrite value.
 - Na⁺ K⁺ Ca⁺⁺, phosphorous before and after haemodialysis.
- * Electrogastrography (Chen et al., 1993). It will be done for all patients before and after haemodialysis and for the control group.

CHAPTER I.

Gastrointestinal Manifestations of Chronic Renal Failure

I Pathology of the G.I.T. in C.R.F :

- Incidence of Gastrointestinal diseases is increased in patients with C.R.F.; Haemorrhage, erosions, gastritis, duodenitis and Peptic ulcer disease of the upper gastrointestinal tract are well recognized complications of C.R.F. (Muto, et al, 1988).
- The mucosal changes varies in severity from mucosal and submucosal oedema, scattered petechial haemorrhagic infarction and pseudomembrane formation to frank ulceration.
- No correlation was found between uraemic ulceration and blood urea, nitrogen, creatinine, uric Acid or the degree of acidosis (Shousha et al.,1989).
- The studies on dogs with terminal R.F. also showed that the primary lesion was vascular (Chenille, 1979). Arteries, and arterioles showed luminal thrombosis and diffuse injury of muscular wall. Mucosal capillaries were dilated with distorted, swollen and occasionally necrotic endothelial cells.

- The prevalence of gastroduodenal ulcer in patients with C.R.F. is controversial but it seems to be lower than that found in patients of renal transplantation (Musola, et al, 1984).
- Upper G.I.T. pathology observed at autopsy in 94 patients with end stage renal disease was analysed. The most prevalent lesions observed were gastritis, followed by gastric and peptic ulcers. The incidence of this pathology appear to decline as the duration of dialysis therapy increases (Chachati and Godonj, 1987).
- In study done by (Shousha et al, 1989), duodenal biopsy specimens from 80 patients with C.R.F., who were under haemodialysis. were examined by light microscopy for evidence of inflammations, gastric metaplasia and campylobacter pylori infection. Chronic duodenitis was found in 47 (59%) of patients of whom only 7 (9%) showed evidence of active inflammation, gastric metaplasia was present in 50 (65.5%) of patients. Yet campylobacter pylori infection was identified in only two patients (2.5%). It is suggested that the duodenal environment of patients with C.R.F. remains hostile to the growth of these organisms in spite of the presence of gastric metaplasia (Shousha, et al. 1989).