بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Nutritional Assessment in Patients with Inflammatory Bowel Disease

Thesis

Submitted for Partial Fulfillment of Master Degree in **Internal Medicine**

By

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Ahmed Kamal Abd el Wahab

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Abb.	Full term
5-ASA	*5-aminosalicylic acid*
AGA	*American gastroenterological association*
ALA	*Alpha linoleic acid*
ASCA	*Anti Saccharomyces cerevisiae antibodies*
ASGE	*American Society for Gastrointestinal Endoscopy*
ASOs	*Antisense oligonucleotides*
ATG16L1	*Autophagy related 16 like 1*
BMI	*Body mass index*
BW	*Body weight*
CCL20	*Chemokine ligand 20*
CD	*Crohn's disease*
CDAI	*Crohn s disease activity index*
CDED	*Crohn's Disease Exclusion Diet*
CRC	*Colorectal cancer*
CRP	*C reactive protein*
CXR	*Chest radiography*
DCs	*Dendretic cells*
.....	*ECCO european crohns and colitisorganisation*
EEN	*Exclusive enteral nutrition*
ELISA	*Enzyme-linked immunosorbent assay*
EPIC	*European prospective investigation into cancer and nutrition*
EUS	*Endoscopic ultrasonography*
FCS	*Food consumption score*
FFQ	*Food frequency questionnaire*
FMT	*Faecal microbiota transplant*
FODMAP	*Fermentable oligosaccharides, disaccharides, and monosaccharides and polyols*

List of Abbreviations (cont…)

Abb.	Full term
GALT	*Gut-associated lymphoid tissue*
GITB	*Gastrointestinal TB*
GWAS	*Genome-wide association studies*
HBV	*Hepatitis B virus*
HCV	*Hepatitis C virus*
HIV	*Human immunodeficiency virus*
IBD	*Inflamatory bowele disease*
ICAM-1	*Intercellular adhesion molecule-1*
ICV	*Ileocecal valve*
IDA	*Iron deficiency anemia*
IEC	*Intestinal epithelial cells*
IFNγ	*Interferon gamma*
IgG	*Immunoglobulin G*
IGRA	*Interferon gamma release assay*
IL23	*Interleuken23*
INR	*International normalized ratio*
IPAA	*Ileal pouch–anal anastomosis*
IQR	*Iterquartile range*
JNK	*c-jun N-terminal kinases*
MAPK	*Mitogen activated protein kinase*
MDP	*Muramyl dipeptide*
MDSC	*Myeloid-Derived Suppressor Cells*
MLNs	*Mesenteric lymph nodes*
NF-κB	*Nuclear factor kappa B*
NLR	*Nod-like receptor*
NOD2	*Nucleotide-binding oligomerization domain 2*
NSAIDs	*Nonsteroidal anti-inflammatory drugs*
PAMPs	*pathogen associated molecular pattern*

List of Abbreviations (cont…)

Abb.	Full term
p-ANCA	*Perinuclear antineutrophil cytoplasmic antibody*
PML	*Multifocal Leukoencephalopathy*
PPD	*Purified protein derivative*
PRRs	*Pattern recognition receptors*
PSC	*Primary sclerosis cholangitis*
PUFAs	*Polyunsaturated fatty acids*
QoL	*Quality of life*
RIP 2	*Receptor interacting protein*
S1P	*Sphingosine-1-phosphate*
SCD	*Specific carbohydrate diet*
SD	*Standard deviation*
SNP	*Single-nucleotide polymorphisms*
STAT4	*Signal transducer and activator of transcription 4*
sTFR	*The soluble transferrin receptor*
TB	*Tuberculosis*
TGF	*Transforming growth factor*
TH1	*T helper 1*
Th17	*T helper 17*
TH2	*T Helper 2*
TLR	*Toll like receptor*
TNF	*Tumer necrosis factor*
TPMT	*Thiopurine S-methyltransferase*
TSLP	*Thymic stromal lymphopoietin*
UC	*Ulcerative colitis*
VZV	*Varicella zoster virus*
WHO	*World Health Organization*

ABSTRACT

Background: Inflammatory bowel disease (IBD) is a chronic inflammatory disease of the gastrointestinal tract, which clinically contains Crohn's disease, ulcerative colitis, and other conditions. The inflammation of the intestinal mucosa in IBD is characterized by episodes of abdominal pain, diarrhea, bloody stools, weight loss, and the influx of neutrophils and macrophages that produce cytokines, proteolytic enzymes, and free radicals that result in inflammation and ulceration.

Aim of the Work: The aims of our study is to assess the nutrient status of individuals with CD and UC in relation to the recommended nutrient intake values, anthropometric measures, and biochemical indices of nutrition, and to determine the extent to which reduced food and nutrient intake contributes to the nutrition deficiencies in this population.

Materials and Methods: This was across-sectional study was conducted on patients with IBD, including Crohn´s disease (CD),ulcerative colitis (UC)and undtermined colitis, who attended to the outpatient clinic for IBD of the Department of Internal Medicine, University Hospital of Ain Shams University, between january 2020 to july 2020. 90 patients with IBD (65 UC patients, 22 CD patients and 3 UD colitis) were included in the study.

Results: Our study show that The majority of our IBD patients showed a normal BMI indicating that malnutrition, especially underweight, is not as common a described in former studies with up to 85% in IBD patients. Our study show that majority of patients are suffering from GI upset following certain meals, all of them are suffering from flatulance,some of them suffering from nausea, vomiting, heart burn and 79(87.7%) patients are suffering from diarrhea, most of patients with crohns disease are suffering from constipation,and some of them are suffering from intestinal colick.

Conclusion: The worldwide rising incidence of IBD is paralleled by a "Westernization" of dietary habits in developing countries. It is therefore obvious that, in addition to a genetic influence, environmental factors, especially diet, undoubtedly play a major role in the development of IBD. Impairment of nutritional status in BID patients has a multifactorial etiology. Main reasons include suboptimal energy intake, malabsorption, enteric nutrient loss, increased basal energy expenditure, and medications.

Keywords: Nutritional assessment - inflammatory bowel disease

INTRODUCTION

Inflammatory bowel disease (IBD) is a chronic inflammatory disease of the gastrointestinal tract, which clinically contains Crohn's disease, ulcerative colitis, and other conditions ***(Szigethy et al., 2010).***

The inflammation of the intestinal mucosa in IBD is characterized by episodes of abdominal pain, diarrhea, bloody stools, weight loss, and the influx of neutrophils and macrophages that produce cytokines, proteolytic enzymes, and free radicals that result in inflammation and ulceration ***(Szigethy et al., 2010).***

IBD is a lifelong disease occurring early in life in both males and females. The incidence and prevalence of IBD markedly increased over the second half of the 20th century, and since the beginning of the 21st century, IBD has been considered one of the most prevalent gastrointestinal diseases with accelerating incidence in newly industrialize countries ***(Shi et al., 2018).***

The highest prevalence of IBD was reported in Europe (ulcerative colitis 505 per 100, 000 persons in the southeast of Norway; Crohn's disease 322 per 100, 000 persons in Hesse, Germany) and North America (ulcerative colitis 286.3 per 100, 000 persons in Olmsted County, USA; Crohn's disease 318.5 per 100, 000 persons in Nova Scotia, Canada) ***(Shi et al., 2018).***