The Relationship Between Your Brain and Your Gut.

“The brain does not resemble anything else in the world except perhaps the small intestine”

Dan Pagis
A U.C patient :

“Loosing my colon felt like loosing a part of my mind “.
Where the Self originates?
“Grumpiness, happiness, insecurity, well being, and worry do not originate in isolation in the mind. We are human beings, with arms and legs, genitals, a heart, lungs and a gut. Science’s concentration on the brain has long blinded us to the fact that our ‘self’ is made up of more than just our grey matter. Recent gut research has contributed significantly to a new, cautious questioning of the philosophical proposition “I think, therefore I am”....It may be time to expand Rene Decartes proposition along these lines:
“I feel, then I think, therefore I am.”
Psychological Support in IBD
PSYCHOSOMATIC and or SOMATOPSYCHIC
“Why was I referred to you doctor? I am not mad... It is in my bowel not in my mind..”
Dr Inspector
Gut Psychiatrist
St Mark's Hospital
Watford Road
Harrow
HA1 3UJ
Please reply to:
Schopwick Surgery,
Romeland
Elstree
Herts. WD6 3BJ

Dr Yoram
Inspector Psychiatrist for IBS
St Mark's Hospital at NWPH
Watford Road
Harrow
Middx HA1 3UJ
The Brain-Gut Axis
brain to gut/gut to brain signaling

• Autonomic Nervous System (modulating a wide range of GI target cells)
• Hypothalamic Pituitary Adrenal Axis (modulating Gut Associated Lymphoid tissue- 70% of the body’s immune cells are contained within the GALT)
• Descending Monoaminergic Pathways (modulating spinal reflexes and dorsal horn excitability)

• This system of parallel outflows from Cortico-Limbic-Pontine networks has been referred to as the Emotional Motor System (EMS). The output from the EMS to the GI tract can be altered due to primary central factors (depression, anxiety and enhanced stress sensitivity) or it can be altered as a consequence of chronic inflammatory conditions in the periphery.
Chronic Inflammation affects the Brain

- **Inflammatory changes** in the viscera, including the Gut can result in cytokine mediated activation of **vagal afferent pathways** (including Tumor Necrosis Factor Alfa, IL-1 and IL-6 receptors, signaling to the hypothalamus and related brain regions. **This vagally medicated brain modulation has been implicated in pain and behavioral responses characterized by hyperalgesia and social withdrawal (“sickness behavior”)**

- **Treatment with Cytokine Antagonists** (Anti TNF for IBD) provides immediate symptomatic affective and Cognitive Dysfunction

- **Chronic Inflammation may play a causative role in depression** (Malenic & Raison 2017 The New Mind-Body Science of Depression)

- **Chronic Intestinal inflammation may result in decreases sensitivity to positive emotions** (fMRI studies of Agostini et Al 2011, 2013)
Microbiota and Psychological process in IBD

• *Lactobacillus rhamnosus* JB-1 not only kept mice swimming longer with more motivation, but their blood was also found to contain fewer stress hormones.

• IBD is associated with an overall reduction in Microbiota diversity, a relative reduction in abundance of the phylum *Frimicutes* and *Dysbiosis* (imbalance between beneficial and harmful bacteria).

• Interplay between the microbiota and the Gut-Brain Axis represents a potential pathway via which *Dysbiosis*, stress and depression mediate their effects in IBD.
Animal Studies of IBD

The Cotton-Topped Tamarin, a New World monkey from Columbia, developed Ulcerative Colitis and Colonic Cancer only in captivity.

*The unique social unit has been changed and so were the temperatures that were lower than the Jungle habitat - Social isolation and cold stress.*
“My God, My God, Why Have you Forsaken me?
King David, Psalm 22,
Jesus on the Cross, Matthew 27:46

“I am poured Out like water and My bones are out of Joint, my heart Melted like wax, it Melted in the midst Of my bowels. “

Psalm 22
“I am gutted”
“I can not stomach it”
“It is hard to digest …”
“It is sickening.”
“My stomach turns when I think of ..”
“Be scared shitless”
The Psychological Medicine Unit of St Mark’s provides Psychiatric and Psychological treatment and SUPPORT to patients who suffer from various gastrointestinal diseases and disorders “

Dear Dr Inspector,

I would be grateful if you could see Mr K, 70 years old, who has been suffering from Crohn’s disease since he was 20. He also experienced a steroid induced psychosis when firstly treated with Prednisolone. He is currently very low in mood as he suffers from “unbearable” pain most likely due to his progressive disease. His current mood and physical state are seriously affecting his quality of life as well as impacting on his family. He was suggested a treatment with Infliximab for his progressive Crohn’s disease but he is hesitating whether to start the drug due a mixture of factors including his self defense mechanisms, previous medication side effects/medical history which also affected his mood and mental state.

He is now at a crossroad where your SUPPORT will be crucial for his holistic care and forward medical treatment”

Yours sincerely

G. IBD Specialist Dietitian.
• support (v.)
  • late 14c., "to aid," also "to hold up, prop up, put up with, tolerate," from Old French supporter "to bear, endure, sustain, support" (14c.), from Latin supportare "convey, carry, bring up, bring forward," from assimilated form of sub "up from under" (see sub-) + portare "to carry," from PIE root *per- (2) "to lead, pass over." Related: Supported; supporting.

• support (n.)
  • late 14c., "act of assistance, backing, help, aid," from support (v.). Meaning "that which supports, one who provides assistance, protection, backing, etc." is early 15c. Sense of "bearing of expense" is mid-15c. Physical sense of "that which supports" is from 1560s. Meaning "services which enable something to fulfil its function and remain in operation" (as in tech support) is from 1953.
Asclepios
and the Asklepion
Fear of Surgery
Fear of Cancer
Pain

Isolation
Fatigue

Fecal Incontinence
Rectal Bleeding
Fear of A Stoma Bag

Side effects of Steroids and Other immunosuppressants
Depression
Worthlessness, Helplessness, Hopelessness
Chronic Inflammation affects the Brain

• Chronic Inflammation may play a causative role in depression (Malenic & Raison 2017 The New Mind-Body Science of Depression)

• Chronic Intestinal inflammation may result in decreases sensitivity to positive emotions (fMRI studies of Agostini et Al 2011, 2013)
Anxiety
Uncertainty, fear of irreversibility

I feel that having Crohn’s is like living with an unexploded time bomb chained round your neck. You never know when it going to go off...you only know that it will go off...Sometimes I wonder if it’s worth all the pain and effort to get better, only to go through this recurring nightmare at a later date.”

Working Therapeutically with Clients with Inflammatory Bowel Disease “
GILLIAN THOMAS, PHD
Jessica Kingsley Publishers, 2009
SHAME (and disgust)

“Shame should be reserved for the things we choose to do not the circumstances that life puts on us “.

Ann Patchett
States Worse Than Death Among Hospitalized Patients With Serious Illness JAMA 2016, 176

- 180 patients with serious illness
- Rating of States of Functional Debility relative to death:
  - **BOWEL AND BLADDER INCONTINENCE scored the highest** before “Rely on breathing machine to live, Cannot get out of bed, Confused all the time, Need care all the time, Rely on feeding tube to live, Live in a nursing home, At home all day, Moderate Pain all the time, In a wheelchair”. 
A 25 year old Patient, Crohn’s Disease,
Severe Anal Pain, referred because of Suicidality.

- P: “I am Suicidal”
- Me: Why?
- P: “I can not live with this pain “
- Me: “If you wouldn’t have this pain would you still want to kill yourself ?
- P: “Are you mad ? I have a great job, a wonderful girlfriend ...”
- Me: “So do yourself a favor, stop saying to everybody that you are suicidal, tell them that you want help with managing this pain so it can be compatible with life ..
The “Professional” Reflection:

- Psychodynamic Psychotherapy
- Psychodynamic Interpersonal Therapy
- Acceptance and Commitment Therapy
- Cognitive Behavioral Therapy
- Mentalization Based Therapy
- Hypnotherapy
- Relaxation-Mindfulness
- EMDR - Eye Movement Desensitization and Reprocessing – Trauma Oriented Psychotherapy.
Chapter 1- IBD-what is it and does the psyche have anything to do with it?
Chapter 2- Stress, distress and IBD
Chapter 3 –The brain-gut axis and psychological processes in IBD
Chapter 4- Microbiota and Psychological Processes and IBD
Chapter 10- IBS in IBD and Psychological implications
Chapter 11- IBD, cancer, and its psychological impacts
Chapter 12- Patients and IBD surgery, Rightful fears and preconceptions
Chapter 13- Standard medical care, side effects and compliance

A BIPSYCHOSOCIAL APPROACH

2015
BE THE SECOND MOUSE

The Psychological Medicine Unit at St Mark’s Provides weekly fortnightly Supervision for specialist IBD nurses – THE SUPPORTERS NEED TO BE SUPPORTED AS WELL

Henri Laborit (1914-1995)
O.C.D
BMI-14

20, WHITE
BRITISH MALE

CROHN’S
DISEASE IN
REMISSION
Permanent ileostomy or Suicide /Organ Donation?
“IBD IS SOMETHING THAT YOU HAVE
BUT IT DOES NOT DEFINE WHO YOU ARE “

K-Dub - Got That
I.B.D. #7AF38D

HIPPOCRATES:

“BE INTERESTED IN THE PATIENT WHO HAS THE DISEASE AS MUCH AS YOU ARE INTERESTED IN THE DISEASE THAT THE PATIENT HAS”.
سفرת אסתר נצר
כורה אשה יתקח אלהינו
מלות חלום, א어서 נצר
את האחים בחכמה בצד
בעקבות בכאים, הלאלם
הלאלם, פרעה ודורו מעני
בנא בוניה, שאמם יפונה
אבל מלוחא, אושם את
מלוחא, אם אמשר להבינה
לשימוש להבינה
inandוע לשלובה. בראש אחת
יהודה רומא כל בשרא
ʇופליה ליבשוה.