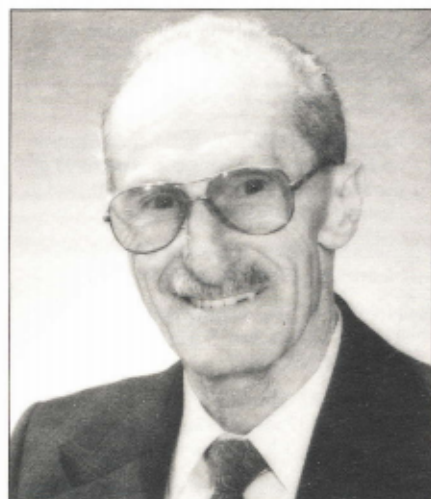


The Irritated Gastro-Intestinal Syndrome: The Role of Dietary Rehabilitation — Dr G Borok, Prof I Segal



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Curriculum vitae

Dr Borok has been in both rural and urban family practice for 38 years. In 1983, after reading Dr M Mandell's book "5 Day allergy relief system", he went to America to learn the techniques used by Mandell in his clinic in Norwalk Connecticut. For the last 8 years he has used an elimination programme to research the relief of irritable bowel syndrome and all chronic symptoms of all systems of the body, associated with the removal of foods from patients. He had read papers and presented posters on foods in relation to moods, asthma, migraine, IBS, hypertension and behaviour at various congresses. He held a part time appointment at the post coronary rehabilitation programme, at the Sports Research Centre, University of Pretoria for 12 years. He has 6 publications to his name.

Curriculum vitae

Prof Isidor Segal qualified at Wits in 1962 and is currently associate professor in the Dept of Medicine (Wits). He was instrumental in the establishment of the Gastroenterology Unit which has acquired an international reputation for its work on third world populations. Prof Segal has written many articles and received several awards for his work, is married and has 3 children.

Summary

A patient report illustrates the effect of food on the gastro-intestinal tract, and how relief of symptoms was achieved by following dietary rehabilitation.

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KEYWORDS:

Colonic Diseases; Diet; Case Report; Patient Participation.

"What other disease is so well buried under the verbal debris of several centuries?" Crane remarked on mucous colitis in 1927.

It was the interest in dietary fibre that stimulated the idea of the vital importance of diet and nutrition in the aetiology of "western" degenerative diseases. Cleave brought together a variety of conditions characteristic of industrial society which he thought were due to overindulgence of refined carbohydrates². Walker, Trowell and Burkitt were pioneers of the concept linking diet to disease.³ In 1972 Painter published a paper entitled "Irritable or Irritated Bowel".⁴ He suggested that the term "Irritated Bowel Syndrome" would be more apt for the symptoms caused by the over-refined modern diet. Perhaps one should not restrict symptoms to the large bowel only, and suggest the term "The Irritated Gastro-intestine". The following report reflects the effects of food on the gastro-intestinal tract and the relief of symptoms following dietary rehabilitation.

Patient Report

A 31 year old woman was referred for distension, chronic diarrhoea and abdominal pain. Her present episode of diarrhoea had been present for 9 months. She had 10-15 bowel actions per day and these consisted of green watery stools containing mucus, accompanied by tenesmus and a feeling of incomplete emptying. She had three different types of pain: a) an intermittent burning epigastric pain radiating to left hypochondrium, b) a sharp pain present "under the left ribs" and C) a colicky lower abdominal which radiated through the back and occurred 3-4 times a week. Gross distension was always present and was not relieved by continuous belching (disturbing conversation) and passing of flatus.

Past History

She was colicky from infancy and various abdominal pains had been present since childhood. Distension, the worst symptom, had been present for 15 years. Constipated as a child, diarrhoea which began 13 years ago increased in frequency and severity and alternated with constipation until 9 months ago when it became continuous. During the past 3 years she had been admitted on 8 occasions to gastro-intestinal units at hospitals. Routine laboratory investigations were normal. Radiology of the gastro-intestinal tract was normal (6 barium meals, 3 barium enemas) as was endoscopy (9 gastroscopies, 1 colonoscopy). The endoscopies showed either mild oesophagitis, gastritis or duodenitis on various occasions. Biopsies of stomach and colon showed mild inflammatory cell infiltration. She had the following surgical procedures: 1961 - repair of prolapsed rectum; 1986 - salpingectomy; 1987 - Nissens

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fundoplication, pyloroplasty and vagotomy; 1988 - cholecystectomy; 1989 - hysterectomy; 1989 - haemorrhoidectomy.

She had been given polytherapy over the past 3 years, including H2 receptor antagonists, antacids, antispasmodics, pancreatic enzymes,

Irritable or Irritated Bowel?

non-steroidal anti-inflammatory drugs and bulk laxatives. Fybogel and plantago ovata with ispaghula which were prescribed the latter few months did not alter her bowel habits.

The only abnormalities on physical examination were a grossly distended abdomen with multiple scars. No peritonism was present and stools were green and watery.

Treatment

The patient was admitted to hospital and placed on an elimination dietary programme (see Appendix A and Tables 1-3). Only 1 item of food per meal was permitted. Water was the only liquid allowed. On admission her current therapy, which included omeprazole, pancreatin plus dimethicone, metoclopramide, loperamide and bulk laxatives, was withdrawn.

Results

She had 10 watery stools on the first day (Table 1), 3 the second and by the third day her diarrhoea and epigastric pain had stopped. However the distension and lower abdominal colic persisted and after 4 days a

straight X-ray of the abdomen showed distension of small and large bowel and loading of colon with faeces. There were no fluid levels. A soap and water enema produced a good result but the distension and lower abdominal colic continued. On the 9th day she passed a normal stool with relief of distension and colic, (Table 2).

During her hospital stay two food items provoked symptoms - maize meal (headache, loose stools) and avocado pear (severe nausea, bloating). She was discharged on the 11th day feeling completely well. She was instructed to continue with the dietary programme adding foods previously eaten on alternate days and report weekly. During her outpatient visits she reported occurrence of symptoms after consuming the following foods: - maize (headache and nausea); apples (pain epigastrium, bloating, winds and nausea); curried mince (colicky lower abdominal pain radiating to back, bloating, diarrhoea which lasted 48 hours, tenesmus and a feeling of incomplete emptying of bowel after defaecation); polony (severe pain left

Colicky from infancy

hypochondrium under left ribs, bloating and flatus); bread (epigastric pain, pain left hypochondrium and winds); eggs (bloating, lower abdominal pain, distension and nausea); milk (lower abdominal pain and diarrhoea).

Three months later her reaction to milk, maize, eggs, peas and curry diminished and ceased to be a

problem but she still reacted to bread and polony. She passed a normal stool daily, distension seldom occurred, her abdominal pains were much less and belching with flatus were minimal.

Discussion

The patient presented with symptoms indicative of diffuse gastro-intestinal involvement and found different foods provoked various symptoms. Reports indicate that foods are associated with pathology of the entire gastro-intestinal tract.

Constipated as a child

These include ulcers of mouth, reflux oesophagitis, duodenal atrophy, colitis in infants, enteropathy, ulcerative colitis and proctitis⁵⁻¹² Irritable bowel syndrome (IBS) may be a response to a variety of foods. Both the pain and altered bowel habits seen in IBS have been discussed on the basis of altered motility.¹³ Food may induce colonic hypermotility in IBS patients. The major problem with patients who present with abdominal symptoms in which food items play a major role is that of management. The diagnosis relies on the recognition of positive clinical features as well as the meticulous exclusion of many other disorders that have similar manifestation.

Some of the reliable positive features are the presence of generalised abdominal pain particularly lower abdominal pain, small stools, distension, diarrhoea and/or constipation and the persistence or

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recurrence of symptoms that are fairly constant in their pattern but variable in their severity.¹³ Relief of pain with bowel movement, looser or more frequent bowel movements with onset of pain, mucus and a sensation of incomplete evacuation are common in IBS patients.¹⁴ The patient may not associate certain foods with his gastro-intestinal symptoms. The elimination programme makes association of eating certain foods with symptoms and signs obvious.

Certain diagnostic tests should be performed routinely. These are: sigmoidoscopy; three stool specimens should be examined for 1) ova and parasites with a specific request to exclude Giardia, 2) occult blood; full blood count and erythrocyte sedimentation rate; a double contrast barium enema; and an upper gastro-intestinal tract evaluation if dyspepsia is present. If symptoms suggest an obstruction, a small bowel enema series should be performed. Some authors conclude that a careful history can increase confidence in diagnosing IBS and reduce the number of investigations in patients with chronic abdominal pain.¹⁴

Treatment

When there is no evidence of pathology the patient should be placed on the elimination diet as shown in Tables 1-3. The patient should be followed weekly. Most patients clear within 2-3 weeks if they react to one or two items of foods as the majority do. Some patients however react to 10 and even up to 25 food types and the analysis of foods provoking symptoms can then take 4-6 months before relief.

The treatment requires a

conscientious appraisal of symptoms in relation to foods and is not very time consuming. It is believed that recognition of the syndrome, dietary management and rehabilitation will help in preventing unnecessary investigations, abdominal surgery and despondency in this group of patients. In addition the cessation of their pain reassures them that they do not have a malignancy. In this patient it is paradoxical that she was prescribed bulk laxatives, Fybogel and plantago ovata, plus ispaghula husk which could promote diarrhoea.

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(See overleaf for Appendices)

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APPENDIX A

Table 1. Elimination Diet: First Week

The elimination diet is prescribed on this form. Each meal has one or two items of food written in blocks for breakfast, lunch and supper for each day. The reactions to the various foods are recorded in the space below each meal. Symbols are used for symptoms. The severity is graded from bad (++) , fair (+) , not sure (+/-) to no symptoms (0). Foods provoking symptoms are replaced weekly with other foods until symptoms have cleared. Combination of foods which provoked a reaction, such as toast and eggs for breakfast will be prescribed seperately the following week to ascertain which is responsible for the symptoms.

The reactions to foods during the first week are shown. Withdrawal symptoms were present the first few days clouding the true reaction. Maize both whole and milled provoked nausea, headaches and loose stools. Avocado provoked severe nausea and bloating. The epigastric pain and diarrhoea were relieved after three days but the bloating and the lower abdominal pain, her worst symptom, persisted the first seven days.

Table 2. Elimination diet: Second Week

The reactions to foods, recorded in the second week of the diet are shown. The bloating and lower abdominal pain, which she had all the time the previous week, were relieved after she had her first normal stool on the eighth hospital day. Maize meal and corn on the cob provoked nausea and headache which lasted 24

hours. The toast and eggs provoked epigastric pain, pain in left hypochondrium and lower abdominal colic. Peas provoked a headache.

Table 3. Elimination Diet: Third Week

New foods introduced this week, plus those foods eaten the previous week together and eaten separately, are printed in capital letters. Apples which were reintroduced provoked pain in epigastrium, bloating, winds and nausea. White toast, eaten together with eggs the previous week, provoked epigastric pain, pain in the left hypochondrium and winds when eaten on its own. Boiled eggs on their own were followed by lower abdominal colic radiating to back, bloating and nausea. Curry, added to beef and cabbage which the previous week provoked no reaction produced the worst reaction and her typical symptoms she had had for years. Curry was followed by epigastric pain, lower abdominal colic, tenesmus, a feeling of incomplete emptying of the bowel and diarrhoea which lasted 36-48 hours. Polony produced a pain in left hypochondrium (under left ribs) from which she had suffered for years. Corn on the cob provoked headache and nausea, similar to previous week. Milk provoked lower abdominal pain and diarrhoea.

During the fourth week tomato produced epigastric pain. The patient's diarrhoea had ceased and she had one or two formed stools a day. Distension did not occur and abdominal pains were minimal.

APPENDIX B

The Elimination Programme

The elimination programme (EP) attempts to identify any offending factors which may trigger a reaction in the human body. Mandell claims that offending factors (triggers) may react locally on the skin, respiratory tract or gastro-intestinal tract bowel from mouth to anus. Furthermore, that the factors may be absorbed systemically from these sites and be distributed via the blood to any organ of the body, triggering symptoms of all systems. Once a factor is suspected it is re-exposed to the body to provoke the same symptom and confirm its association with that symptom.¹⁵

The EP eliminates all possible factors in the environment which may affect the human body in a systematic fashion. Inhalants, skin applications and foods are investigated simultaneously. Some factors are impossible to eliminate or can only be eliminated with difficulty such as car exhausts, trees, pollens, building material and work conditions especially cigarette smoke. However, some people react to more than one factor so that if bread is responsible for 80% of the symptom, then after removal of bread, car exhaust will provoke only 20% of the symptom which may be tolerable and not require treatment. The reactions of the body to the triggers may be chemical and not necessarily an allergic reaction with a raised immuno-globulin E in reaction to the trigger.¹⁶ Nevertheless standard skin scratch tests are performed to exclude house dust mites, cats and dogs. Grasses, pollens and trees play a role at certain times of the year but are not usually a perennial problem.

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Skin Irritants

Scented soaps, toiletries and shampoos must be avoided as perfumes may play a large role in reactions. Plain Sunlight washing soap (green blocks) is advised for washing the body, hair and clothes in the first few weeks.

Other non-scented soaps may be used. When symptom-free then perfumed soaps, ointments, hand lotions and other skin preparations used previously are re-introduced one at a time to provoke reactions and so identify any trigger. The house dust mite numbers can be reduced by careful vacuuming, wet cloth wiping and the use of ascaricide. Elimination of the mite can be achieved by spraying all contents of the bedroom with a spray "Allergard". This coats the mattress, pillow, blankets and other contents with an almost impenetrable layer preventing mites emerging at night to eat skin scales, their source of energy, and thus starves them.

Danders and Inhalants

Dogs, cats, doves, birds and feathers are eliminated especially if the history and skin scratch tests are positive. Many people may react to coal and crude oil products such as sprays, exhaust fumes, thinners, cooking gas, dry cleaned clothing, benzine and perfumes which are all eliminated, at the beginning. Only non perfumed toiletry is allowed such as roll-ons and cosmetics. Hair wave sets and lotions are avoided during the first week. Smoking is discouraged as it alone may be responsible for respiratory symptoms.

Feather and foam rubber pillows are replaced by cotton pillows if history suggests either may be a trigger. Polyester pillows made from crude oil have the same chemicals as found in petrol, propellants and

thinners and may lead to a blocked nose. A cotton pillow is easily made by tearing a white cotton sheet into small pieces and filling a white cotton pillow slip with them.

Foods

Only one type of food is allowed per meal. Each day one type of grain, vegetable, fruit and protein is eaten. Large portions of food per meal are encouraged to compensate for the drop in kilojoules per meal. No one type of food is repeated in the week. Only fresh or frozen foods are allowed. No packaged or tinned foods are permitted, except for tuna fish. Foods may be eaten raw or cooked. They may be steamed, boiled, grilled, cooked or microwaved but never fried. Only salt may be added to foods in cooking and no other spices, condiments or salad dressings are allowed. Water is the only fluid permitted. It must be boiled at first to exclude chlorine. Perrier, soda, spring and bore hole waters are allowed. No tea, coffee, cold drinks, liqui fruits or fruit juices are permitted in the first week.

The diet is written on a special form with space for each meal: breakfast, lunch and supper. Under each meal a space is provided to record any adverse reactions. Abbreviations are used in the spaces and symptoms are graded from bad (++), fair (+), not certain (+/-) to relief (0) depending on the severity of the reaction in that period as in Tables 1, 2 and 3.

The patients return each week and foods associated with a reaction are replaced by other foods until the patient is symptom free. Suspected foods, danders and inhalants are then re-exposed to the patient in order to provoke the same reaction again. If positive, that factor is removed for a

few months and re-exposed once more. Generally patients doubt that a particular food is responsible and will test it on their own to be entirely convinced. Some patients are addicted to that food type and will not let it go, preferring drugs for relief. Very often patient's favourite food, dog or inhalant is associated with his problem.

Skin scratch tests may be done to identify allergies especially house dust mites. This is done more so to help convince patients to avoid their favourite dog. IgE and RAST tests are not done as a routine as foods are combinations of chemicals and not single items. The author is further of the opinion that most reactions to foods are chemical and not allergic in nature.

In some patients the reaction to a trigger may diminish after three to four months and the trigger may be tolerated in small amounts. In others the reaction may take years to lessen. In a few there will always be the same reaction.

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PATIENT REPORT

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Table 1. Daily Diet Report

Name _____ Age _____ Sex M/F _____ Date 28/10/90 Week No 1

Day	Maltabella salt + water	Melon	Oats salt-water	Pawpaw	Maize meal salt + water	Avocado	Toast + Eggs
Breakfast	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	1 Ha ++	Ha +	Pa-lab ++	Pa-lab ++	Ha ++	Na +++	Pa-ep ++
	2 Na ++	Na +	Bl ++	Bl ++	Na +	Bl +++	lh ++
	3 Di ++++	Di +	Di +/-		Di +++	Di +/-	lab ++
	4 Bl +++	Bl ++			Pa-lab ++	Pa-lab ++	Bl +
	5 Pa-ep ++	Pa-ep ++			Bl ++		Na ++
	6 Pa-lab +	Pa-lab ++					
Lunch	Apples	Peaches	Bananas	Pears	Plums	Baked Potato	Salmon + marrow
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	Pa-lab ++						
	1 Pa-ep ++	Ha +/-	Pa-lab ++	Soap and water enema	Pa-lab ++	Pa-lab ++	Pa ep +
	2 Bl ++	Di +	Bl ++	NS	Bl +	Bl ++	Bl +
	3 Wi ++	Bl ++	Di +/-				Wi ++
	4 Na ++	Pa-ep ++					Pa-lab ++
	5 Ha ++	Pa-lab ++		Pa-lab ++			
	6 Di +++			Bl ++			
Supper	Kingklip Peas	Beef Cabbage	Lamb chops Broccoli	Chicken Green bean	Tuna Lettuce	Hake Carrots	Corn on the Cob
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	Pa-ep ++						
	1 Pa-lab ++	Pa ep +/-	Pa-lab ++	Pa-lab ++	Pa-lab +	Pa-lab ++	Pa-lab ++
	2 Bl +++	Bl ++	Bl ++	Bl ++	Bl ++	Bl ++	Na ++
	3 Wi ++	Wi ++	Wi ++	Wi ++	Wi ++	Di 0	Pa-lab ++
	4 Na ++	Di +					Bl ++
	5 Ha ++	Pa-ep ++					
	6 Di ++++	Pa-lab ++					
Early morning symptoms	Di +	Di +			Di +/-	Di 0	Di 0

Symptoms: are graded according to severity; bad ++, fair +, not sure +/-, none 0.

Bl - bloated. Di - diarrhoea. Ha - headache. Na - nausea. Wi - winds. Pains: Pa ep - epigastric, lh - left hypochondrium, lab - lower abdomen radiating to back. NS - normal stool. Ie - incomplete emptying

PATIENT REPORT

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Table 2. Daily Diet Report

Name _____ Age _____ Sex M/F _____ Date 4/11/90 Week No 2

Day							
Breakfast	Maltabella salt + water	Melon	Oats salt-water	Pawpaw	Maize meal salt + water	Tasty wheat	Toast + Eggs
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	1 Pa-lab ++ 2 Bl ++ 3 4 5 6	NS +		Pa-lab 0 Di 0 Wi 0 Discharged ex hospita	Ha ++ Na ++ Di ++	NS	Pa-ep ++ -lh ++ -lab ++ Bl + Na ++ Wi ++
Lunch	GRAPES	Peaches	Bananas	Pears	Plums	Baked Potato	Salmon + marrow
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	1 After a 2 normal 3 stool 4 Pa-ep 0 5 Bl 0 6		Pa-lab +/- Bl +/- Wi +/-				Pa-ep Bl + Wi ++
Supper	Kingklip Peas	Beef Cabbage	Lamb chops Carrots	Chicken Green beans	Tuna Lettuce	Hake Broccoli	Corn on the Cob
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	1 Pa-lab 0 2 Di 0 3 Ha ++ 4 5 6					Pa-ep 0 -lh 0 Wi +/-	Ha ++ Na ++ Wi + Bl 0
Early morning symptoms	Di +	Di +	NS	NS	NS	NS	NS

Symptoms are graded according to severity: bad ++, fair +, not sure +/-, none 0.

Bl - bloated. Di - diarrhoea. Ha - headache. Na - nausea. Wi - winds. Pains: Pa ep - epigastrium, lh - left hypochondrium, lab - lower abdomen radiating to back. NS - normal stool. Ie - incomplete emptying

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Table 3. Daily Diet Report

Name _____ Age _____ Sex M/F

Date 11/11/90 Week No 3

Day							
Breakfast	MILK	Melon	Oats salt-water	Pawpaw	Maltabella salt + water	TOAST WHITE	BOILED EGGS
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	1 Pa-lab ++	NS +	Pa-lab +	Pa-lab +/-	NS	Pa-ep ++	Pa-lab ++
	2 Di +		Bl ++	Di ++		lh +	Bl ++
	3		Di +	Wi 0		Wi ++	Na ++
	4		Ie +			NS	
	5						
	6						
Lunch	Apples	Peaches	Bananas	Pears	POLONY	Baked Potato	Salmon + marrow
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	1 Pa-ep ++		Pa lab +/-	Di +/-	Pa-lh ++	Pa-ep +	Pa-lab +
	2 Bl ++		Bl +/-			-lh +	Bl +
	3 Wi ++		Di +			Wi +	
	4 Ha ++		Ie +				
	5 Na ++		Wi ++				
	6						
Supper	Kingklip Peas	CURRY Beef Cabbage	Lamb chops Carrots	Chicken Green beans	Tuna Lettuce	Hake Broccoli	Mealies on the Cob
	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms	Symptoms
	1 Ha +	Pa-ep ++	Wi ++		Pa-lh +	Pa-ep 0	Ha ++
	2 Na ++	-lab ++	Bl +/-		Di +/-	-lh 0	Na ++
	3	Di ++	Pa-lab +/-			Wi +/-	Pa-ep 0
	4	Bl ++	Di +				Bl 0
	5	Ie +	Ie +				
	6						
Early morning symptoms	NS	Pa-lab ++ Di++ Bl++	Di +	Di +/-	Pa-lh 0	NS	NS

Symptoms are graded according to severity: bad ++, fair +, not sure +/-, none 0.

Bl - bloated. Di - diarrhoea. Ha - headache. Na - nausea. Wi - winds. Pains: Pa ep - epigastrium, lh - left hypochondrium, lab - lower abdomen radiating to back. NS - normal stool. Ie - incomplete emptying