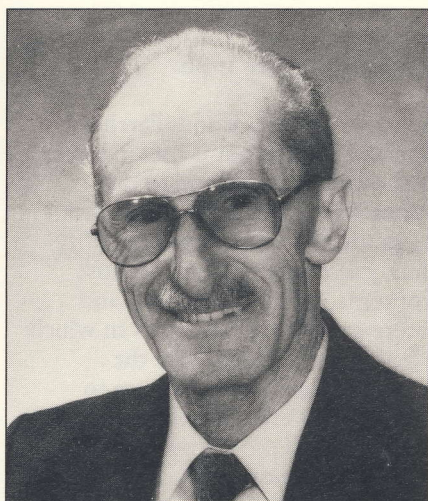


Ulcerative Colitis – A Patient Report – Dr G Borok



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Curriculum vitae

Dr Borok has been in both rural and urban family practice for 35 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 5 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 has read papers and presented posters on foods in relation to moods, asthma, migraine, IBS, hypertension and behaviour at various congresses. He has held a part time appointment at the post coronary rehabilitation programme at the Sports Research Centre, University of Pretoria for 12 years.

Summary

The author believes that food plays a major role in triggering the symptoms of ulcerative colitis in genetically predisposed patients. He illustrates this by giving the history of one of his patients.

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KEYWORDS:
Ulcerative Colitis; Case Report; Diet.

Ulcerative colitis, a diffuse inflammatory disease of the colon and rectum, is characterised by a bloody mucus diarrhoea with remissions and exacerbations and no apparent cause. No specific medical therapy is available, but the sufferer does have a surgical cure available at a price; total procto-colectomy. The colon deals with foods all the time, their absorption, concentration, storage and propulsion onwards for defaecation of waste products. Is it not logical to suspect food plays a role in triggering the symptoms of ulcerative colitis, in an individual genetically predisposed to react? This can be compared to eczema, hayfever and asthma, but in this instance the bowel is the target organ and food the allergen. A history of a patient is reported to support this view.

History

A young man, aged 27 was referred as a case of ulcerative colitis to ascertain whether foods were related to his condition. He had numerous unrelated symptoms which in chronological order were: a history from day one of his life of crying and

a feeding problem. He suffered from infantile colic, loose stools and frequent vomiting for the first 5 years of his life.

He remembers having had atopic symptoms such as eczema, rhinitis, and sinusitis from an early age while he has been bothered with asthma for the last 15 years.

Neckache, backache, painful wrist and shoulder joints of non-specific origin have troubled him the last 10 years. Muscular aches of the upper limbs with a flu like feeling and shivers have been constant. He sweats excessively, blushes easily but never has a temperature. Recurrent headaches due to blocked sinuses have always been a pattern of his existence.

Generalised body itch and severe pustular acne of face, chest, back and arms have plagued him for the last 13 years. Mouth ulcers have troubled him all his life.

Since adolescence he has suffered from distension, winds, colic, diarrhoea and pruritis ani. For 10 years, he has had nausea, a constant desire to go to stool, a feeling of incomplete emptying after defaecation and incontinence of stool at times. Gradually his symptoms deteriorated and for the last 6-7 years he has passed up to 10 stools a day with mucus and blood, at times more blood than stool.

Tiredness, lack of energy and generalised apathy were forever present. He has suffered from marked mood changes, depression, anxiety and nervousness, irritability with poor memory and lack of concentration for 10-12 years. He has felt inadequate with a lack of confidence in himself.

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Medications

Salazopyrin II TDS the last 6 years. Cortisone enemas daily and loperamide tablets to lessen frequency of stools. The Isotretinoin which he took for 3 months for his acne, with little improvement, was stopped prior to going onto the specific elimination and rotation dietary and environmental programme.

Repeated sigmoidoscopies by a surgeon showed blood, mucus and ulceration of the rectum and sigmoid colon, features typical of ulcerative colitis. Repeated biopsies of the rectum were reported as "active phase of ulcerative colitis", a typical example is the one in December 1983. See Fig 1.

With such varied symptoms he was given the impression he was neurotic and often advised by various doctors to pull himself together, think positively and many of his symptoms would improve.

He had always suspected that certain foods, namely cucumber, tomato, banana and oranges were the cause of his problem. His favourite foods were beef, eaten twice daily and pineapple which he had almost daily in a fruit salad.

Simply by diverting foods from the colon!

The Elimination Diet

He was placed on an elimination diet (ED) where he had a different fruit, vegetable, grain and protein daily, one item per meal and no food item was repeated in the week. Water was the only fluid and salt the only condiment allowed. He was seen weekly when "bad foods" related to symptoms were removed and replaced by other foods. So called "good foods" were repeated until his

symptoms cleared. The diet began on the 7th November 1985.

The colic, flatulence and diarrhoea improved rapidly but it took 6 weeks for the mucus and blood to disappear. At this stage his medication was gradually reduced and on 19th January 1986 he was free of most symptoms, off all medication and then re-exposed to the foods to which he had reacted, to provoke the symptoms again. On exposure to pineapple for breakfast one morning his tongue and mouth burnt and resulted in mouth ulcers. His typical shivers returned accompanied by uncontrollable diarrhoea, cramps, blood and mucus within 30 minutes, soiling his pants. The mucousy blood remained for 3 days before clearing. Salazopyrin was reintroduced.

Cottage cheese was the next food to produce diarrhoea, mucus and blood whilst taking the Salazopyrin. The bloody stools improved rapidly but he remained with mucus and

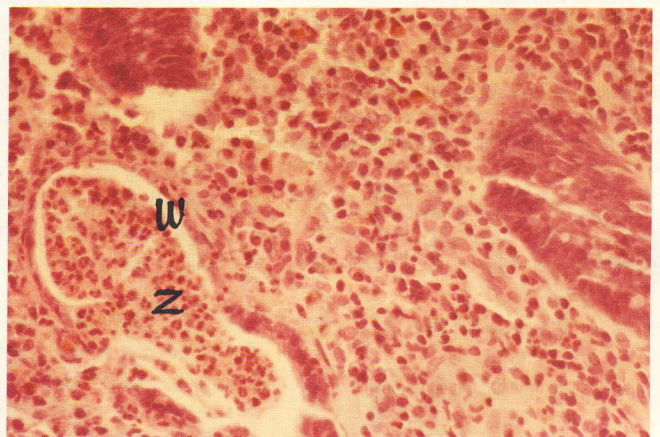
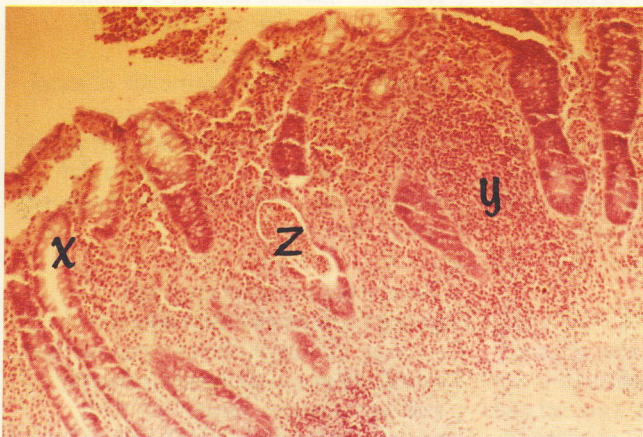


Fig 1: Histology of mucosa of the rectum shows a decrease in the number crypts with reduction of the number of mucus secreting goblet cells in crypt epithelium^x. The lamina propria shows a dense chronic inflammatory cell infiltrate^y. There is a crypt abscess^z with destruction of crypt epithelium^w in the centre of the field. The features are typical of ulcerative colitis.

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Table 1
Foods associated with provoking symptoms

<i>Colic</i>	Orange, Tomato, Curry, Chutney, Milk? Baby
<i>Nausea</i>	Milk Products, Cheese
<i>Vomiting</i>	Milk Products, ?Also as an infant and young boy
<i>Diarrhoea</i>	Pineapple, Pears, Apples, Cucumber, Cheese, Beef
<i>Distension</i>	Pineapple, Peas, Apples, Banana, Beer, Mealie Meal, Cold Drinks (Gassy)
<i>Winds</i>	Pineapple, Bread, Peaches, Grapes
<i>Blood and Mucus</i>	Pineapple, Cottage Cheese, Cucumber, Beef
<i>Pruritis</i>	Peaches
<i>Mouth Ulcers</i>	Pineapple
<i>Acne</i>	Sugars
<i>Ringling in Ears</i>	Pineapple
<i>Rhinitis Asthma</i>	Milk Products, Cold Weather, Perfumes
<i>Sinusitis</i>	Milk Products, Whole Wheat Bread, Perfumes
<i>Neck and Backache</i>	Mealie Meal
<i>Muscle and Joint Pains</i>	Milk Products, Sugars
<i>Headaches</i>	Milk Products, Whole Wheat Bread
<i>Shivers, Flu-like Feeling</i>	Pineapple
<i>Depression</i>	Probably ? Mealie Meal or ? Sugars
<i>Mood Swings</i>	Mealie Meal
<i>Tiredness, Sleepy</i>	Biscuits, Sugars, Mealie Meal
<i>Nervous, Anxious</i>	Tea, Sugars
<i>Sweating</i>	Not Established
<i>Made to feel neurotic, lack of confidence</i>	Much better as he now knew cause of his symptoms, was not tired and felt free of the stigma of being psychosomatic

Table 1: Showing the association between foods and the relief of symptoms during the elimination diet and subsequent re-exposure of offending foods provoking symptoms again.

flatulence. Elimination of milk and beef, similar proteins, stopped the mucus and flatulence. Foods identified with various symptoms are shown in Table 1. In April '86 he phoned to say he was constipated, having had no bowel action in 7 days. He was advised to eat pears, a food which gave him diarrhoea on the ED, and this relieved his constipation.

A new symptom which arose during the diet was insomnia. During the day he was sleepy but at night he was bright, alert and had plenty of energy. It was suggested that the foods he had for breakfast, mainly grains which made him tired, be taken at night and the foods he had for supper, protein and a vegetable, be taken in the mornings. As maize, sugar and wheat lead to tiredness on the ED, eating them at night relieved the insomnia.

After 30 months he is still in remission with one or two formed stools a day. He has had blood with mucus on 2 occasions only. The first when on a bushveld safari, he was forced to eat meat, being the only protein available. The second when he had a salad which unbeknown to him contained cucumber.

He still suffers from flatulence and cramps occasionally, depending on what he eats. He no longer suffers vomiting, nausea and the constant desire to defaecate. His nasal symptoms, asthma, headaches, itch, backaches, neckaches, muscle aches and flu-like symptoms are gone. His severe pustular acne cleared after 4 weeks and remains so after 30 months. The clearing of the boils on his face has given him a good feeling. He is full of confidence and no more moody. Alert, memory much improved, he now enjoys his work, which previously was a bind to him.

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Fig 2: There is a reduction in the density of the inflammatory infiltrate^y. The lining epithelium shows more goblet cells^x with no destruction of the epithelium^w and no evidence of crypt abscess formation compared to the previous biopsy.

He has gained body mass, possibly as a result of the more efficient absorption of nutrients.

After he had been on the diet eliminating the offending foods, pineapple, cheese, beef and cucumber, for 6 months, sigmoidoscopy showed a normal mucosa of the sigmoid and rectum without ulceration. Biopsy report, "non specific chronic colitis". See Fig 2.

Sigmoidoscopy done on 23-4-88, nearly 2 years later, showed "a normal looking rectum and sigmoid", and the biopsy report - "Severe chronic colitis". Fig 3: At this stage he was eating beef again in small amounts.

Discussion

Ulcerative colitis, a chronic inflammatory disease of the rectal mucosa may spread proximally to

involve part or all of the colon. The etiology is not established, genetic factors play a role and atopic symptoms are more common, according to Rhodes¹. The patient suffered from bowel and atopic symptoms all his life.

The Bowel Symptoms

Miserable as an infant with colic and diarrhoea, he continued with

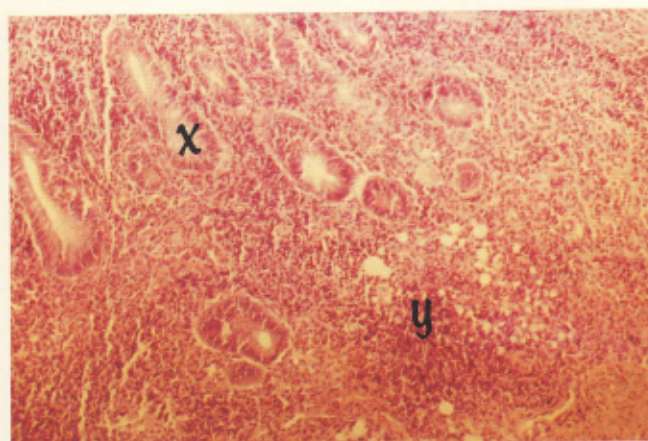


Fig 3: The lamina propria shows a dense chronic inflammatory cell infiltrate^y. The number of the goblet cells in the crypts are reduced^x, there are no crypt abscesses nor any crypt epithelium destruction.

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recurrent abdominal pain (RAP) during childhood, symptoms of irritable bowel syndrome (IBS) as an adult, and progressed to ulcerative colitis the last 6 years. Only after 27 years the bowel symptoms cleared when certain foods, identified by the ED to be associated with the symptoms, were removed from his diet. This supports Fielding's quote "Little bellyachers grow into big bellyachers."²

... so logical to suspect that food plays a role in the symptoms of ulcerative colitis

The main food culprit associated with blood and mucus was pineapple, followed by cucumber, then cheese and beef.

The Atopic Symptoms

The atopic symptoms, rhinorrhoea and asthma which he had all his life, also cleared when milk, whole wheat bread and perfumes were removed from his environment. Table 1.

The Dysphoric Symptoms

The patient suffered vague symptoms of the other systems of the body. These included headaches, neckache, backache, tiredness, muscle ache, joint pains, nervousness, anxiety, flu-like feeling, feeling of inadequacy, inferiority complex and neuroticism. These symptoms have been described as dysphoria by Ellis,³ and are typical of "Yuppie" flu.

The relief of anxiety in the patient was associated with the removal of caffeine containing foods, tea and sugar. Greden⁴ queries whether

anxiety is due to neurosis or caffeine in foods. Tiredness, a main feature of this patient for 10 years, was relieved when sugars, biscuits and maize were removed. Muscle and joint pains were provoked on re-exposure to milk and the flu like shivers, on re-exposure to pineapple, his favourite food. Borok⁵ has shown tiredness to be associated with grains mainly sugar, wheat and maize.

Other dysphoric symptoms relieved in this patient by removing the offending foods, identified by the ED, to be associated with the symptoms are seen in Table 1.

The association of IBS, atopic and dysphoric symptoms is well shown in this patient, and their relief by removing environmental factors, inhaled or eaten. The same association of bowel, atopic and dysphoric symptoms and their relief by removal of associated foods and inhalants have been shown by Borok,⁶ Mandell⁷ and a special report.⁸

These reactions do not have to be an autoimmune reaction with positive skin or blood reactions such as IgE, or positive RAST tests according to Jenkins⁹ and Lessof¹⁰. The reaction may be due to chemicals found in

In ulcerative colitis the bowel is the target organ, and food the allergen

foods, such as salicylates, benzoates, glutamates, nitrates and amines according to Allen¹¹. The amines found in foods include, histamine, serotonin, dopamine, acetylcholine. The enzyme ananase found in pineapple is used pharmacologically

as a lytic to absorb haematomas. This lytic action of ananase may have been responsible for the mouth ulcers provoked by eating pineapple in this patient. It is suggested that the ulceration of the mucosa of the colon may have also been due to the lytic action of ananase. Salicylates, metabisulphites and benzoates extracted from foods precipitated asthma according to Allen¹¹ and may have been associated with asthma in this patient.

Little belly-achers grow into big belly-achers

Ulcerative colitis can be compared to contact dermatitis. The chemicals in oils, soaps and lotions are accepted as irritating the skin leading to contact dermatitis, with itch only at first, going on to erythema, weeping and finally ulceration. The progress can be reversed at any stage by simply removing the offending chemical applied to the skin. But in ulcerative colitis it is the mucosa of the colon that reacts to chemicals in foods, a contact colitis, the symptoms reversible by simply removing the food.

Food allergic colitis has been shown by Jenkins⁹ to be due to milk protein, soya and beef. "All our patients presented with bloody, often severe diarrhoea, usually shortly after the introduction of cow's milk feeds. Resolution of symptoms on an appropriate exclusion diet is the only definitive criterion for diagnosis, preferably with appropriate subsequent challenge."⁹

The whole bowel may be affected

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from lips to anus by the same or different foods and not compartmentalised as mouth, stomach, duodenum or colon as we see the bowel.

Wright¹² has shown foods have caused ulcers in the mouth. This patient had stomal ulcers related to pineapple. Price et al¹³ conclude "that pain of oesophagitis is non specific and can be precipitated by a variety of seemingly unrelated substances", coffee, orange juice and tomato drink

being involved. Milk was associated with these symptoms in this patient. Harrison et al¹⁴ showed pronounced mucosal damage in jejunal biopsies of all 5 children after positive milk challenge.

Jenkins et al⁹ support the view that there is an identifiable minority of patients with colitis who respond quickly and completely to diet.

Ament¹⁵ has shown, in an infant fed on soya formula, haemorrhages,

oedema and no villi in jejunal biopsies and in rectal biopsies development of crypt abscesses and increase of eosinophils. Rosenkrans¹⁶ demonstrated allergic proctitis in which the lamina propria of rectal mucosa is infiltrated with IgE containing cells. Bloody diarrhoea with mucus was associated with milk in a patient described by Mandell⁷. In this patient, beef, cucumber and pineapple were associated with provocation of bloody diarrhoea. The above authors, except Rosen-

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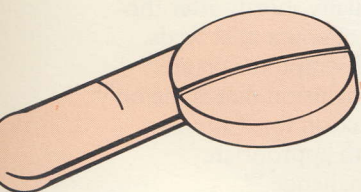
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*Reference: Professor I. Kanfer. Department of Biopharmaceutics, Research Group. Rhodes University.

Eliminating Foods

krans have shown a relationship between foods and various regions of the bowel.

Repeated sigmoidoscopies showed haemorrhages and ulceration and repeated biopsies in this patient showed features compatible with ulcerative colitis, prior to going on the ED. See Fig 1.

After being on the ED for 6 months besides the sigmoidoscopy showing a normal looking sigmoid mucosa with no haemorrhages or ulceration, the histology showed marked improvement. See Fig 2. It is suggested that this improvement was associated with the removal of the offending foods, pineapple, cucumber, cheese and beef.

The mucosa of the colon reacts to chemicals in foods

The patient found after 12 months he could take small amounts of beef, which he loved, without leading to a bloody diarrhoea but only colic, mucus and mild bloating. He was content to have these symptoms as long as he enjoyed his steak. Sigmoidoscopy at 18 months still showed a normal rectal mucosa but the histology worsened with a dense chronic inflammatory cell infiltrate, Fig 3, possibly related to the small amounts of beef he reintroduced to his diet, compared to Fig 2, taken at the time he had eliminated beef entirely.

It is suggested that in the pathology of ulcerative colitis, an enzyme or chemical in foods prime the bowel with a chronic cell infiltrate, as shown in Fig 3 and associated with

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beef in this case. Then different enzymes in foods precipitate the ulceration with a bloody diarrhoea as an anase of the pineapple in this case, Fig 1. Without the pineapple and beef the mucosa recovers as shown in this case in Fig 2.

Conclusion

The author suggests that IBS occurs, in genetically predisposed individuals, atopy occurring commonly, as an ongoing illness from cradle to grave and the worst form is ulcerative colitis as shown by the history of this patient. The symptoms wax and wane depending on what is eaten a) at that age, b) the previous meal or days or c) the season of the year. This easily explains the remissions and exacerbations patients with ulcerative colitis have.

The elimination technique is used when defunctioning ileostomies are performed to see which patients, with ulcerative colitis need colectomy or not by diverting foods from the colon¹⁷. Surely the ED does the same, without the morbidity, risk, complications and expense of an ileostomy, simply by not allowing the food to enter the gastro-intestinal tract at all.

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