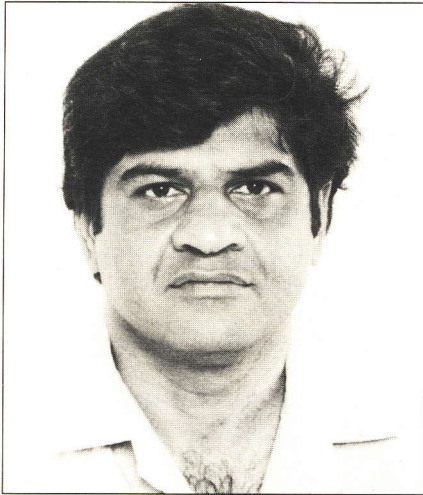


## A Practical Approach to Dyspepsia - A E Simjee



**Prof A E Simjee**

MBChB (Natal) MRCP (UK) FRCP (UK)  
Gastro-intestinal Unit  
University of Natal  
Durban  
4000

### Curriculum vitae

Professor Ahmed Essop Simjee is head of Gastrointestinal Unit at King Edward VIII Hospital and Faculty of Medicine, University of Natal. He is also head of Ward N5 and Undergraduate Curriculum Committee. His research interests are: Peptic ulcer disease, including that due to NSAIDs; Tuberculosis of the abdomen; Chirrhosis; and Amoebiasis.

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### Summary

*Dyspeptic symptoms affect 10% of all adults and need to be investigated as they may indicate serious illnesses like carcinoma. A careful history with clinical symptom analysis could be all that's needed for a correct diagnosis and expensive investigations unnecessary. The importance of different dyspeptic symptoms are discussed as well as drug and dietary treatment*

*S Afr Fam Pract 1990; 11: 60-4*

### KEYWORDS:

Dyspepsia; Physician-patient Relations; Family Practice.

There is no commonly agreed definition of dyspepsia and up to 22 different terms have been used. There is not only no clear definition by patients but, unfortunately, there appears to be lack of uniformity in the understanding by doctors of the terms used. I hope to clarify some of the terms used.

Among the symptoms included under dyspepsia are:

1. Upper abdominal pain and discomfort.
2. Flatulence and distension.
3. Heartburn and gastro-oesophageal regurgitation.
4. Anorexia, nausea and vomiting.
5. Dysphagia.

I would like to discuss only the first two of these.

### Importance of Dyspeptic Symptoms

Dyspeptic symptoms are important for several reasons:

#### 1. Disease:

These may range from the apparently trivial ("nervous dyspepsia") to life-threatening illnesses such as carcinoma of the stomach and pancreas.

#### 2. Frequency:

It has been estimated that about 10% of adults have some gastrointestinal symptoms.

#### 3. Value in Diagnosis:

Moynihan in 1905 claimed that 90% of dyspepsia could be diagnosed simply on the history. Today, in clinical practice, we achieve only a 45 - 50% correct diagnosis of dyspepsia on history, although studies have suggested that we should be able to achieve a 90% accuracy of diagnosis. There appears to be a failure to elicit and to analyse symptom information at the time of the first patient contact. In one study, physicians given the usual information elicited, achieved a diagnostic accuracy of about 50%, but when given information from a detailed, structured, pre-defined interview with a non-medically qualified physician's assistant, a diagnostic accuracy of up to 80% was achieved. Symptoms are particularly important because very often physical examination is unhelpful.

#### 4. Cost of Investigations:

There is now realization that in health care services, infinite demand is currently chasing finite diminishing resources. More is not necessarily better and this particularly applies to

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expensive, time-consuming special investigations. The clinical symptom has become attractive not only because it is cheap, but also it ensures optimal selection of subsequent investigations.

## Pain and Discomfort

The following may be regarded as *classic peptic ulcer symptoms*:

1. Episodic upper abdominal pain (typical episodes last 7-14 days or longer and occur 2-6 times a year with long remissions).
2. The "pointing" sign: the patient points with one finger to a site in the epigastrium to indicate the position of the pain.
3. Night pain which wakens the patient.
4. Pain relieved by food, antacids or vomiting.

Up to 50% of these patients do not have an ulcer crater on endoscopy. The patients without an ulcer crater are referred to as having *non-ulcer dyspepsia*. Some of these have gastritis

## More investigations are not necessarily better

or duodenitis, whilst others have no abnormality seen on endoscopy. However, they do respond to anti-ulcer therapy. Since both groups respond to anti-ulcer therapy, is an endoscopy necessary? Some may believe that one needs a firm diagnosis before treatment, while others would be content to use a therapeutic trial itself to confirm a clinical diagnosis. It would seem that

it is easier, cheaper and in the patient's best interests to treat such symptoms without resort to endoscopy. However, it needs to be emphasized that patients need to be re-assessed in 10 days to see if they are responding to treatment. If symptoms do not respond to therapy, or in those in whom symptoms recur, further investigation is needed.

*Gastric Cancer*

The following should make one consider further investigations to exclude gastric malignancy:

1. Dyspepsia in a patient over 45 years.
2. Daily discomfort or pain.
3. Anorexia or early satiety.
4. Weight loss.
5. Vomiting of small amounts of fresh or altered blood.
6. Unexplained anaemia.

Although, in general, symptoms are more important than signs, when signs are present they provide strong evidence of disease. In particular, the following should be looked for:

1. Palpable mass.
2. Supraclavicular node.
3. Enlarged liver.

*Biliary Colic*

The following would suggest biliary colic:

1. Attacks of pain lasting minutes or hours with recovery in the next 48 hours; the pain is seldom "colicky".
2. Pain is in the right hypochondrium or epigastrium

and may radiate to the right shoulder.

3. Restlessness, sweating, vomiting and shivering during an attack.
4. Such severe pain that urgent medical attention is required.
5. Dark urine, pale stools or jaundice after an attack.

## Dyspeptic symptoms affect 10% of all adults

*Non-Organic Dyspepsia*

Whilst there are patients whose symptoms resemble classic peptic ulcer (these are described above), there are others in whom the nature of the symptoms suggest that there is a non-organic basis for the dyspepsia. These include:

1. Complaints disproportionate to clinical well-being.
2. Symptoms recurring daily over long periods of time.
3. Pain present before breakfast but seldom disrupting sleep.
4. Location of the pain described with sweeping movements of one or both hands.
5. Pain often difficult to relieve.
6. Morning nausea: In regard to the symptom of morning nausea or even retching, alcohol abuse should be considered. These patients may also have associated painless diarrhoea.

The management of this group of patients is that of the irritable bowel syndrome.



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## Flatulence and Distension

The complaint of wind and gas in the bowel is one of the commonest symptoms encountered in a Gastrointestinal Clinic. It encompasses excessive eructation from the mouth or troublesome passage of flatus from the anus as well as abdominal pain and distension.

*Intestinal Formation of Gases and Passage of Flatus*

A great deal of gas can be formed in the alimentary tract, but much of it is quickly absorbed. Nitrogen, oxygen,

carbon dioxide, hydrogen and methane comprise 99% of intestinal gases. There are also a great many trace gases which include ammonia, hydrogen sulphide, volatile amines and short chain fatty acids. Carbon dioxide is produced from gastric acid and bicarbonate and is quickly absorbed. Nitrogen mainly comes from sucked-in air. Hydrogen is exclusively the product of intestinal bacterial metabolism of especially non-absorbable sugars such as lactase deficiency. In the latter, there can be great flatulent discomfort and even diarrhoea. Some foods contain air incorporated in them, eg an apple may contain as much as 20% of air by

volume; egg whites, cakes and bread contain much more. The normal gastrointestinal tract contains 100-200 ml of gas and as much as 1-2 litres of gas can be produced per day by normal people. Most people pass some flatus about a dozen times a day. The daily volume of flatus in normal subjects is between 200 mls and 2 litres.

Certain foods are more likely to cause this, eg milk, if there is lactase deficiency, cabbage, turnips, etc. The worst offenders are beans, which can result in up to six-fold increase in the amount and frequency of passing wind. While most gases lack odour,

- Gastro-oesophageal dysfunction
- Nausea and vomiting
- Gastric stasis
- Flatulent dyspepsia

**Maxolon**<sup>metoclopramide</sup>  
teaches the stomach to behave

**Dosage:** Daily dosage should not exceed 0.5 mg/kg body mass.  
**Side-effects:** Various extra-pyramidal dystonic-like reactions, tardive dyskinesia, raised serum prolactin levels.  
**Contra-indications:** Pregnancy, suspected or confirmed phaeochromocytoma.  
**Precautions:** Exercise care with the co-prescription of phenothiazines.  
Further information is available from our Medical Department.



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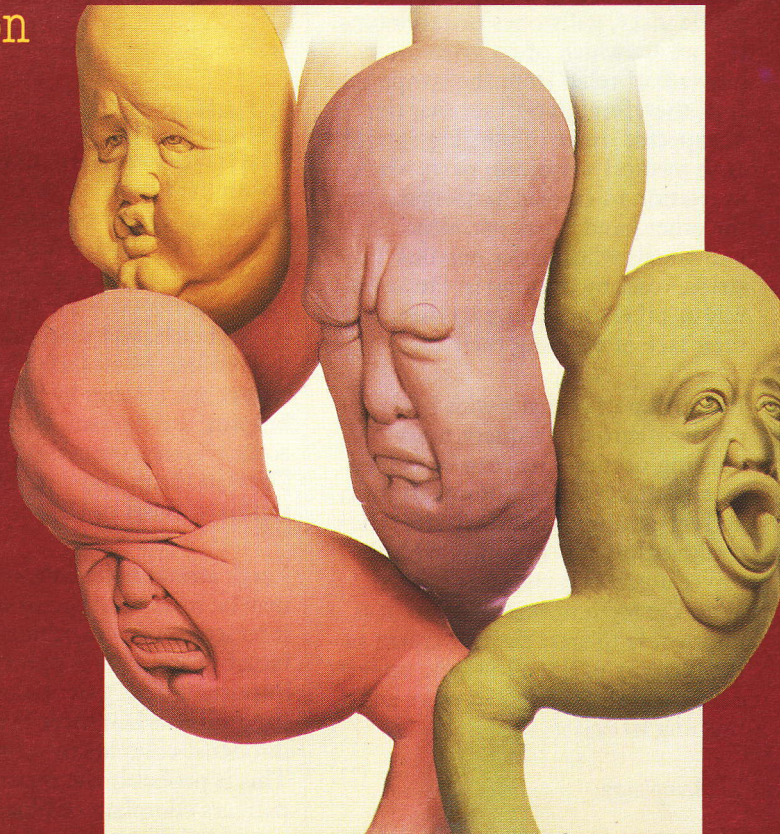
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reveal whether there is excess gas in the GIT and will help locate the site.

Thirdly, with increasing age, there may be emphysema of the lungs. Patients often feel uncomfortable immediately after meals, especially if they are in a semi-reclining position.

Fourthly, bloating is a special form of abdominal distension which comes on especially towards the evening. Essentially, it is a form of forward and downward displacement of the abdominal contents from contraction of the diaphragm and arching of the lumbar spine. In general, this position is a little more comfortable to maintain than an upright military stance. Patients think that they have become full of gas, but this is seldom the case.

Fifthly, in many patients with functional abdominal complaints, there is not an increase in gas in the intestine, but it seems that their complaints of bloating, pain and gas may result from disordered intestinal motor function and an increased pain response to the presence of normal amounts of gas in the bowel. There is evidence to suggest that transit time is often prolonged.

Sixthly, delayed gastric emptying which may contribute to bloating include motility disturbances such as diabetic neuropathy, anti-cholinergic drugs and vagotomy, and also pylorospasm.

### Treatment

When dyspepsia is thought to be a problem of gastrointestinal motility, metoclopramide (Maxolon) may be used. In some cases it enhances gastric emptying and increases lower

oesophageal sphincter pressure. It is a dopaminergic antagonist and crosses the blood-brain barrier and increases extrapyramidal side-effects.

Domperidone (Motilium) may be preferable as it acts only peripherally but it is much more expensive.

There is no single dietary manipulation which exerts a favourable response in the majority of patients. Avoidance of tobacco and aspirin may help. There is increased fermentation particularly with food containing unabsorbable carbohydrates, such as beans, fruit juices, brussels sprouts, apple juice or prune juice. Careful dietary counselling is of great value in treating patients who complain of excessive flatulence.

Whilst not advocating psychotherapy, a caring and sympathetic physician can be of great value in treatment.

### Summary: An Approach to Dyspepsia

1. Try to get the patient to define as clearly as he can what he understands by his complaint of dyspepsia.
2. Dyspeptic symptoms are common and affect 10% of all adults.
3. Dyspeptic symptoms are important because they may draw attention to life-threatening illnesses such as carcinoma.
4. A careful history can lead to a diagnostic accuracy of 80% and thus save the patient time and money.
5. Classic peptic ulcer symptoms include periodicity, the "pointing" sign and nocturnal pain.
6. Up to 50% of patients with classic ulcer symptoms do not have an ulcer crater on endoscopy.
7. Gastric cancer should be suspected in patients with dyspepsia if they are over 45, or have daily pain, early satiety, weight loss and unexplained anaemia.
8. While symptoms are more important than signs, signs such as palpable mass, supraclavicular lymph node and enlarged liver should be carefully looked for.
9. Biliary colic is seldom colicky and patients often seek urgent medical attention.
10. Complaints disproportionate to clinical well being and pain located with sweeping of the hands should suggest non-organic dyspepsia.
11. Alcohol abuse should be considered when there is morning nausea, retching or painless diarrhoea.
12. A sudden onset of burping should make one look for organic disease in the chest or abdomen including and especially cardiac ischaemia.
13. A feeling of distension may be an early symptom in middle-aged women with an ovarian neoplasm.
14. Dyspepsia due to a problem of gastrointestinal motility can be treated by metoclopramide or domperidone (Maxolon and Motilium).
15. No single dietary manipulation exerts a favourable response in the majority of patients with dyspepsia.
16. A caring and sympathetic physician can be of great value in treatment.