case reports
THE CARE GUIDELINES

CASE REPORT

To encourage other practitioners to consider submitting a case report for the E – News, we have restructured the format in line with recommendations from July 2014 and have left in the key guides – should you be interested just e mail info@nutri-linkltd.co. We will send you the word doc.

Case reports are profesional narratives that outline the diagnosis, treatment, and outcomes of the medical problems of one or more patients. Information from case reports can be shared for medical, scientific, or educational purposes. They provide a framework for early signals of effectiveness adverse events, and cost. Case reports and the systematically collected data from which they are written also provide feedback on clinical practice guidelines.

Case Report of 42 year old woman with SIBO which is resolved by engaging in a nutritional programme.

Abstract. *Summarise the following information if relevant: (1) Rationale for this case report, (2) Presenting concerns (eg, chief complaints or symptoms, diagnoses), (3) Interventions (eg, diagnostic, preventive, prognostic, therapeutic exchange), (3) Outcomes, and (4) Main lesson(s) from this case report.*

This case explores a nutritional focused approach to the resolution of SIBO in a 42 year old mother of two who also had a range of non-GI symptoms.

The awareness of small intestinal bowel overgrowth (SIBO), has been growing over recent years. It is recognised as one of a number of functional bowel disorders. The GI condition is caused by an excess amount of fermenting bacteria in the small intestine. Technically this means at least 100,000 bacteria per ml of fluid. This produces a number of GI symptoms which includes burping, excessive wind (flatus), bloating, cramps, pain & discomfort, and variable bowels from diarrhoea to constipation.

Symptoms of SIBO can also include or lead to anaemia, B12 deficiency, mal-nutrition, reduced bile acids, steatorrhoea, weight loss, food allergies/intolerances, brain fog, systemic inflammation, autonomic dysfunction, chronic fatigue, restless leg syndrome, and features associated with micronutrient deficiencies (vitamins B12, A, D and E, iron, thiamine, nicotinamide).

The signs and symptoms can be mistaken for IBS or fructose or lactose intolerance or a non-responding coeliac.

SIBO can develop as a result of a number of different reasons. A lack of stomach acid, (achlorhydria or low levels), hypochlorhydria could be involved, or the use of antacids such as PPIs. Bowel stasis may be involved leading to dysmotility. Age may play a role, as can poor nutrition. Chronic pancreatitis could cause SIBO. Chronic use of antibiotics could lead to SIBO. In less common cases there could be a surgical explanation (surgical loops, vagotomy, or bariatric surgery) that has led to the condition. Or there could be a collagenous vascular disease involved. An inflammatory bowel condition such as Coeliac Disease or Crohn's Disease could be a factor. If an individual has something called 'Short Bowel Syndrome' this could lead to SIBO. Non-alcohol steatorrhea hepatitis can lead to SIBO. Liver cirrhosis is another possible aetiological cause. SIBO can also lead to malnutrition due to malabsorption.

The diagnosis is made when Breath Test for Hydrogen (H2) and Methane (CH4) (an indirect test) is above the lab's reference range in parts per million. Usually this threshold is 20 ppm but could be as low as 12 ppm depending on the lab. There is one caveat to this and that is that a fast transit will lead to a false positive result.

A common misconception is that SIBO affects only a limited number of patients, such as those with an anatomic abnormality of the upper gastrointestinal (GI) tract or those with a motility disorder. However, SIBO may be more prevalent than previously thought. This apparent increase in prevalence may, in part, be because readily available diagnostic tests have improved ease of SIBO diagnosis.

Research shows that those with an existing digestive condition are more likely to have SIBO, such as those with IBS. In summary, although data are limited, the prevalence rates of SIBO in young and middle-aged adults appear to be low, whereas prevalence rates appear to be consistently higher in the older patient (14–15%); these rates, however, are dependent upon the diagnostic test used.

This 42 year old mother responded well to specific nutritional intervention and not only resolved her digestive symptoms but then was also able to resolve her non-GI symptoms as well.

Key Words. *Provide 3 to 8 key words that will help potential readers search for and find this case report.*

Small Intestine Bowel Overgrowth (SIBO), Irritable Bowel Syndrome (IBS), bloating, cramps, wind, fatigue, motility disorders.

Introduction. *Briefly summarise the background and context of this case report.*

Mrs S.T. presented with 'IBS' as diagnosed by her GP, and specifically complained of abdominal pain first thing in the morning and at other times of the day and night, bloating, excess wind and burping, cramps and loose stools.

S.T. also told me how tired she was, and as with many mothers of small children she was not able to discern whether this was the natural state given that she was looking after a 3 and a 5 year old or whether her energy was poor for other reasons, specifically her digestive symptoms, which she experienced every day.

S.T.'s digestive symptoms first started after travelling abroad 18 years previously and returned when she again travelled abroad, which she did regularly for family reasons.

Fatigue, sinus congestion and excessive weight were other concerns that S.T. had, and these were worse since the GI symptoms had started nearly two decades before.

Presenting Concerns. *Describe the patient characteristics (eg, relevant demographics—age, gender, ethnicity, occupation) and their presenting concern(s) with relevant details of related past interventions.*

Mrs S.T. is a 42 year old mother of two young children, living in south west London. She is 5 ft 3 in (160 cm) tall and weighs 10 stone 2 lbs (65.33 kg). She is Caucasian. Her parents had lived in Kenya but now lived in the south of England, but her brother lived in Nairobi with his family and for this reason S.T. and her family visited Nairobi quite regularly.

S.T. told me that she regularly experienced abdominal discomfort, at all times in the day & night, as well as bloating, excess wind and burping, cramps and loose stools.

S.T. had not focused on her own health as much as she might have done and was always caring for someone other than herself. So, after being prompted by a friend, she was finally having a consultation for herself. This meant that she did not have a list of previous interventions that she had tried and tested. S.T. had, however, tried a few dietary changes including cutting out bread but this had not made any noticeable difference. She had taken Fybogel but this had not helped at all.

S.T. also had intermittent but not very troubling sinus congestion and a low grade headache. However, this was minor compared to the gut problems.

Prior to the arrival of her children S.T. had also experienced a greater challenge in losing weight. She managed to conceal her excess weight very well by the way she dressed but she told me she was very aware of it and it was a source of ongoing stress.

S.T.'s health goals were to be entirely free of her digestive symptoms (pain, burping, wind, loose stools, bloating, cramps), to have good energy all day, and to lose body fat and finally to be free of sinus congestion and the low grade headache.

Clinical Findings. *Describe: (1) the medical, family, and psychosocial history including lifestyle and genetic information; (2) pertinent co-morbidities and relevant interventions (eg, self-care, other therapies); and (3) the physical examination (PE) focused on the pertinent findings including results from testing.*

S.T. was alone in her family with this type of health condition. She had effectively 'caught' the digestive problems after one trip to Nairobi where her parents had been living at that time. Other than short-lived digestive upsets, no other family member had any digestive problems or other health concerns. Her parents were fit and well in their retirement and her two brothers were also very well.

S.T. had had some blood tests done by her GP recently which are discussed below.

Timeline. *Create a timeline that includes specific dates and times (table, figure, or graphic).*

S.T. was 42 when she first met me. When she was 24 years of age in 1996 she was visiting Nairobi, somewhere she had been a number of times before, and she suffered from food poisoning. Since this time, her digestive system has not been the same, and she has experienced GI symptoms on and off ever since, and especially in recent years. (Suggestive of a post infectious IBS)

In 2014 she presented with her GI complaints along with what appeared to be under-active thyroid hormone symptoms.

S.T. followed the nutrition programmes for 8 weeks, 5 weeks, 6 weeks and 6 weeks for the respective phases, totalling 25 weeks in all before she followed a maintenance programme (Fifth Supplement Programme).

Diagnostic Focus and Assessment. *Provide an assessment of the (1) diagnostic methods (eg, PE, laboratory testing, imaging, questionnaires, referral); (2) diagnostic challenges (eg, financial, patient availability, cultural); (3) diagnostic reasoning including other diagnoses considered, and (4) prognostic characteristics (eg, staging) where applicable*.

Her recent GP ordered blood tests included a thyroid hormone assessment. Her TSH had been fine at 1.20 but her FT4 had been below the reference range at 9 (10 – 22). She was told that this would be monitored at her next blood test but no action was taken, and since her TSH was normal this was not a matter to address right now.

The low thyroid hormone may help to explain the difficulty S.T. had in losing weight, but the weight may also have been related to her GI health. We did not know how long the thyroid imbalance had been present, but it is quite common for thyroid problems to emerge after having children.

Based on the excessive fermentation which led to burping and flatulence, I recommended a lactulose breath test to rule out small intestine bowel overgrowth (SIBO).

S.T. undertook the home breath test and the results returned two weeks later. She had an elevated level of hydrogen reaching 35 ppm, but not methane, with the threshold being 20 ppm.

Therapeutic Focus and Assessment. *Describe: (1) the type(s) of intervention (eg, preventive, pharmacologic, surgical, lifestyle, self-care) and (2) the administration and intensity of the intervention (eg, dosage, strength, duration, frequency).*

S.T. followed the nutrition programmes for 8 weeks, 5 weeks, 6 weeks and 6 weeks for the respective phases, totalling 25 weeks in all before she followed a maintenance programme (Fifth Supplement Programme).

The strategy was to directly address the SIBO which had been confirmed with the breath test and her symptoms, with a view to then supporting digestion to inhibit inappropriate bacteria from colonising the small intestine. This approach involved a reduction in carbohydrates as outlined in this Route to Resolution document on the subject of SIBO.

Whilst aware of the less than ideal thyroxine output, no nutritional intervention for her thyroid was made in the first phase of the nutritional programme.

The most significant change for S.T. was to reduce the carbohydrates in her diet, and she was directed on how to follow a low FODMOPs diet - FODMAPs Diet (Fermentable Oligo, Di, Monosaccharides and Polyols. Family of poorly absorbed, short-chain carbohydrates).

In addition, specific anti-microbial supplements were recommended for the first phase. This programme was to be taken for 6 weeks before reviewing.

First Supplement Programme	Dose
ADP Oregano (BRC)	3 with each meal
Garlic Plus (BRC)	1 with each meal
Tanalbit (INP)	2 with each meal

S.T. was meant to return after 6 weeks for a follow up but this was changed to 8 weeks, and she had taken the course of the above supplements for 6 weeks, during which time there had been a marked improvement in her GI symptoms, with the only symptom remaining being the abdominal pain in the morning.

However, since she had stopped the supplements at 6 weeks, some symptoms had gradually reappeared, suggesting that the anti-microbial approach was only palliative, although it had worked very well.

It was important and interesting to note that the 6 weeks on the 3 natural anti-microbials had been very effective whilst she had taken them but when they had been stopped, S.T.'s digestive symptoms began to return.

When we met for the first follow up after 8 weeks, she reported that the symptoms were as much as 50% returned, whilst most were about 25% of what they had been. The only symptom that had persisted with the abdominal pain she had first thing in the morning.

The breath test and the recommendations to address the SIBO had proven helpful in giving me the direction I needed. However, simply providing the anti-microbials was not the way forward since the symptoms, and presumably the fermenting bacteria, returned when the anti-microbials were stopped.

Therefore, an approach which included a correction in her digestive 'terrain' and functioning was required. S.T. presented with many symptoms that suggested she had a low level of stomach acid, and on this basis rather than with the use of the Gastro-Test, a supplement to support her production of stomach acid was recommended. At the same time, a supplement to support her thyroid hormone levels was recommended too. The process of making digestive HCl and enzymes is a highly energetic one and the low thyroid hormone would not be conducive of ideal energy for S.T.'s body to make adequate digestive juices.

Within a week of re-starting the anti-microbial supplements, S.T.'s digestive symptoms diminished once again. This time, there was no break in the use of the anti-microbials.

The second programme of nutritional supplements provided anti-microbials as well as digestive support and some thyroid support too. This was for 5 weeks.

Second Supplement Programme	Dose
ADP Oregano (BRC)	3 with each meal
Garlic Plus (BRC)	1 with each meal
HydroZyme (BRC)	1 with lunch & 1 with dinner
Meda-Stim (BRC)	2 with breakfast & 1 with lunch

When S.T. returned 6 weeks later for the second follow up appointment, she reported a complete absence of GI symptoms except for the pain first thing in the morning, which persisted. She did report a slight improvement in her energy and a few lbs of weight loss. She felt that this could easily have been due to the lower carb diet she had been following, which may well have been the case.

The third programme contained the oregano anti-microbial along with the same thyroid support and HCl acid supplement but now introduced some gut epithelial tissue support, in the form of butyric acid which helps to support a healthy balance of bacteria in the gut. This was for 6 weeks.

Third Supplement Programme	Dose
ADP Oregano (BRC)	3 with each meal
HydroZyme (BRC)	1 with lunch & 1 with dinner
Meda-Stim (BRC)	2 with breakfast & 1 with lunch
ButryEn (ARG)	1 with breakfast, 3 with lunch & 3 with dinner

At the fourth appointment, S.T. reported the continued absence of digestive symptoms and this time the pain in the morning had gradually faded away over this 6 week period of time. She felt lighter and brighter and had lost some more weight.

Now was the time to stop the oregano extract, in what was her fourth supplement programme. She had strict instructions to re-commence the ADP Oregano (BRC) if the symptoms reappeared, especially involving any wind. Two weeks later, however, S.T. emailed to report that she had not had any of her GI symptoms reappear and she continued with the digestive supplements and thyroid support.

The fourth supplement programme was the first not to contain an anti-microbial and focused on supporting S.T.'s digestive system and thyroid hormone levels. This programme lasted 6 weeks.

Fourth Supplement Programme	Dose
HydroZyme (BRC)	1 with breakfast & 2 with lunch & dinner
Meda-Stim (BRC)	2 with breakfast & 1 with lunch
ButryEn (ARG)	1 with breakfast, 3 with lunch & 3 with dinner
GTA Forte II (BRC)	1 with breakfast & 1 with lunch

After the 6 weeks on this fourth programme, and with no sign of recurrence, I recommended S.T. to follow a maintenance programme of supplements to help continue to support her digestion and energy and weight control.

Overall, S.T. had managed to lose a stone and a half since the second appointment. Her energy was much better than it had been. We acknowledged that this could be for a number of reasons including the absence of uncomfortable gut symptoms, improved digestion and absorption, improved thyroid hormones and a lower carbohydrate diet.

Somewhere in the process, her sinus congestion and achy head had resolved, though S.T. could not recall when this had happened.

When S.T. travelled abroad, it was recommended that she take the A.D.P. (BRC) prophylactically, and this had worked on the one occasion she had done so.

All in all, she had achieved the health goals we established at the outset.

S.T. then followed a maintenance programme which involved a reduced schedule of supplements as follows:

Fifth Supplement Programme	Dose
HydroZyme (BRC)	1-2 with dinner
ButryEn (ARG)	1 with breakfast, 3 with lunch & 3 with dinner
Meda-Stim (BRC)	1 with breakfast & 1 with lunch
GTA Forte II (BRC)	1 with breakfast most days of the week

This is a case of a young mother who had had digestive problems, and in all likelihood a dysbiotic imbalance, for 18 years since her food poisoning in Kenya. This was possible to test as SIBO with a home breath test. However, she also had a sub-clinical hypothyroid state and was fatigued, overweight and had a reduced level of HCl acid.

After many years of suffering the digestive symptoms, and having visited her GP and being diagnosed with IBS, an effective nutritional programme had completely resolved this patient's gut symptoms and supported her overall metabolism. As S.T. had voiced herself, "how many other women are out there with the same symptoms as me but are completely unaware that there is a straightforward solution to their problems?"

Supplement Information

ADP Oregano (BRC)
Emulsified, sustained standardised oregano oil extract that has been patented for eradicating B. hominis more effectively than tinidazole or metronidazole. This oregano extract has a broad range of action and inhibits a wide range of unwelcome guests including parasites, bacteria and yeasts. (This product is used by Dr Gerry Mullin, gastroenterologist at John's Hopkins University Medical School to treat SIBO.)

Garlic-Plus (BRC)
Each tablet provides 500 mg of garlic with 180 mg of clove and 10 mg of chlorophyllin.

Tanalbit (INP)
Each capsule provides plant tannins which have a broad anti-microbial effect.

HydroZyme (BRC)
Provides a low dose HCl acid with low dose pancreatic enzymes.

Meda-Stim (BRC)
A vegetarian formula of nutrients designed to convert T4 into T3. Useful in many weight loss programmes and does not alter TSH levels, typically.

ButyrEn (ARG)
ButyrEn is an enteric-coated, extended shelf-life formulation of the calcium and magnesium salts of butyric acid, designed specifically for delayed release in the gastrointestinal tract. Butyric acid (BA) is a short-chain fatty acid (SCFA) produced by certain commensal bacteria, and appears to support mucosal integrity as the epithelial cells utilise it. BA may support the integrity of the colonic mucosa by acting as a primary fuel for the colonic epithelium (colonocytes). Butyric acid ("butyrate" when in salt form) is an important SCFA for this reason. BA also supports the maintenance of bifidobacterium species in the large intestine.

GTA Forte II (BRC)
A thyroid glandular product, without hormones, with accessory nutrients of zinc, selenium & copper, favoured for use by Dr David Brownstein.

Discussion. *Please describe (1) the strengths and limitations of this case report including case management, (2) the literature relevant to this case report (the scientific and clinical context), (3) the rationale for your conclusions (eg, potential causal links and generalizability), and (4) the main findings of this case report: What are the take-away messages?*

Strengths and limitations of this case report including case management

The detailed case history with the use of a time-line analysis of what had occurred and when in S.T.'s life and health proved fundamental to the positive outcome of this case. Next is the familiarity with a number of functional bowel disorders including SIBO. Then there was the availability of a home breath test.

However, the case history had identified that there was a thyroid hormone imbalance separate to the SIBO which meant that the anti-microbial approach on its own was considered an incomplete approach in terms of a longer term resolution. S.T. needed support for both her digestive juices and thyroid hormones, with the latter being continued as a maintenance programme.

The literature relevant to this case report

There is increasing peer-reviewed scientific literature on the subject of SIBO, and combined with specific seminars on the subject this has given me familiarity with the subject matter which permitted me to readily identify a likely contributory factor in this woman's condition, and then be able to recommend a test which then confirmed the considerations.

This was true for the SIBO but not the sub-clinical hypothyroidism for which there is a paucity of literature.

The rationale for your conclusions

The careful case history and familiarity with the specific profile of SIBO led to a relatively straightforward consideration that SIBO may exist, which was then confirmed by the breath test.

The main findings of this case report: What are the take-away messages?

Whilst SIBO is not very common in this age group (i.e. young forties) the specific detail of the case history led me very swiftly to consider that this may be present.

The identification of the sub-clinical hypothyroidism, if this is what it can be referred to, was also relatively straightforward due to the distinction between the two sets of symptoms of SIBO and less than ideal thyroid hormone function. Equally, the familiarity of the most common signs and symptoms of thyroid hormone imbalances made it straightforward to consider the relevance of nutritional thyroid support.

Without the familiarity of SIBO and that there can exist a thyroid hormone imbalance in the face of normal blood tests it would have been a more lengthy process to identify the priority issues for this woman. For example, the use of pre and probiotics is likely to have been counter-productive.

Patient Perspective. The patient should share his or her experience or perspective of the care in a narrative that accompanies the case report whenever appropriate.

"After many years of suffering the digestive symptoms, and having visited my GP and being diagnosed with IBS, an effective nutritional programme has completely resolved my gut symptoms and supported my overall metabolism. How many other women are out there with the same symptoms as me but are completely unaware that there is a straightforward solution to their problems?"

Informed Consent. *Did the patient give the author of this case report informed consent? Provide if requested.*

The patient is not aware her case history is being used, and all identifiable data has been removed. S.T. are not her real initials.

Case Report Submission Requirements for Authors

1. Competing interests. *Are there any competing interests?*

None Known

2. Ethics Approval. *Did an ethics committee or Institutional Review Board give approval? If yes, please provide if requested.*

This case was not presented to an ethics committee.

3. De-Identification. *Has all patient related data been de-identified?*

All patient data has been re-identified. S.T. are not this lady's true initials.

4. Author. *Name of Author and practice*

Antony Haynes, Registered Nutritional Therapist, works in London W1