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 a 45 year old man with rosacea finds resolution with NT

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 rosacea in a 45 year old man who had been suffering from when he considered to be a life-altering condition for 2 years. This case explores this man's health journey over an 18 month time period and reveals how the variety of triggers for his condition were successfully addressed with different interventions.

Rosacea is a condition that affects facial skin, characterised by acne, redness & inflammation. It presents as a rash, found on the central part of the face, usually of a middle-aged person. A tendency to flush easily is followed by persistent redness on the cheeks, chin, forehead and nose, and by crops of small inflamed red bumps and pus spots.

The British Skin Foundation (BSF) states that the cause of the condition is unknown and not fully understood but many think that the defect lies in the blood vessels in the skin of the face, which dilate too easily, referred to as vascular hyper-reactivity but could also be sebaceous gland hyperplasia. Rosacea is more common in women than in men, and in those with a fair skin who flush easily. The BSF website states that rosacea is due to certain bacteria in the skin, or in the bowel, but that this has not been proved. There is also awareness that increased intestinal permeability could contribute to rosacea. Triggers include, but are not limited to, alcohol, too much exercise, both high and low temperatures, hot spicy foods, stress, and sunlight. There can also be psychological triggers which includes anxiety, stress and depression. Rosacea is not contagious.

A review of the literature identifies that vasculature, chronic inflammatory responses, environmental triggers, food and chemicals ingested and microorganisms either alone or in combination are responsible for rosacea. The incidence of rosacea in the world has been estimated to be 1 in 10 adults. Accurate figures for the UK are not known whilst in the USA, The National Society of Rosacea reports that there are 16 million sufferers.

There is no standard medical treatment.

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

Rosacea, rash, redness, facial skin, vascular, microbiome, probiotics, stress, anxiety.

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

G.T. is a 45 year old man, whose life involves meeting customers and clients on a daily basis in his role as a software salesman. His work involves being in close proximity with a customer for some hours in the day as he works on the same computer screen as his client. In this way, he is physically closer to strangers for a longer period of time than most of us experience.

G.T.'s quality of life had become intrinsically linked to his condition and he told me that his default thought process was dominated by his rosacea.

In this way, for the previous two years, G.T.'s happiness had been significantly dented by his condition, and this was made all the worse by the lack of hope that he could do anything about it.

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.*

G.T. is a Caucasian man living in London, and is single, with no children. He is of normal height and quite lean, perhaps with a need to gain a few kgs. He has expertise in software used by financial corporations to facilitate in-house training that helps to optimise productivity, and to minimise the cost of training. G.T. has been relatively successful in selling this product over the years. His work did involve traveling to Europe at least once a month, but less frequently in the past 6 months.

G.T. had sought medical help from his GP over the past 2 years. This involved being prescribed and taking antibiotics for a full month early on in his condition, but this ultimately made it worse. G.T. had not considered that the food he ate was relevant to his rosacea; he had not noticed any difference when he ate quite differently in different countries for example. However, G.T. is not aware of what gluten-containing foods are, and which foods may contain dairy proteins or sugars, and so on.

There was no other intervention that G.T. had engaged in, other than a daily hygiene morning and night. He only used non-scented, hypo-allergenic soaps and shampoos.

About five years ago G.T. had begun to experience gastro-intestinal symptoms of loose stools, bloating, wind, lower abdominal discomfort, and intermittent burping. There was no known trigger for these symptoms and G.T. could not identify any specific rhyme and reason for a worsening or a lessening of his symptoms. He had noticed that when his gut symptoms were bad that his rosacea did tend to worsen too, but this was not always the case. He had asked his doctor whether rosacea was diet-related and was told that there was no connection whatsoever.

G.T. had not engaged in any other specific intervention nor sought any help or advice for his digestive issues, and other than his disappointing outcome from his GP's recommendations had not sought professional help for his rosacea, in spite of its significance in his life and the anxiety that it generated within him. When I asked him why he had not seen any other healthcare practitioner, he told me that he had not been aware that anything could be done. He had been referred by a friend who had told him that his nutrition could make a real difference.

His personal health goals were established at the outset of the first appointment:

1. To be free of rosacea
2. To be free of digestive symptoms & have normal daily bowels
3. To improve stress tolerance & feel less anxious
4. To be able to exercise without worsening symptoms
5. To get my confidence back

However, G.T. advised that he really only cared about his facial skin.

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.*

G.T. presented with an evident red rash on his nose and the skin close to his nose. He also had a red rash on his chest that spread up to his lower neck, and this was more variable than the skin on his face. His sole reason for seeking help was to resolve his skin issues, although he had digestive imbalances that preceded his rosacea. The rosacea had been persistently present for two years, whilst his digestive symptoms had been present for five years.

The rosacea was present every day but in certain situations and at certain times, it was more red and inflamed than others. Sometimes it was worse in the morning and sometimes it was worse at night. Sometimes it varied in the day and sometimes the condition remain unchanged for days.

Too high an ambient temperature, spicy foods, hot drinks and stress were known triggers for the redness but sometimes it flared up for no particular reason (i.e. when none of the aforementioned were involved), and this was particularly stressful to G.T. even though he knew that his emotional reaction elongated the duration of time that his skin remained angry and red.

G.T. was very sensitive to how the rosacea made him appear, and it had become something that ruled his life.

Not only was G.T. emotionally altered by his condition, he had also needed to temper his exercise routine because when he raised his heart rate above 130 bpm for more than 5 minutes at one time his face became red for the rest of the day. He had continued with resistance exercise, but he missed cycling & running which had been doing 3 to 4 times a week previously. He was almost certainly less fit on a cardiovascular level but remained physically strong.

No blood tests or other medical tests had been conducted.

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

G.T. had been free of any specific illness or condition in his lifetime. His mother had told him that he had some minor eczema as a young child, but he had grown out of this by the age of 4, and G.T. could not recall having had this.

G.T. had eaten a typical diet at home and at school, had enjoyed some sport and had always been lean. He used to eat sweets like his peers at school but had not ever over-done any specific food. He had not enjoyed alcohol and therefore rarely drank, and it would be red wine if at all, and never smoked. In this way, his history lacked any remarkable information.

G.T. had enjoyed good health whilst at university where he studied computer engineering and software programming. He had been working in this field since he graduated and was someone who needed to achieve in order to feel good about himself. He tended to be more introverted and was not too comfortable in groups.

Only a short time ago, aged 39, G.T. was well in many ways. He had been fit, worked hard, enjoyed his trips to the financial centres in Europe to meet with banks & other financially-related companies to promote the software that he was so familiar with. He had been more confident, laughed more often, and enjoyed the rewards of his success. He had been in a relationship for a few years, but did not live with his partner at that time.

When he was 40, his gut health began to change and he experienced loose stools from time to time, and then experienced wind much more often than previously, and he also suffered from abdominal discomfort and bloating. The symptoms mainly occurred after eating, and particularly after dinner.

As time passed, G.T. reported that his gut symptoms increased in frequency rather than severity. He found that his trips abroad exacerbated the symptoms and he had found it inconvenient to need to visit the bathroom in the middle of his business meetings.

At 41, G.T.'s relationship ended which was quite stressful at the time but did not seem to have any specific effect on his health, which remained unchanged during and after this parting.

At 42, 3 years prior to our first meeting, G.T. had become accustomed to his digestive complaints but did not seek professional help to resolve them. His work life was as busy as it had ever been, and this was particularly due to the European trips.

At 43 years of age, G.T. first noticed a change in his facial skin and on his nose. For no particular reason, and without any notable incident, his facial skin became red and then it disappeared. A few weeks later it returned, and for a period of time the symptoms were intermittent but after a month or two they became more frequent. At some point in this year, G.T. noticed that his upper chest and lower neck had become red. He had certainly become more stressed and anxious as a result of his skin condition and this persisted to the current day. His rosacea had re-written the software of his brain, he told me, which meant he was almost a different person after 2 years of the condition.

He had looked on-line about the condition and learned the basics from conventional-medicine sites and could confirm that a hot climate, hot drinks and spicy foods did aggravate the rash so he avoided these where possible.

It was ironic that the condition had increased his stress level but had seemingly limited his ability to consider getting help for that very condition. He had lost confidence and become more isolated socially, and had been anxious and depressed about it.

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*.

As with all other patients, G.T. had completed two detailed, nutritionally-related health questionnaires along with a time-line bullet point health history in advance of the first appointment. This clearly highlighted his main concerns, and clarified what G.T. did not suffer from or experience as well as what he did have. Skin and digestive health were evidently the two most significant physical systems highlighted by the questionnaires and his stress, anxiety, poor mood and depression were emphasised, which reflected his psychological challenges.

His diet was quite sound in that he had a varied intake, ate fresh vegetables twice a day, consumed high biological value proteins regularly, did not over eat and rarely had coffee and very rarely drank alcohol. If he ever had tea, herbal tea or the coffee then he waited for it to cool down before drinking it. However, he did consume a gluten-containing grain (wheat, rye, oats) most days and had some dairy products on most days (small amount of milk, butter, and sometimes, cheese). On many evenings a week, G.T. would tend to eat quite late, after 9 pm.

There were no lab tests to which to refer, and the one medical intervention which had been recommended, namely antibiotics for a month, did not really help and then shortly afterwards resulted in a worsening of the rosacea. The antibiotics made no difference to his digestive symptoms either. I considered a test for intestinal permeability and for food reactivities and discussed this with G.T. in some detail. G.T. wanted to do something that would make a difference as soon as possible, and said that he would do one test or another if the initial dietary programme did not work at all. In this way, it was decided to proceed with a clinical experiment rather than testing.

There is some evidence that suggests that Rifaxamin, the antibiotic (which is poorly absorbed systemically), could be helpful to address a small intestinal bacterial overgrowth and that this may help rosacea.

There is also some evidence that there may be food reactivities that contribute to rosacea, and 'leaky gut syndrome', although this has not been proven, just as there is evidence that anxiety & stress can contribute to rosacea too.

Research shows that there is a pro-inflammatory state in rosacea, and there can be increased oxidative stress or decreased innate antioxidant defences.

Therefore, the focus throughout the course of intervention was on G.T.'s microbiome, his gut lining, his antioxidant defences, the quality of his vascular system as well as a food exclusion programme.

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).*

There were three aspects to the first phase for G.T.'s nutrition programme. The first was a food exclusion trial, the second was a targeted supplement programme and the third was a meditation practice in order to help improve G.T.'s ability to handle the stress of his condition but also to change his now-Pavlovian response to his thoughts about the rosacea, including the belief that it would never get better.

I advised G.T. that I believed that his digestive health was intimately connected to his skin issues, and probably underpinned the rosacea.

The foods to be excluded in the first phase were gluten-containing grains, and dairy products and all added salt, which I discovered he added to most meals. I recommended alternatives to G.T. which included quinoa flakes

instead of porridge oats, brown rice or sweet potato instead of pasta (which was eaten occasionally). G.T. did not consume carbs in any significant amounts but did consume a larger portion on days that he trained. It was also strongly recommended for G.T. to consume whole, fresh vegetables at two meals a day but rather than raw veg I recommended for him to have cooked veg. The reason for this was to help make the vegetables easier to digest.

The supplement programme consisted of 2 types of human strain bacteria (probiotics), zinc in liquid form which is also low dose, and a product to support his gut lining, and a colostrum product (which does contain a very low level of casein) to reduce inflammation in the gut & systemically and to further help to heal the gut lining. The reason for using 2 probiotic supplements was to help correct what I believed was a gut bacteria imbalance, which may have been exacerbated by the antibiotics over 18 months previously, and using a powdered probiotic I believed I could achieve a higher intake more easily. The gut bacteria recommended have an affinity for both the small (lactobacillus strains) and large intestine (bifidus strains).

First Supplement Programme – June 2014	
BioDoph-7 Plus (BRC)	3 with breakfast & dinner
BioBifidoBacT Powder (BRC)	½ tspn with breakfast & dinner
Aqueous Zinc (BRC)	10 ml with each meal
IPS Caps (BRC)	3 caps before each meal
Immuno-gG (BRC) (colostrum)	4 with breakfast & dinner

We agreed to meet 5 weeks later, to review whether the programme had conferred benefits to G.T.'s skin health. At the time, he was not too bothered about his gut health, but due to my emphasis on the connection, he became more aware of the importance of his GI symptoms and the rosacea.

We met, as planned, after G.T. had followed the programme for 5 weeks. He took all of the supplements as directed, and he had successfully avoided all gluten and dairy products. He also had cooked vegetables instead of raw veg. He drank more water and avoided coffee entirely.

He found the ability to follow a simple, guided meditative thought process was challenging, even though he recognised its value, and very much wanted to feel less anxious about his rosacea. G.T. had not been able to do this more than twice a week, instead of twice daily. I engaged him in some coaching for this, so he would be more able to put this into practice on his own.

Naturally enough, we started off the conversation in talking about his skin, and G.T. told me that he perceived a definite improvement in the rosacea and his chest rash. A 30% improvement was his estimate, and he was extremely pleased to have found that there was indeed something he could do to improve the rosacea, and he felt hopeful for the first time.

The rosacea had fluctuated from day to day and from time to time in a similar random pattern as before but the severity was lessened by about one third by the 4th and 5th week.

G.T.'s digestive system symptoms had improved by about twice as much as his skin had. The 60% improvement in gut discomfort, too loose stools, wind, bloating and so on occurred in the 2nd week. We discussed this and decided that the most likely reason was the exclusion diet, combined with the supplements.

I recommended that G.T. continue with the same diet which was being effective but amended his supplement programme. I rotated the probiotic bacteria and introduced an antioxidant product that supports glutathione

levels, to help address potential excess oxidative stress. The logic for this was the need to support G.T.'s antioxidant defences. I decided to stop the gut lining supportive supplements of IPS Caps (BRC) & Immuno-gG (BRC) because I believed that the exclusion diet had removed the major culprit foods that could aggravate the gut lining and the improvements that had occurred in the first weeks.

Second Supplement Programme – July 2014	
Lactobacillus P, R, S (ARG)	2 with breakfast & dinner
Thiodox (ARG)	1 with breakfast & dinner
Aqueous Zinc (BRC)	1 tbpsn with breakfast & dinner

We set the next appointment date for 9 weeks after the second appointment, in late September, in order to allow G.T. to make further improvements and consolidate the positive changes. However, due to his work commitments, it transpired that we met some weeks later than that, in October.

G.T. presented his face to me in that 3rd appointment and it was quite clear that his rosacea was considerably better. He was so much happier. He told me that he had had some mini flares but overall, the redness, inflamed-looking skin was about 70% less than it had been. His chest rash had reduced in similar fashion. He had been diligent in following the supplements, and had entirely avoided gluten, and dairy products.

His digestive symptoms were now about 80% improved from his original state.

We discussed what changes needed to be made to achieve a more complete resolution to his skin and the gut symptoms. This required a careful dietary analysis. We discovered that when he travelled, G.T. could not be 100% sure that he had avoided gluten when he was served food at a restaurant, and this may have tied in with the mini flares, but they were not immediate results. In addition, we revisited the calming meditative practice and we spent 4-5 minutes going through an example of this.

G.T. agreed that he would be diligent in his gluten avoidance and we also identified that he may react to garlic which he told me that he suspected could be involved in the aggravation of his rosacea, which was now very much less noticeable. Garlic was to be avoided entirely. He had been eating it every day.

The 3rd supplement programme included one of the original probiotic supplements and also included a butyric acid product in sustained release form, to support his gut lining and to reduce inflammation. I varied the zinc from a liquid form to an amino acid chelate tablet form; this is something which I have found can help others with skin conditions, and without anything other than clinical experience, I believe this is due to the fact that different forms of zinc may be required for optimal skin health. Zinc is also important for all healing of tissue within the body. We maintained the glutathione supplement as before.

Third Supplement Programme – October 2014	
BioDoph-7 Plus (BRC)	2 with breakfast & dinner
Thiodox (ARG)	1 with breakfast & dinner
Zn-Zyme (BRC)	1 with dinner
ButyrEn (ARG)	2 with lunch & dinner

We both wanted to ensure that this next phase was going to have a progressive improvement and so we agreed to meet the next month.

G.T. met me for the 4th time in November and he had made more progress. His stress and anxiety were less, even though they were on the threshold of being triggered if there was any sign of redness on his face. G.T. told me that he felt garlic exclusion had been a good thing. He also liked the butyric acid supplement and liked the supplement programme.

Overall, G.T.'s gut symptoms were 90% better and his skin was over 85% better at this stage. We discussed the importance of vascular health in rosacea, and I explained to G.T. what the research had to say about this, and I old G.T. about the foods that are rich in bioflavonoids that may be supportive of vascular tissues as well as providing anti-inflammatory effects. I added a grapeseed extract which provided proanthocyanidins which have been found to support vascular skin health.

It was recommended that G.T. take these supplements for two months, and we were to have a brief telephone follow up after 4 weeks.

Fourth Supplement Programme – November 2014	
BioDoph-7 Plus (BRC)	2 with breakfast & dinner
Zn-Zyme (BRC)	1 with dinner
Thiodox (ARG)	1 with breakfast & dinner
ButryEn (ARG)	2 with lunch & dinner
Bio-Cyanidins (BRC)	1 with breakfast & dinner

We spoke about 4 weeks later, and G.T. had fared well. His gut symptoms were still markedly less and his rosacea was not noticeable to anyone who did not know him well. There was a hint of redness but this was not obviously a sign of anything other than rude health. The Bio-Cyanidins appeared to have had a benefit, with the veins close to his nostrils diminishing from view almost entirely. However, this could also have been due to the ongoing gluten free diet and the other supplements combined with the reduced stress & anxiety.

We agreed to delay the next appointment until he needed to visit, and I stated that the intention would be to reduce the supplements if they were not needed. However, I strongly emphasised the need to keep off gluten and refined sugars.

Some months passed and I did not hear from G.T. which was a good sign that all was well. However, he contacted me in February 2015 to tell me that after having a few weeks when he had a single glass of wine that his skin had shown evidence of flaring up again. We met a few weeks later. G.T. had taken the supplements from November until February religiously. He had also been very strict about being GF but he could not swear that all of the food that he had eaten out, in restaurants had been GF, and there was a possible link with the mini flare up and eating out, as well as with the wine. He told me that he had been a little fed up with a few things in life, and unlike him, he had a single drink on several nights for a few weeks in a row.

I decided to shift the focus onto his liver, and recommended a glutathione support, a free form amino acid formula which supports all phase two pathways, and an anti-inflammatory tocotrienols formula (a formula which has been shown to help reverse fatty liver disease). We agreed that we would speak after 21 days on this programme.

I had come to know G.T. quite well now, and appreciated that he was a very sensitive man, and could quite easily be knocked, emotionally, and wondered about the influence of cortisol on his overall skin health. His digestive symptoms seemed to be well under control.

Fifth Supplement Programme – March 2015	
Thiodox (ARG) (glutathione support)	1 with breakfast & dinner
Bio-Cyanidins (BRC)	1 with breakfast & dinner
Free Aminos (ARG)	4 with breakfast & 4 with dinner
Tocomin SupraBio Tocotrienols (ARG)	1 with breakfast & dinner

About 4 weeks later we spoke, and the good news was the G.T.'s rosacea had disappeared again. We established that G.T. would contact me to make an appointment as needs dictated. I recommended he follow the same supplements for another month, and then to reduce the doses by half. He was abstaining from alcohol.

G.T. had cause to contact me some months later in October. This time, the trigger for his rosacea mini flare was stress. He had been working hard, but due to the business climate, things had not been going so well for his company, even though he was performing well himself. So, pressure was being brought to bear on him to increase his revenues which he felt was harsh given his performance. In this way, he felt unfairly pressured and also worked harder.

We spent some minutes going through the meditative practice, which he had slipped out of the habit of doing everyday, and I revisited his diet and emphasised the need to eat a protein food to support his body when under stress. I also prepared this specific programme designed to improve his stress tolerance. The Stabilium 200® has been shown to reduce anxiety and improve resilience, and is a supplement I have been using for over 15 years. It provides amino acids that support neurotransmitter balance and antioxidants which are believed to support oxygen tension in the body and contribute to an overall sense of improved resilience. The Bio-3B-G provides a low dose B vitamin formula, with 3 in their active forms, which supports the nervous system (physical structure) and energy production and supports neurotransmitter metabolism. The Zen supports healthy levels of GABA in the CNS and peripherally and helps reduce anxiety.

Sixth Supplement Programme – October 2015	
Stabilium 200® (ARG)	4 with breakfast
Bio-3B-G (BRC)	3 with each meal
Zen (ARG)	1 first thing, 1 mid-morning, 1 mid afternoon

20 days later, G.T. was feeling more in control and the rosacea had again disappeared. He had maintained his GF diet and had not had any alcohol. I directed G.T. to continue with the programme for another month as above, and then to consider alternate days and to observe how he felt, and if necessary to revert back to daily intake if need be.

G.T. contacted me about 3 months later in January 2016 and said that his skin had flared worse than for a year and this was after he had eaten out. He had loose stools and felt nauseous for days after that meal out. He had no idea what it might have been except that his guts and then his skin reacted badly.

I decided to use an oregano extract which inhibits a broad array of bacteria, yeasts & parasites, and is my favoured product for post-food-poisoning episodes. I also suggested adding liquid iodine topically to help as much as possible if there was a microbial involvement. I maintained the nervous system support B vitamin formula. I also added a phase two liver detox support for glucuronidation in this instance. I find that persistent support for the more well-known glutathione pathway does not always produce the desired results when supported on a singular basis.

Seventh Supplement Programme – January 2016	
Bio-3B-G (BRC)	3 with each meal
ADP Oregano (ARG)	3 with each meal
Liquid Iodine (BRC)	1 dropperful on cotton wool, applied topically twice daily
Ca-D-Glucarate (BRC)	1 with breakfast & dinner

G.T. reported back after a few weeks to report that his rosacea had gone again, that his gut symptoms had settled down and I suggested a reduced programme of the above, to stop the topical iodine but to maintain the B vitamin formula.

Supplement Information

A.D.P. Oregano (BRC)
This patented oregano extract is a very effective broad-spectrum anti-microbial, and is a product used in management of people with a variety of auto-immune conditions, in which there has been an infectious agent involved, with successful outcomes reported in the majority of patients.

Aqueous Multi-Plus (BRC)
A sweet-tasting liquid multi vit & min formula that provides reasonable levels of nutrients for a liquid multi, including 15 mg of zinc and 50 mcg of chromium.

Bio-3B-G (BRC)
A low dose B vitamin formula with 3 active B vits, which supports energy, neurotransmitter levels and functions and nervous system resilience.

Bio-BifidoBacT Powder (BRC)
A bifidus strain product that deliberately excludes all acidophilus or lactobacillus and provides cellulose as the prebiotic as opposed to inulin or chicory or FOS.

BioDoph-7 Plus® (BRC)
A mix of 7 strains of probiotics of the lactobacillus & bifido strains. In this case, the introduction of 10 strains of probiotics proved effective over and above the introduction of 1 strain. All of these have the potential to reduce inflammation.

Bio-Cyanidins (BRC)
Provides an excellent source of proanthocyanidins, with each tablet supplying 15 mg of Pycnogenol™ Pine Bark Extract and 35 mg of Grape Seed Extract (95% OPCs).

ButryEn (ARG) a concentrated source of the essential SCFA butyrin, which helps the immune cells preferentially express tolerance in the large intestine.

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 their metabolic breakdown of fibre, and appears to support mucosal integrity as the epithelial cells utilise it. Butyric acid 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.

Ca-D-Glucarate (BRC) - Provides the substrate for glucuronidation, which is one of the major Phase II hepatic detoxification pathways, which is involved in the elimination of hormones from the body including oestrogens.

Free Aminos (ARG)
A dairy free source of broad spectrum amino acids which support multiple functions in the body, including hepatic detox pathways and the provision of amino acid precursors for neurotransmitters.

Immuno-gG (BRC)
Colostrum has proven its worth in countless patients. It can help to reduce intestinal inflammation, to heal the gut lining and promote a stronger immune system. Colostrum is of importance in the majority of those patients seen with immune compromise of any kind.

I.P.S. Caps (BRC)
Provides key nutrients for the gut lining, including glutamine, glutathione, gamma-oryzanol, Jerusalem artichoke, Tillandsia & extract of lamb intestine.

Lactobacillus Plantarum, Rhamnosus, Salivarius (ARG) provides particularly hardy strains of lactobacilli that help to maintain a healthy intestinal microbiome balance. They support the structure and functional integrity of the epithelial lining in numerous ways & may enhance immune response and support resistance. They can also produce vitamins, enzymes, and organic acids that support normal intestinal pH and bacterial diversity.

Liquid Iodine (BRC)
Provides 75 mcg per drop. A dropperful contains 6 to 7 drops. It has anti-microbial properties which is the main reason for using it with G.T.

Stabilium (ARG)
Contains a high concentration of small peptides similar to pituitary and hypothalamic stimulating peptides which act as hormone precursors to neurotransmitters such as GABA, encephalins and endorphins which can all support the nervous system and help to adapt to stressful conditions. It has been used clinically to support 'get up and go', and is fine to take alongside anti-depressants.

Thiodox (ARG)
Supports a healthy liver detoxification, primarily phase II, provides antioxidant protection, supports a healthy immune function and production of glutathione, facilitates the production of cellular energy, enhances the effectiveness of other antioxidants. Provides NAC, glutathione, lipoic acid, selenium, riboflavin, thiamin & vitamin C.

Tocomin SupraBio Tocotrienols (ARG)
This product offers enhanced absorption of the 4 tocotrienols, which offer antioxidant support. They have been shown to have benefits in a number of different conditions from helping to prevent stroke to reducing a fatty liver, to lowering cholesterol and more. Do view this article (one of a number on the subject of tocotrienols) on Clinical education's website: Tocotrienols and their Benefits.

Zn-Zyme (BRC)
This simple zinc supplement of gluconate and citrate bound mineral provides 15 mg of elemental zinc.

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 strengths of this case are the detailed case history taking combined with a review of the research literature on the subject of rosacea, as well as the all-too-obvious understanding that G.T.'s gut health could readily affect his skin. The understanding of the triggers and the means by which to counter them resulted in a very positive outcome for this man, whose life had been transformed by the presence of rosacea.

It could be said that a limitation was the lack of hard evidence for the interventions, such as a gluten reactivity test, or a test for intestinal permeability, or a stool test to give a guide for the use of probiotics, or an adrenal test to inform us about his cortisol levels. However, these were always options should the recommendations not borne fruit.

It is recognised that multiple different supplements were used in this case, which requires a broader understanding of supplements and the roles they can play than is required in most cases. The ability to access these reflects the time dedicated to studying these supplements as well as having used them in clinical practice over many years.

The literature relevant to this case report
There is a mass of research on the subject of rosacea, with the more recent articles providing a useful overview of the issues involved, including those with which most NTs and functional medicine practitioners are familiar; namely, compromised gut lining, inflammation, food reactivity, gut microbiome, the use of bioflavanoid for vascular integrity. It did not take more than 20 minutes to get up to speed with these factors, which are almost exactly what may be expected with red, inflamed skin condition of any kind.

The rationale for your conclusions
The well understood connection between the gut and the skin, and then stress and the skin, and then food reactivity and the skin was reinforced by the literature review that was conducted shortly before first meeting G.T. Each step and series of recommendations appeared to be extremely logical at the time, and in hindsight.

The main findings of this case report: What are the take-away messages?
Whilst none of the research papers describes a single case as this, in the detail and with the interventions, it strikes me that the vast majority of NTs would have taken the same or very similar action to address this man's rosacea.

The logical connection between the gut and the skin, whether it is rosacea, acne, eczema or other skin rash condition, has been confirmed in this case.

In this particular case of rosacea, it is now clear that there were combined causes and triggers and therefore it may serve notice that it may be futile to try to find a single causative factor but rather one needs to appreciate multiple contributory factors and consequently multiple interventions, albeit that these interventions may not need to be implemented all at once.

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.

G.T. was naturally delighted with the outcome of resolving his rosacea. As the months passed and mini flares occurred, he learned to understand what caused it, how he could control them and we managed to find a solution to each of them, thereby putting him in control of the condition and his health. The locus of control also increases confidence and this reduces stress and anxiety.

Having had many conversations with G.T. over the 18 months that I have known him, I believe that he has forgotten that he had no idea that what he ate had no bearing on his rosacea. He has come a long way, and now appreciates that what he eats has a profound role to play in his rosacea, the way he thinks and handles stress also is a significant factor and with these new understandings, is in a robust state to prevent rosacea flares or deal with them if they arise.

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

The patient is not aware his case history is being used, and all identifiable data has been removed. G.T. are not his 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

4. Author. *Name of Author and practice*

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