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 Adult Acne Resolved with Nutritional Therapy

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 40 year old woman's adult acne with nutritional intervention.

Acne is an inflammatory disease of the sebaceous glands (oil producing) and hair follicles of the skin that is marked by the eruption of pimples or pustules, especially on the face. Acne is considered a normal response to abnormal levels of the male hormone testosterone. An increase in oil secretions may build up beneath a blocked pore, allowing bacteria (including Propionibacterium acnes and yeast) to increase in number and cause inflammation.

More than four out of five people between the ages of 12 and 24 develop acne at least once in their life. It usually affects individuals in puberty, but can affect people of any age.

Women may experience mild to moderate acne due to hormonal changes associated with feminine health issues, such as pregnancy, menstrual cycles, menopause, or starting/stopping birth control pills.

Risk factors for adult acne include hormonal activity, such as puberty, stress, overproduction of sebum (oil), accumulation of dead skin cells, buildup of bacteria in the pores. Skin irritation or scratching of any sort will activate inflammation. Friction or pressure on the skin caused by items such as telephones or cell phones, helmets, tight collars and backpacks. Certain medications can cause acne. Exposure to high levels of chlorine compounds, particularly chlorinated dioxins, may cause severe, long-lasting acne, known as chloracne.

Diagnosis: the appearances of skin lesions occur wherever there is numerous oil or sweat glands, mainly on the face, chest, and back. The typical acne lesions include comedones (whitehead, blackhead), papules (reddened, no pus), pustules (reddened, pus), nodules, and inflammatory cysts. These are the more inflamed form of pus-filled or reddish bumps, even boil-like tender swellings. Non-inflamed sebaceous cysts (also called epidermoid cysts) occur either in association with acne or alone but are not a constant feature. After resolution of acne lesions, prominent unsightly scars may remain.

Social complications and problems due to acne include social withdrawal, decreased self-esteem, reduced self-confidence, poor body image, embarrassment, feelings of depression, anger, preoccupation, frustration, and higher rate of unemployment.

Treatment: conventional acne treatments are based around reducing oil production, speeding up skin cell turnover, fighting bacterial infection or all three. Acne treatments may take four to eight weeks for results. Topical treatments and antibiotics are the typical conventional treatment, with tetracycline being the most widely prescribed antibiotic for acne.

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

Adult acne, boils, spots, insulin, carbohydrates, wheat, biotransformation, detoxification.

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

Mrs G.N. is a 40 year old mother of four with no history of acne or any other skin condition. GN had always prided herself on the fact that as she grew up she ate well and never had any trouble with spots and had unblemished skin.

She had had her first child when she was 20 years old, and her children were now 20, 18, 16 & 14 (three boys and a girl). In effect excluding the possibility that hormones associated with post-childbirth were related to her present health complaint.

Without any known reason why, two years prior, G.N. developed spots and acne on her face for the first time in her life.

She had tried different soaps and creams and had also taken antibiotics which had not worked and caused digestive problems; so only for 2 months. She was very frustrated and confused. Her acne was affecting her self-esteem and getting her down.

G.N. had also gained a stone of weight over the past 5 years.

G.N. had kept on trying to find an answer to her acne, hence her making an appointment for Nutritional Therapy.

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 G.N. works part-time and runs her busy household. She is 5 ft 2 tall and weighs 11 stone (157 cm, 68.45 kg). She is a Caucasian and lives in the south of England.

Through her 4 pregnancies and the hectic years of having 4 young kids she ate as well as she could and despite being exhausted for a number of years, she has since recovered and has been very well for some years.

There were two concerns that G.N. presented with. These were the acne and some weight gain but the former troubled her far more than the latter.

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.*

There was no family history of acne, although her boys and daughter had experienced some teenage acne but was unremarkable.

G.N.'s weight gain over the past five years of about one stone had occurred without G.N. understanding exactly why. She had not changed her diet as far as she knew, nor her lifestyle. She told me that perhaps she was less active than she had been in the past.

G.N.'s diet was wholesome with minimum refined food, she was not on any specific exclusion diet although she ate a minimal amount of wheat and gluten and dairy products and refined sugars.

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

Two years prior when the acne appeared, G.N. was aged 38, she had visited her G.P. who had suggested variously the pill (Dianette), then HRT, antibiotics and anti-depressants. The most recent suggestion was roacutane. The only drug that G.N. had taken was antibiotics, and this was for 2 months. This had caused digestive upset and not helped her skin at all so she stopped them. She realised that a longer time period may have been required but she was not prepared to put up with the digestive soreness and constipation.

She had facial spots on her chin and jaw line mainly but some on her cheeks as well. By the end of the course of antibiotics she had been experiencing her acne for about 6 months. The spots on her jaw line had developed into hard lumps and were boil like and painful to touch.

G.N. had not undertaken any specific dietary strategies to address the acne, since she had not perceived there to be any connection between the two.

We met on a total of three occasions: the first appointment, then six weeks later, and then a further six weeks after that.

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*.

Two years ago, G.N.'s local G.P. had conducted a standard blood test of CBC (complete blood count) and haematology, but this revealed nothing out of the range, including anaemia. No other tests were conducted.

G.N. would have taken any other test that was recommended to her but instead of tests the G.P. had recommended a series of drug interventions which she had not felt were appropriate and she was not inclined to simply take drugs to see if they worked without very good justification.

Since G.N. had not wanted to follow the G.P.'s drug recommendations in full the G.P. had told her that the acne should disappear in time and that G.N. should be patient and use sensible skin hygiene.

G.N.'s nutritionally related questionnaires revealed some digestive symptoms (but this was over a year since the antibiotics, and they were different symptoms than those caused by the antibiotics), some symptoms of adrenal stress, a potential for under-active thyroid in terms of a handful of symptoms, but her female cycle was regular. There was no sign of any peri-menopausal symptoms. The spots and boil-like hard lumps on her jaw-line remained the whole time and worsened premenstrually.

It was not straightforward to pinpoint with the case history notes and the onset of her acne as to what was the cause, although the digestive and adrenal and potentially thyroid hormones were the only indicated potential imbalances in the forms. From a case history perspective, that she had gained some weight prompted the consideration that there may be excessive insulin involved, especially since this is also connected with acne.

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).*

The initial Nutritional Therapy strategy was to support G.N.'s digestive function and general detoxification, and to reduce the stimulation of insulin. No other lab tests were recommended. The specifics of the nutritional programme are detailed below.

In addition to the supplements, it was recommended that G.N. avoid wheat entirely and replace with GF oats, rice and gluten free options. In addition, it was recommended for her to reduce carbohydrate intake by about 40%. The intention behind this was to reduce the stimulation of insulin on the one hand, and on the other reduce the main food substrate for bacteria and yeast in her gut. One of the quickest ways by which to alter gut bacteria is to change one's diet and in particular to reduce refined dietary carbohydrates.

The antibiotics that G.N. had taken did not appear to have caused a yeast overgrowth or thrush but this was a consideration.

G.N. ate well anyway, so the shift in her emphasis was relatively straightforward for her. She was very familiar with the macro-nutrients (i.e. fats, proteins, carbs) and what food contained them.

The change in diet for her meant that she moved onto consuming more protein and more fat than previously to make up for the reduction in carbs. She continued to eat fish, eggs, and lean meats. She also ate more vegetables and continued to snack on nuts and seeds but there was no daily pattern to her snacks. She did not suffer from any specific dips in energy in the day that demanded she eat something to feel better. The net effect was that she overall ate fewer calories than she had been eating. Her caffeine intake was restricted to one cup before 11 am, although we did discuss the potential need to stop caffeine altogether. (As I write this case report, I admit that I now question whether it would have been best to avoid all caffeine completely, although her withdrawal headache from the reduction of caffeinated drinks may have been worse if avoided entirely).

The supplement programme to support her digestion, improve her resilience and mood, and support her overall detoxification (phase one and two hepatic pathways) and to provide broad-spectrum nourishment is shown below.

First supplement programme	Dosage
NutriClear Powder (BRC)	2 scoops with breakfast – mixed in almond milk
G I Flora (ARG)	2 with each meal

Betaine Plus HP (BRC)	1 with lunch & 1 with dinner
Stabilium (ARG)	4 with breakfast

G.N. followed the programme for 6 weeks before her first follow up appointment. We arranged a brief conversation after 14 days, and brief email updates at days 21 and day 30.

G.N. reported some headaches in the first two weeks, which we believed were related to her reduction in caffeine – from 2-4 cups a day to 1.

She also reported that she gained weight at first, which felt like water weight, which also coincided with the week before her period. Her skin made no improvements at all in the first two weeks.

After 14 days, however, things began to change. When we met after six weeks, she told me she spent two days on the loo, urinating non-stop. She not only lost water weight but also some fat weight over the month and a half.

Her skin did not change by day 21. By day 30, she said that no new spots were appearing, as they typically would have done.

At 40 days into the programme, there was a distinct improvement in her skin, and it was "glowing" like it had in the past. No new spots were forming, but there were still some hard, lumpy boil-like spots along her jaw-line, which she worried at with her fingers.

She had lost 8 lbs in weight in the six weeks.

The second supplement programme included the very same supplements but at a reduced dose.

Second supplement programme	Dosage
NutriClear Powder (BRC)	1 scoop with breakfast – mixed in almond milk
G I Flora (ARG)	2 with dinner
Betaine Plus HP (BRC)	1 with lunch & 1 with dinner
Stabilium (ARG)	2 with breakfast

G.N. followed the programme and continued to witness improvements in her skin, in that no new spots formed and most excitingly for her, during the PMT week when they usually appeared, angry and red. The hard lumps had diminished in size and for the first time in months, she needed no or less make-up (which was probably also good for her skin anyway).

At the second follow up appointment, six weeks after the previous appointment, G.N. was much happier than she had been in two years, she told me. Although her life was good, with no particular stresses, the facial spots had made a significant dent into her overall sense of well-being.

She had now lost 12 lbs, weighing 10 stone 2 lbs. Her facial skin was noticeably improved, with only a residue of under-the-skin lumps on her jaw line.

She wanted to know how long she should follow the supplements, and I described a graded reduction in the programme to her to follow, so that she could be in charge of the dosing. If the skin worsened, she could always resume a higher dose. She, as with most patients, felt comfortable with this sense of control.

So that she would forever understand what had happened within her body, I reminded her how much the reduced carbs and likely reduced insulin production played a role in her improved skin and weight loss. Insulin the most pro-inflammatory hormone in the body, which can also upset the metabolism of other hormones.

Maintenance supplement programme	Dosage
NutriClear Powder (BRC)	1 scoop with breakfast – 3-4 days a week
G I Flora (ARG)	2 with dinner – 3-4 days a week
Betaine Plus HP (BRC)	1 with larger meals or at weekends
Stabilium (ARG)	2 with breakfast – 3-4 days a week

G.N. continues to follow the revised eating plan, avoiding wheat and with a lowered carb intake, and takes a further reduced dose of the supplements.

Supplement Information

NutriClear Powder (BRC) – is a multi vitamin and mineral with protein and some carbs specifically designed to support detoxification pathways which exist primarily in the gut and liver. It contains 160 calories per 2 scoops which typically means reducing the size of the meal at which it is taken for most patients. The protein is derived from rice.

GI Flora (ARG) – a relatively low dose probiotic, that is dairy free. It contains 4 strains: lactobacillus casei 1.6 billion, lactobacillus rhamnosus 1.6 billion, lactobacillus acidophilus 0.4 billion, bifidobacterium longum 0.4 billion. The intention is to rotate the probiotics for G.N. as with most patients, and I would consider using Lactobacillus GG (ARG), Lactobacillus Plantarum Rhamnosus Salivarius (AR), & BioDoph-7 Plus (BRC) in due course.

Betaine Plus HP (BRC) – with 700 mg of HCl, it is a higher dose product that I have found works most effectively in restoring stomach function. It is just as well tolerated as the lower dose products. In many cases, a Gastro-Test is worthwhile undertaking prior to using HCl acid supplements.

Stabilium (ARG) – a traditional Gallic remedy derived from the fish Garum Armoricum. Has been found to reduce anxiety, improve sleep and generally improve resilience.

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 success of the case highlights the value of taking a detailed case history in which the pertinent potential aspects of this woman's health were at least highlighted.

Given the likely involvement of insulin levels and other hormones including androgens and testosterone and its metabolites, it may have been ideal to have conducted testing to verify imbalances within these hormonal biomarkers. After the improvements, a re-test could have been very confirming and validated the precise mechanisms by which the acne was resolved.

At the same time, testing her cortisol, DHEA and thyroid hormones may also have had a validity. In this way, given the cost, effort and time in conducting these tests, it may be seen a strength of the case that these were not needed for a positive outcome to be achieved.

The literature relevant to this case report
There is much literature on the underlying hormonal imbalances as a contributory factor for adult acne. There is less literature on the role of hepatic detoxification and its involvement in acne, although this is much appreciated by complementary medical disciplines including Nutritional Therapy, Naturopathy, Herbal Medicine, Ayurvedic and Traditional Chinese Medicine.

The rationale for your conclusions
The detailed questionnaires provided clues as to what imbalances may have been contributory to this woman's acne. The writer's awareness of the role of insulin, having written a book on the subject, and its impact on acne helped to confirm the need to support a reduced stimulation within the body.

The main findings of this case report: What are the take-away messages?
It is likely that G.N.'s insulin levels were lowered with this nutritional approach, although these were not measured. This would have benefited almost every aspect of her health; her ability to conduct the daily metabolic biotransformation processes within her body improved; her gut bacteria would have improved from the reduced carbs and the G I Flora would have helped reduce GI inflammation too. The HCl Acid may have contributed to improved protein digestion and diminished absorption of longer-chain peptides with potential antigenic effect. The Stabilium may well have helped improve her anxiety and resilience.

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.N. expressed her delight at having a clear skin on her face, and regretted not seeking professional Nutritional Therapy advice sooner. However, this is easier said than done, given how busy her life was and is and without the knowledge that such intervention would work.

That she lost virtually all of the weight that she had gained over the past five years was a bonus and she "felt lighter in every way", she declared.

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. G.N. 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?*

Virtually all patient data has been re-identified.

4. Author. *Name of Author and practice*

Antony Haynes is Registered Nutritional Therapist, and works from his clinic in London W1