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 an 18 year old school girl who suffered from migraines, strong headaches, acne, tense shoulders, back pain, depression & anxiety, fatigue, irregular cycle, painful periods since she was 13 years old - resolves with NT, in remarkably quick order.

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 a cluster of related symptoms and signs in an 18 year old school girl, D.R. She had experienced the majority of her very uncomfortable symptoms and signs for the past 4 years but some of them had been present for longer, as will be described. The most extreme of her symptoms were the painful headaches and migraines suffered for the past 4 years. They frequently completely incapacitated her, requiring her to retire to her bedroom, with eyes closed, sometimes behind dark glasses. Pain killers were ineffective, making other symptoms worse, so none were taken.

Migraine is the most common neurological condition in the developed world. It is more prevalent than diabetes, epilepsy and asthma combined with eight million people in the UK suffering from migraine. In the USA it is estimated that 18% of the females and 6% of the males who experience migraines, whereas the percentages in the UK are 18% of females and 8% of males. Children also experience migraine attacks. Attacks can start at any age, but they usually start in children in their early to mid teens.

Severe migraine attacks are classified by the World Health Organisation as among the most disabling illnesses, comparable to dementia, quadriplegia and active psychosis. In 2003, it was estimated that there were in the UK, an estimated 190,000 migraine attacks every day. Depression is three times more common in people with migraine or severe headaches than in healthy individuals.

There are multiple different causes to migraines and therefore potentially many different means by which to treat them. This ranges from pain-killers which simply suppress the pain without addressing the underlying cause, which is useful if the underlying cause is not known. There are structural means by which to support a migraineur such as cranial osteopathy, osteopathy, and chiropractic treatment. Acupuncture, massage, reflexology and nutritional intervention have also been shown, at least anecdotally to help reduce migraine frequency and intensity.

Other means which have been used to help alleviate migraine include electromyelogram biofeedback, relaxation training, and thermal biofeedback combined with relaxation training, hypnosis, occlusal adjustment, occlusal appliances, and TENS machines.

There is even anecdotal evidence of an energised device (this aspect is patented) which is comprised of two sheets stuck together called an expanded polytetrafluoroethylene sheet (ePTFE) adhered to a neoprene sheet measuring 3 inches by 4 inches placed against the skin. It imparts an energy which helps reduce migraines, and has been shown anecdotally to be effective.

The main lesson from this case report is that the case history led to suspicions which were born out by lab testing and the lab testing steered the nutritional intervention (in this case supplementation) and the nutritional intervention resulted in one of the more remarkable changes in someone's health that I have observed in my 23 years of practice.

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

Migraines, headaches, acne, PCOS, depression, anxiety, pain, back pain, fatigue, HHV-6, zinc.

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

Miss D.R. was 18 years old when we first met, and as this is being written, she has now had her 19th birthday. For four + years, since the age of 14, D.R. has been suffering with profound migraines and strong headaches, which she can distinguish, and has been to see her GP and other doctors over time and taken many different types of pain-killing drugs but nothing had worked. She has not been able to attend school at these times. D.R. usually wakes up with a headache which can then turn into a migraine, or it may not. Either way, she has awoken with a headache most days for the past 3 years.

For some years before the emergence of her neurological symptoms, D.R. experienced depression and anxiety of which there is a family history. Her father has also suffered from migraines in his lifetime.

The severity of the headaches and migraines is almost always worse premenstrually and during her periods, which are now heavy and painful. Marked tension in her shoulders then leads to the strength of the headache but this is not specifically linked to the migraines themselves. D.R. experiences deep fatigue at the times she has strong headaches and migraines, to such an extent that she simply cannot open her eyes.

D.R. had been diagnosed with PCOS very soon after menarche, aged 12 years, although soon after that she had no cycle for two years until she was 14. She was quite ill during this two year period of time. The headaches and migraines occurred once her periods restarted.

As a small child, D.R. had been quite unwell with recurrent chest infections and a failure to thrive and fared much better, relatively speaking, when cow's milk was removed from her diet. D.R.'s mother told me that there was, however, almost always something wrong with her. Nonetheless, D.R. is an intelligent girl who has applied herself well to her work and considering her health and what she has missed, has performed very well indeed.

D.R. and her mother are aware of how food can affect all aspects of health and she had already cut out dairy products including chocolate, cheese and all citrus fruit too.

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.*

D.R. is a caucasian, English teenager living in north London with her mother and one of her two brothers. She is in her final year of school. Her eldest brother has left home now. D.R.'s presenting concerns are succinctly reflected by the health goals we established at the outset of the first consultation.

1. To be free of migraines & headaches
2. To identify why I get them (the migraines)
3. To be free from muscular tension in back and neck
4. To have female hormone balance & be free of PCOS
5. To have a regular cycle and pain free periods
6. To be free of bloating, cramps and nausea
7. To have a strong immune system and not get infections
8. To have great energy all day
9. To be in good mood & free of inappropriate anxiety
10. To not need drugs

On the Nutritional Assessment Questionnaire, she scored relatively highly in those sections which related to her digestive system symptoms, her vitamin and mineral needs sections, her liver, and her adrenal and her female hormone sections.

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.*

Miss D.R. is the youngest of three children, and is now 19 years old but was 18 when we first met. She has two older brothers, one of whom still lives at home along with their mother. D.R. is 5 foot 7 inches tall (170.18 cm) and weighs 8 stone 7 lbs (52.89 kg). Her mother is fit & well, and her father, who lives relatively close by, has suffered from migraines in the past as well as having TIAs (transient ischaemic attacks) more recently. Her aunt was diagnosed with PCOS. There is a family history of depression and anxiety.

Miss D.R. was unwell as a small child and had a failure to thrive, frequent infections and was quite sickly until she avoided all cow's products at which time she fared much better, but this was a relative improvement only. She still had a poor appetite and was quite skinny as a child even after that. She had her appendix out at 9 ½ years old.

D.R.'s cycle started at 12 years of age and was irregular from the start but then stopped for two years and she was quite ill over this time, with a high risk of infections. She went through the stress of her parents' divorce when she was 12 which may have added to the factors that resulted in a hiatus in her cycle from manifesting.

At 14 her menses re-started and she had painful periods and an irregular cycle. This was when the tension headaches started, upon awakening, and the migraines also started at this time. The headaches did not always turn into migraines. She was not able to tolerate the OCP which was tried as a means of regulating her cycle. She suffered from kidney and liver pains when she took drugs of different kinds. She experienced profound fatigue with the headaches and migraines and simply could not open her eyes and could not speak or utter a word. It was an abnormal kind of fatigue. As far as her mother can recall, anaemia was ruled out in the GP's blood tests.

At 15 years of age, she was diagnosed by her doctor with glandular fever and this was in the midst of frequent infections. This was based on symptoms rather than blood tests.

At 16, after enduring headaches on a daily basis and migraines on a weekly basis, D.R. had severe lower abdominal pain. After being admitted to hospital it was discovered that an ovarian cyst had burst. The diagnosis of PCOS had been made earlier and was confirmed at this time. D.R. also began to have bad acne at this time. During her periods she had marked cramps, bloating and nausea, which was made worse if she ate poorly (i.e. refined, processed foods).

D.R. missed school on the days she had migraines, but attended school when she had headaches.

As part of the search for the causative factors in her poor health, her mother and family had scoured their history for any evidence that they could find. The pregnancy with D.R. has been a good one, her mother told me. She also told me that up until the age of 10 years of age, the farmers sprayed the nearby fields twice a year and she remembers being able to smell distinctly the chemicals (insecticides) as they drifted over from the fields to their house. No one else in the area whom they knew suffered with health issues, however, so they could not find a trend in poor health in the local area.

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

D.R. was born in 1996. She was quite small as a baby and had very dry skin. She was breast fed for 9 months. She had a failure to thrive for a number of years and at 4 years of age, in 2000, it was discovered that cow's milk and cow's products contributed to her illnesses and chest infections, since when they were stopped D.R.'s health improved noticeably.

However, even at the tender age of 8, in 2004, D.R. displayed symptoms of anxiety and depression. She was also quite skinny throughout her childhood.

In 2005, D.R. had her appendix out and seemed to be more likely to catch infections than her brothers or her classmates.

At 12 years old, in 2008, her cycle started and it was irregular from the outset and at this time her parents went through their divorce. At this time, D.R.'s periods stopped for 2 years and she suffered with illness frequently over this time.

In 2010, aged 14, D.R.'s periods re-commenced and they were very painful and the cycle was irregular. She was diagnosed with PCOS previously and this was re-confirmed more than once. Interestingly, whilst her periods were absent, in 2009, D.R. experienced what was diagnosed as being a burst ovarian cyst and was hospitalised for a number of days at this time. Her face became ever denser with spots from 2009 onwards.

From 2010, it appeared that there was almost always something wrong with D.R. and she had not ever had a sustained period of time during which she has felt or been well.

From before the age of 10, before 2006, D.R. had experienced undue anxiety and depression, and this persisted to the current day, although perhaps the enduring experience of being in such pain on a daily basis for years is a ready explanation for this.

When we met for the first time, D.R. was experiencing a migraine and she wore big dark glasses and a hoodie drawn over her head and she could not speak and I conversed solely with her mother. D.R.'s head was bowed throughout the hour appointment. Therefore, I did not even get to see her face during this first meeting.

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*.

D.R. had been taken to her GP and other doctors at the local hospital on numerous occasions. It was quickly established that she could not tolerate pain killers or other drugs and she and her mother were told that they (the doctors) did not know what to do for her. She'd had the diagnosis of PCOS but could not take the OCP nor mefanamic acid to reduce the pain of the periods.

Acupuncture had not helped, nor had chiropractic treatment helped.

D.R.'s poor health dominated her mother's emotional world, but by the time we met, it was something she was used to her mother told me but this did not, of course, stop her from wanting every day to be able to do something to change the landscape of her daughter's health.

It was via her own chiropractor that she was referred to me. I had worked 20 years ago with this chiropractor in north London and more recently helped her own 19 year old daughter with her own health issues.

I carefully read the questionnaires, took the case history, listening out for all and any clues as to what may be a point of intervention or nutritional change. D.R.'s mother had completed the detailed questionnaires for me, and she told me verbally how aware they all were in her family about food, and how cow's products had been avoided for many years, and although she was aware of the possible connection of wheat and gluten with a variety of health issues, these foods were not avoided at this time. Years ago, a trial elimination had been conducted but had not made a difference to any symptoms so this meant that the effort to avoid it (the wheat & gluten) was not rewarded with any health improvement.

A number of blood tests had been conducted by the doctor in the past but there were no abnormalities that showed up in these tests.

D.R. had suffered from repeated infections almost throughout her entire life, reflecting a long-term immune compromise. This could be reflected by the presence of a chronic, hidden (or at least not yet diagnosed) viral infection, something I am finding more and more in clinical practice, especially in complex cases where there is no known underlying cause of the poor health. Her acne (and immune dysfunction) reflected not only hormonal imbalance but also a likely lack of zinc and vitamin A, and her blood glucose and fatigue highlighted poor glycaemic control which could also be linked to ineffective insulin, a zinc polypeptide. The muscle tension and headaches pointed to inflammation and since these were definitely at their worst premenstrually and during her periods, I suspected that her liver's clearance of oestrogen metabolites was less than ideal. If there had been a burden of toxins from the farmer's spraying then this may have contributed in her ability to tolerate environmental toxins and therefore diminish the efficacy of her hepatic biotransformation pathways of which glucuronidation is the most abundant. The inability to tolerate drugs could also be a reflection of compromised glucuronidation.

I recommended that D.R. have a mineral check done to rule out a lack of zinc in particular, and a viral antibody test done to rule out the presence of HHV-6 and EBV which I suspected from her health profile. I expressed my suspicions to D.R.'s mother and she was very willing to engage in any testing which showed something out of balance which could be contributing to her headaches, migraines, back pain, trapezius tension, depression, anxiety, acne, fatigue and so on. There is a liver detoxification profile test for glucuronidation and this was something I considered. However, in previous cases it had not come back as imbalanced in spite of the expectation so it was not a test that I was confident was worth the investment in determining if it would show an imbalance in spite of the potential need for glucuronidation support.

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 tests were undertaken at once and we were able to meet two weeks to the day from our first appointment. This time, D.R. was able to speak and I saw her face for the first time. She had a headache but not a migraine. She evidently had acne on her face. In spite of the relatively decreased symptoms, most of the conversation was with her mother as before.

The viral antibody test was positive to HHV-6 antibodies above the reference range (IgG, by EIA testing). The mineral test showed that she was very low in the range for zinc, and below the range in copper.

The theory was that a virus had been persistent in under-mining her immune system, contributed to inflammation in her liver via one mechanism or another including impaired hepatic bioremediation and that this led to the headaches and migraines. The low zinc could have contributed in many different ways to poor immunity, mood and acne. This theory was at least supported by lab evidence, and was the first theory that D.R.'s mother had heard in years that made any sense. In addition, the poor tolerance of drugs (the OCP, mefanamic acid and pain killers) also pointed to a compromised glucuronidation pathway and subsequent excess systemic cytokines.

The first supplement programme that was recommended was limited to four items as shown here. It included a natural anti-viral, zinc at 15 mg only, a formula to support bowel motility and to bind to toxins in her gut to help her eliminations, and a glucuronidation detoxification / biotransformation support substrate supplement (Ca-D-Glucarate) a derivative of cruciferous vegetables known to enhance bioremediation of hormones and other metabolites.

First Supplement Programme	
Zn-Zyme (BRC)	1 with dinner
Humic Acid (ARG)	1 with breakfast
Colon Cleanze (ARG)	2 with each meal
Ca-D-Glucarate (BRC)	1 with breakfast & 1 with dinner

The intention was to address the low copper at the next appointment, and I told D.R. and her mother of this intention. I did not consider that the low copper was worthy of immediate correction and since copper and zinc are antagonistic I did not want to inhibit a restoration of her zinc levels with the addition of a copper supplement.

At the time, I stated that I did not know when or if this programme would make a difference to D.R.'s health, but at least there was evidence in the form of lab tests and logic to proceed with some form of intervention. I asked D.R.'s mother to inform me of any changes in her daughter's health, whenever that may be, and for us to be in touch in terms of a follow up appointment.

I impressed on the mother and D.R., as much as she was able to concentrate and take it in when we met for the second time, the importance of eating whole fresh food, no refined or processed food and no sugar and no cow's products as usual, and lots of vegetables (esp. cruciferous ones), but also protein at each meal in order to support her blood glucose balance and provide sufficient protein to the multiples tasks it has within the body.

Therefore, I admit that I was very surprised to receive a text four days later telling me that D.R. had woken up for the first time in "ages" without a headache. 10 days later another text confirmed that this improvement had persisted; no headaches or migraines since day 4 of the programme. After 21 days there was solid evidence of improved mood, energy and clearer skin, which had begun from the very start of the programme but which had manifested more obviously after 3 weeks. After 28 days, all of these improvements persisted. It was 'incredible', declared her mother in our communications. After 35 days (5 weeks) her mood and energy were so improved it was noticeable to everyone who knew her. After 42 days (6 weeks) she was a different person entirely and had not had a migraine since the start of the programme, nor a headache. Her tense shoulders, back pain, poor skin, poor mood and so on had all improved dramatically.

D.R. now had the ability to attend an interview to university, something she would simply not have been able to do previously. She went to the interview, she gave it her best. After a week or so of waiting she then learned that she had obtained a place at her university of choice, something the whole family had never imagined would have been possible just weeks beforehand.

Every day, D.R. took the four supplements and every day she was feeling well and better and better. She awoke without a headache and was thriving in a way her mother had never seen before. This was truly stunning, she told me.

There has been no follow up appointment and we have met just the twice, but there is a plan to have one in the coming months. D.R. has fared so well there has been no apparent need.

It is hoped that D.R. continues to lead a life free from debilitating discomfort in the varied forms which she had experienced, and that the focus of her mother's life in particular can be free to dwell on the everyday and ordinary things that other mothers think about and not on the daily pain of her daughter, and that her brothers can have a sister who is leading her life and fulfilling her creative potential.

However, we will revert for Chapter Two in the coming year for an update on how she fares.

Supplement Information

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

Humic Acid (ARG)
A natural soil-based anti-viral agent, that adheres to a wide array of viruses. Humic acids are the organic components of soil, peats, brown coals, shales, and lake sediments, formed from decomposed plant material.

Humic acid can bind to cell surfaces with no adverse effects on the cell itself or on cell growth, and can support normal, healthy resistance and immune response. In clinical terms, humic acid can bind to viruses and inhibit their replication, which results in enhancing the body's natural anti-viral activity.

Colon Cleanze (ARG)
Provides Perilla seed extract which is proven to reduce symptoms of IBS, and supports optimal motility, and is combined with synergistic ingredients that support gut health and a healthy elimination of potentially inflammatory substances from the gut.

Ca-D-Glucarate (BRC)
Contains the substrate for glucuronidation, the most abundant of the Phase 2 liver conjugation pathways, providing 500mg per capsule.

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 from birth, and during the childhood and then the teenage years of this girl was so important in this case because it gave me the information that helped to explain possible underlying causes of her headaches and migraines. There are so many potential causes it is almost impossible to know from the simple presence of these symptoms what might be involved, and often there are variable synergistic underlying imbalances.

The clinical experience I have had as a practitioner, especially with chronic and previously hidden viral infections was also of vital use in this case. Also, the familiarity with what may be occurring in the liver if there is poor tolerance of drugs was useful.

The literature relevant to this case report
The literature that is relevant to this case is not something that lent to the positive outcome. In the past I have read numerous research papers on the subject of migraine, having suffered myself in the past, but unless there is a targeted focus, there would be too many possible avenues to explore and experiment with that it would be untenable to engage in many.

The rationale for your conclusions
The detailed case history led me to have suspicions about a chronic hidden virus and its impact in this girl's body and in particular in its contribution to inflammation which was a major contributory factor in the morning headaches and migraines. Zinc insufficiency was prompted by the fact that she had had bad acne for some years, but also fit with the picture of poor energy and blood glucose instability which could have been related to insulin function. Zinc insufficiency is also something that may be present in those with PCOS.

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

As has already been identified, it is the detail of the case history, the timing of onset of the headaches and migraines, the long term immune weakness (including poor maturation of the mucosal immune tissues in the gut and possible related barrier issues), the exacerbation of symptoms premenstrually and during her periods that led to my consideration of the chronic viral infection, the inadequate zinc status and its importance, as

well as a potential inadequacy of the glucuronidation pathway which was prompted not only by the female hormone cycle mediated symptoms but also by D.R.'s inability to tolerate any medications.

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.

D.R.'s mother has been the person with whom I have communicated and she has relayed statements from her daughter to me by email and texts too. Here are some direct quotes:

"D.R. is absolutely thriving and so happy to be pain free! It's wonderful to see!" (28 days in)
And
(21 days in)

"She's feeling so much better, it's truly incredible. She hasn't had a migraine since treatment started … her back pain has almost disappeared … her complexion is clearing up and her depression gone … she went for her interview … and heard last Thursday that she has been offered a place for September, an outcome which seemed impossible a few months ago."

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. D.R. 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

4. Author. *Name of Author and practice*

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