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 42 year old woman with Ankylosing Spondylitis & Iritis that responded very well to Nutritional Therapy intervention.

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 ankylosing spondylitis and iritis in a mother of two children, aged 42.

Ankylosing spondylitis (A.S.) is a type of arthritis that affects the spine, with symptoms that include pain and stiffness from the neck down to the lower back. A.S. is a form of chronic inflammation of the spine and the sacroiliac joints. The vertebrae may grow or fuse together, resulting in a rigid spine. These changes may be mild or severe and may lead to a stooped-over posture. A.S. is also a systemic disease.

Ankylosing spondylitis shares many features with several other arthritis conditions, such as psoriatic arthritis, reactive arthritis, and arthritis associated with Crohn's disease and ulcerative colitis. Each of these arthritic conditions can cause disease and inflammation in the spine, other joints, eyes, skin, mouth, and various organs. In view of their similarities and tendency to cause inflammation of the spine, these conditions are collectively referred to as "spondyloarthropathies."

A.S. is two to three times more common in males than in females. In women, joints away from the spine are more frequently affected than in men. Ankylosing spondylitis affects all age groups, including children. The most common age of onset of symptoms is in the second and third decades of life.

In a 2014 review of the prevalence of A.S. globally, Oxford based researchers identified that the mean A.S. prevalence per 10,000 (from 36 eligible studies) was 23.8 in Europe, 16.7 in Asia, 31.9 in North America, 10.2 in Latin America and 7.4 in Africa. Additional estimates, weighted by study size, were calculated as 18.6, 18.0 and 12.2 for Europe, Asia and Latin America, respectively. There were sufficient studies to estimate the number of cases in Europe and Asia, calculated to be 1.30-1.56 million and 4.63-4.98 million, respectively. The condition is linked to the gene HLA-B27.

Human Leukocyte Antigen HLA-B27 is a class I surface antigen encoded by the B locus in the major histocompatibility complex (MHC) on chromosome 6 and presents antigenic peptides (derived from self and

non-self antigens) to T cells. HLA-B27 is strongly associated with A.S., and other associated inflammatory diseases referred to as "spondyloarthropathies".

There is a connection with a gut bacteria called Klebsiella pneumoniae, in those who have HLA-B27, as a contributory factor in A.S.

Medical treatment involves the use of nonsteroidal anti-inflammatory drugs (NSAIDs), such as naproxen (Naprosyn) and indomethacin (Indocin), which are the medications most commonly used to treat A.S.

Iritis is inflammation of the coloured part of the eye, causing painful, aching eyes and blurred vision. Iritis may due to an injury, infections or conditions such as arthritis, including A.S., so it is not surprising for an individual to have iritis alongside A.S. In fact, iritis is frequently associated with certain diseases, such as ankylosing spondylitis, Reiter syndrome, sarcoidosis, inflammatory bowel disease, and psoriasis.

Treatment of iritis includes the use of a drug (in the form of eyedrops) to dilate (widen) the pupil and to prevent spasm of the iris muscles so that the inflamed iris can rest. This allows for healing and helps decrease the eye pain.

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

Ankylosing spondylitis, HLA-B27, iritis, back pain, pain-killers, inflammation, Klebsiella pneumoniae

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

Mrs B.R. presented with back pain that had troubled her for at least two years before we met. The discomfort was affecting her more and more to the extent that it was the most distressing experience of her life. She resorted to pain-killers every day in order to function.

Shortly before we met, B.R. was diagnosed with iritis, which is a relatively common association in those with A.S.

B.R. did not want to be reliant on pain-killers which she understood had negative effects in the body, and was seeking a complementary approach to her condition. Importantly, she recognised her condition was having a detrimental impact on the way in which she could look after her two children and this generated a pressing need to try and address her condition in a different way other than simply taking NSAIDs.

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.*

B.R. is a Caucasian 42 year old mother of two children living in the south east of England. She is 5 foot 6 tall, and weighs 10 stone 7 lbs (168 cm, 65.3 kg). She is a full time mother and housewife.

B.R.'s presenting symptoms were: persistent back pain which meant it was difficult to get out of bed in the morning. She had back pain all day, to one degree or another. Iritis which was not too uncomfortable, and in itself it would not have been something for which she would have visited her GP, but when she told him about a sore eye that she had, he had referred her to the rheumatologist who then made the diagnosis and prescribed eye drops.

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.*

Neither of B.R.'s parents had arthritis, they were fit, well and in their mid-seventies. There was some heart disease in the family tree. Her brothers were close in age to her and they were in good health with no diagnosed condition or signs or symptoms.

B.R. told me that if there had been arthritis in her family she is sure that she would have taken her complaint of a sore and stiff back to the GP some time before she actually did.

Two years prior she had been diagnosed with degenerative discs at L4 and L5, but the pain was not isolated to her lower back, it also affected her thoracic area. She had suffered from hip pain and needed an epidural to reduce the pain. Her back pain was a challenge to deal with and she had received steroid injections and tried a variety of pain-killing medication which included diclofenac, cocodamol & tramadol. Nothing had really worked, and B.R. lived in persistent pain.

She had persisted with visits to her GP and had already seen a number of rheumatologists who had recommended a variety of pain killers. It seems that the earlier diagnosis of degenerative discs had stuck and this was the sole explanation for her discomfort. However, she then visited a neurologist, some 7 weeks before the nutrition appointment, and it was this specialist who recommended a radioactive P.E.T. scan and X-ray. He then referred her to another rheumatologist who diagnosed her with Ankylosing Spondylitis (A.S.). There was significant inflammation present in her back and she was recommended yet more NSAIDs.

B.R.'s husband was greatly concerned for her, and when the medical intervention of pain killers and steroids had not had any measurable impact, he was very supportive of her seeking any advice which could make a positive difference.

There were no obvious signs that B.R. had an arthritic condition until she moved and when she sat and arose from the chair, which she did cautiously.

Somewhat surprisingly B.R.'s energy was good, it was her mobility that was in question and for this reason her goals were to improve her mobility, be free of pain, not to rely on medications, be free of iritis, and we added "to rule out unwelcome bugs" too, after I explained the potential link with A.S. and Klebsiella pneumoniae or other bacteria in the gut. She had no gut symptoms so she could not readily understand the connection and she appreciated the research papers I provided to her on the subject.

Based on the documented connection between A.S. and gut bacteria, I recommended a stool test with parasitology x 3. With this lab, each of the 3 samples are examined separately, they are not pooled together and then examined as one.

The stool test revealed six imbalances of note, which were the presence of four potentially problematic organisms: Clostridium spp, Geotrichum spp, Proteus vulgaris and Dientamoeba fragilis. Stool SIgA was low (21.2 in range of 51-204 mg/dl), and there was also an elevated marker of inflammation (Lactoferrin) (20.6 in range of less than 7.3 mcg/mL). The Proteus strain that has been associated with rheumatoid arthritis is Proteus mirabilis, not vulgaris. Klebsiella pneumoniae, which is associated with A.S., was not identified.

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

B.R. had been in robust good health for almost all of her life. Now, aged 42, with two young children, she was in a state she had never expected, and it was having a significant impact on her physical and mental health. She admitted to feeling quite depressed and scared about the future.

B.R. had not had anything notable in her life that required medical attention. She declared a few courses of antibiotics for some persistent chest infections but nothing in the past decade.

She had given birth to her first son when she was 34 and her second son when she was 36. She had breast fed them both, and had recovered her figure within a few months of their birth. She told me that she had felt in charge, capable and creative in the way she managed the boys' school and home lives along with the needs of her and her husband. That had all changed now.

When she was 38, four years before we first met, B.R. had first noticed that her back was painful, and she put it down to the gardening, since that is what triggered it. It was only two years after that, aged 40 that she had sought help and the degenerative discs were identified, which had been a shock to her. (*Degenerative disc disease is a catchall phrase for a number of structural changes of the spine, such as loss of disc height, disc bulges, and impingement of nerves in the spine, among other changes*).

B.R. dutifully but reluctantly took the pain-killers and had visited her doctor and the rheumatologist a number of times over the next two years. Ultimately, when the pain persisted and when nothing seemed to make a difference and she was not keen on taking pain-killers every day, she was referred to another rheumatologist and was finally diagnosed with A.S. this was within a few months prior to seeking nutritional advice, and just a few weeks before the index appointment the diagnosis of iritis was made.

B.R. was in some shock still, and could not quite believe how she could have ended up with A.S. and iritis, and was at a loss to know what to do.

B.R. followed the nutritional programme for over 7 months, and we met on 4 occasions over that time. The second appointment was 5 weeks after the first, and this was when we discussed the test results and focused on the 4 identified organisms in her gut. The third appointment was 6 weeks after that, with the 4th being 8 weeks later.

B.R. then followed a maintenance programme and we had email contact. She still follows this, as far as is known, which takes the total duration of the nutrition intervention to beyond 7 months.

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*.

Before the stool test results were available, I had recommended she take some food supplements that assist in the optimisation of her own anti-inflammatory mechanisms, improved her diet so that it was totally free of problematic fats, refined sugars & processed foods. B.R. admitted that some less ideal foods had crept into her and her family's diet mainly due to practical reasons including B.R.'s mobility which limited her shopping and cooking and meal preparations.

5 weeks after the first meeting we met for the second time to discuss the test results; we would have met sooner but B.R. had been away.

With the stool results identifying four potentially problematic organisms (*this may be defined as a state of dysbiosis, in which an imbalance in the gut microbial ecosystem, including overgrowth of some organisms and loss of others is present*), even though there were low levels of three of them, the strategy was to manage them as a priority, along with the low level of SIgA, which is a primary anti-inflammatory immunoglobulin in the gut and associated mucosa.

A nutritional programme that focused on correcting the dysbiosis, enhancing immune capability and healing the gut was the recommended course for B.R. to achieve her health goals.

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 first phase dietary recommendations were to eliminate refined sugars & processed foods. When the test results returned, I recommended B.R. to focus on lean proteins, no red meats and no cheese, to increase vegetables and eat a variety of sources of carbohydrates thereby reducing her wheat and gluten and increasing her brown rice, sweet potato, quinoa, buckwheat noodles and so on. However, my emphasis was on a small portion of carbs to help maintain lower levels of insulin, which in excess, is a pro-inflammatory hormone.

I recommended a higher water intake, a reduced caffeine intake (from 3 to 1 coffees per day, done gradually). B.R. did not drink alcohol.

Before the test results came back, the first supplement programme comprised 3 products to support innate anti-inflammatory mechanisms:

First Supplement Programme	
KappArest (BRC)	3 with each meal
EFA-Sirt Supreme (BRC)	2 with breakfast & dinner
Arthred Powder (ARG)	1 scoop before 2 meals a day

When we met for the second time, 5 weeks after the first appointment, B.R. had taken the 3 supplements as detailed above. She reported that she had been able to reduce her daily NSAIDs by 50% which was a good result, she said. Otherwise, there had been no change.

At this second appointment, the stool test results were back and the programme focused on addressing the yeast, bacteria and parasite, whilst maintaining the recommended supplements.

Second Supplement Programme	
KappArest (BRC)	3 with each meal
EFA-Sirt Supreme (BRC)	2 with breakfast & dinner
Arthred Powder (ARG)	1 scoop before 2 meals a day
ADP Oregano (BRC)	4 with each meal
S. Boulardii (ARG)	1 caps midafternoon, 1 caps at bedtime (2 hours after ADP Oregano)

After the next phase of 6 weeks, B.R. reported that the iritis which had been an intermittent issue in spite of the NSAIDs had not troubled her after 2 weeks on the revised supplements. She was not able to stop the NSAIDs for her back pain, but there was a further reduction in her need to take them. She said she felt a lot better, but pain remained the chief complaint.

B.R. had engaged in daily exercises that she had been given to do by the rheumatologist, specifically for A.S. She felt that this had helped, although it was not clear if she felt better because of the exercise or could exercise better because of the reduced inflammation from the nutrition programme. Her mobility was not back to what it had been, and we discussed that there was a possibility that it may not be possible to achieve that if her discs were compromised or changes to the bony architecture had occured.

The second phase involved a high dose of the A.D.P. Oregano (BRC) oregano extract for the eradication of Dientamoeba fragilis and Proteus vulgaris. It should have had an inhibitory effect on the Geotrichum yeast as well. The S. Boulardii (ARG), taken away from the A.D.P. (BRC) should have helped to inhibit the Clostridium. For the next phase, I therefore decided to change the programme to include an anti-microbial with different properties to the oregano extract, in the form of an olive leaf extract. I also introduced a probiotic strain (ATCC 53103); Lactobacillus rhamnosus GG, to assist restoration of eubiosis after a dose of the oregano extract.

The supplement programme was changed to this.

Third Supplement Programme	
KappArest (BRC)	3 with each meal
EFA-Sirt Supreme (BRC)	2 with breakfast & dinner
Arthred Powder (ARG)	1 scoop before 2 meals a day
Lactobacillus GG (ARG)	1 caps with breakfast
ProLive (ARG)	2 with each meal

B.R. then followed the revised programme for 8 weeks, and did her exercises every day.

When we met again, she told me that she had been away for a week and had not managed to take the supplements and her iritis had returned. Two days after recommencing the supplements, the iritis went away. This was interesting and made me wonder on the one hand if the A.D.P. Oregano (BRC) programme should have been maintained, but at the same time, the existing 3rd programme supplements had resolved the issue.

Over this month and a half period of time, B.R. had been able to reduce the Ketoprofen NSAID further and some days did not need it. Although her rheumatologist had expressed concern about her trying to reduce the NSAIDs, he was aware that she was doing so, and he expressed surprise that this was possible given her condition. She had told him about the stool test and what she was doing nutritionally, but he had not noted that in her file, she observed. B.R. had made further reductions in the NSAIDs, because her pain was considerably less than it had been.

Over the next weeks, B.R. found that she could extend the length of time when she did not take the Ketoprofen. She experienced a flare up after 28 days on the latest programme when she needed to take it for consecutive days which disappointed her, but then the pain improved after that. I explained that it could have been inflammation derived from a die-off of one or more of the bacteria and parasite, but it was hard to know or prove. Two weeks after that, was our appointment date and B.R. had not taken a pharmaceutical for 8 days by the time we met for the 4th time.

She was very pleased that this had been possible for many reasons, quite apart from the fact that she felt so well, but she was concerned that her rheumatologist had expressed concern about her not taking the NSAIDs which she was told controlled the disease. I explained that the NSAIDs sole purpose was to reduce inflammation and pain and that if she did not have either of these, then it would be ideal NOT to take the drugs. We also revisited the discussion about addressing the underlying cause of the A.S., an auto-immune condition, and I referred her to the papers I had given her which discussed this.

I revised the supplements to reflect the improvements and B.R. was pleased to see a reduction in the number to take, but understood that she could revert back to the previous doses if need be.

Fourth Supplement Programme	
KappArest (BRC)	2 with breakfast & dinner
Arthred Powder (ARG)	1 scoop before dinner
ProLive (ARG)	1 with breakfast & dinner *on Mon / Weds / Fri*
EFA-Sirt Supreme (BRC)	2 with breakfast & dinner
Lactobacillus GG (ARG)	1 caps with breakfast

B.R. had achieved all of the goals that she set out with, and she was in the process of improving her mobility with exercises.

She is contact with me from time to time by email to give me updates, and she continues to do well and remains free of the need for medications. She has a second test kit to repeat the stool test but she has not done it yet.

B.R. represents another case of a patient with an Auto-Immune Disease whose condition has been significantly improved with a nutritional programme that specifically focused on addressing dysbiosis of one kind or another, alongside the use of natural anti-inflammatory agents.

There is much research to show the link between infectious microbes and A.I.D.

The programme may have helped to address other unwelcome bacteria which may have included Proteus mirabilis and Klebsiella pneumoniae even though they were not identified in the testing. I have had other patients who have resolved their R.A. by taking A.D.P. Oregano (BRC) but they have not had the Proteus mirabilis antibodies (or its presence in the stool) confirmed with testing since this is not commercially available. There may potentially have been viruses that may have been inhibited successfully by the olive leaf extract.

In my experience of patients with auto-immune conditions, I am finding that not only is there more than a single condition, but there is also more than a single microbe involved that appears to require addressing (i.e. eradicating or managing into dormancy if it is a virus) in order to quieten the immune system and achieve a successful outcome.

Supplement Information

KappArest (BRC)
Provides a blend of proven anti-inflammatory plant extracts and antioxidants with BioPerine which enhances the efficacy of these ingredients. The formula was developed to inhibit NF-kB (nuclear transcription factor kappa B) which influences an inflammatory cascade and many other pro-inflammatory cytokines.

EFA-Sirt Supreme (BRC)
Dr Mark Houston's combination fatty acid product with EPA & DHA and GLA in a ratio of 2 parts omega 3 to one part omega 6. This has a greater anti-inflammatory role to play than fish oil alone.

Arthred Powder (ARG)
A patented, pre-digested collagen powder that has been proven to reduce articular joint arthritic pains and reduce the need for pain medications. In addition, it has also been useful to heal the gut lining and support skin health.

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

S. Boulardii (ARG)
The well-known and well-studied 'probiotic' yeast that supports SIgA levels, and can also reduce inflammation, and supports gut lining integrity.

Lactobacillus GG (ARG)
World's most researched probiotic bacteria, with a potential wide range of digestive and other benefits, including the reduction of inflammatory cytokines. Contains at least 30 billion viable organisms per capsule.

ProLive with Antioxidants (ARG)
Olive leaf possesses a variety of properties which potentially support balanced intestinal microbiology & circulation.

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 strength of this case is manifest by the positive outcome of B.R.'s health which has turned her life around. However, as indicated above, it is not known exactly why the improved outcome occurred except the focus on a eubiosis approach is what brought about the sustained improvements. It is likely that the identified bacteria and parasite were inhibited by the oregano extract and olive leaf extract, but other bacteria and viruses may also have been inhibited.

It would be ideal if B.R. could repeat the stool test to at least demonstrate that, on re-testing, the original imbalances have been corrected.

Vitamin D could have been a focus here which may have helped, but this has yet to be explored. B.R. did take regular holidays in the sunshine and perhaps this was therefore less of an issue.

Proteolytic Enzymes were also not used in this case, and could have been of some value. Due to the success of the programme that was used, there was no apparent need, although I do find the combination of enzymes,

when taken on an empty stomach for systemic benefits, assists the process of dealing with bacteria, viruses and parasites when used alongside anti-microbials.

The literature relevant to this case report
In the preparation of a series of presentations on the subject over the past four years, I have found over 100 research papers in the literature which focus on the connection between infectious agents (i.e. bacteria, parasites, yeasts and viruses) which may be involved in the development and or triggering of an auto-immune disease. Specifically, there is a body of evidence that incriminates klebsiella pneumoniae with A.S. – even though B.R.'s stool test did not identify this bacterium.

The rationale for your conclusions
Clinical experience, the stool test results combined with peer reviewed literature supports the use of an eubiosis approach, combined with the use of nutritional anti-inflammatory concentrates.

The main findings of this case report: What are the take-away messages?
This is one of numerous cases in my own clinical experience in which the use of nutritional anti-microbials have resulted in positive outcomes in an individual with an auto-immune disease. NT colleagues have also advised me that they have had similar results with their own patients, and in some cases parents or other relatives.

An important take-away message in this specific case is that, in spite of the absence of klebsiella pneumoniae in the stool test, the use of a natural (i.e. non-drug), effective eubiosis approach combined with natural anti-inflammatory supplements can not only reduce the need for medication that has proven side effects, but also address an underlying cause of the condition and change not only the trajectory of the condition but also of the individual's life.

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.

B.R. sought out a complementary approach to her condition but was quite sceptical when she learned of the possible bacterial connection with A.S. She took to heart the comments of her rheumatologist who cast doubt about any other approach than the anti-inflammatory control approach of modern medicine. This helps to explain what she now appreciates, in her words:

"I am so thrilled to have found another way to deal with my condition, one which I had no idea about. If I had not experienced the great improvements in my health I would not have believed it because my doctors had not given me any idea that there was an underlying cause that could be corrected. I have discussed this with my husband and we have both gone through a process of incredulity, especially when we have looked at the medical research on the subject, and downright anger and of wanting the world to know about this but have now settled on being appreciative for what health I have. I am so grateful that I found someone who knew about the bacterial connection and could do something to correct it. I thought I would have it (A.S.) forever and now that I am free of this worry, I feel so much lighter in myself, quite apart from being so much better physically. It's an immense relief!"

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. B.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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