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HERBAL Alternatives to ANTIBIOTICS

An antibiotic might be described as an antibiotic agent that inhibits bacterial growth or kills bacteria. However, costs and many other upper respiratory infections, as well as some ear, nose, and throat infections. Antibiotics are used too often for things they can’t treat—like colds or other viral infections—they can stop working effectively against bacterial infections. This phenomenon is known as antibiotic resistance and is a direct result of antibiotic overuse. As it currently stands, antibiotic overuse represents a significant health risk to modern society. This article will examine antibiotic overuse, as well as the use of herbal medicines that may present a viable alternative to the use of antibiotics or when antibiotics are not indicated.

A Historical Perspective

At the beginning of the 20th century, illnesses caused by infectious diseases ranked as the most common cause of death in North America. By the middle of the century, the diagnosis, prevention, and management of infectious diseases had advanced dramatically, and antibiotic drugs had become widely available. However, most of the new diseases would be eliminated by the end of the 20th century. Unfortunately, clinicians, public health officials, and infectious diseases would be eliminated by the end of the 20th century. Unfortunately, clinicians, public health officials, and microbiologists have confronted an unprecedented number of resistant and new infectious diseases on a global scale, with antibiotic resistance being among the new diseases represents one of the most serious threats to human health, and a serious threat to the treatment of infectious diseases.

Ramasifications Of Antibiotic Resistance

The overuse of antibiotics contributes to the emergence of antibiotic-resistant (AR) that are costly and difficult to treat. 2, 3 Ongoing and consistent use of antibiotics allows antibiotic resistance being among the new diseases represents one of the most serious threats to human health, and a serious threat to the treatment of infectious diseases.

Reasons For Antibiotic Overuse

So why are antibiotics overused in the first instance? The answer is four-pronged. First, determining if an infection is viral or bacterial is expensive and time-consuming and concerns over malpractice lead many physicians to overprescribe antibiotics and non-life-threatening conditions. Second, many patients expect antibiotics to cure viral infections such as colds and flu. Third, some patients request antibiotics because they perceive a benefit from them or do not want to become ill. Fourth, some patients may be unaware of the proper use of antibiotics, such as the correct dosage and duration. Fifth, antibiotics are often prescribed to treat symptoms caused by other conditions. Finally, some patients may be seeking relief from the symptoms of an infection.

An Unfortunate Case Of Ignorance

Part of the problem is that many antibiotics are sold over-the-counter, which means that patients can purchase them without a prescription. This can lead to improper use and the development of antibiotic resistance. In addition, patients may not be aware of the proper use of antibiotics, such as the correct dosage and duration. Furthermore, some patients may be seeking relief from the symptoms of an infection.

Factors That Contribute To Antibiotic Resistance

There are several factors that contribute to antibiotic resistance. These include the overuse of antibiotics, the misuse of antibiotics, and the lack of proper monitoring of antibiotic use. When antibiotics are overused, the bacteria that are not killed by the antibiotic are able to survive and multiply. This can lead to the development of antibiotic-resistant bacteria. In addition, the misuse of antibiotics can also contribute to antibiotic resistance. For example, if a patient stops taking antibiotics before they are finished, the bacteria that are not killed by the antibiotic are able to survive and multiply. This can lead to the development of antibiotic-resistant bacteria. Furthermore, the lack of proper monitoring of antibiotic use can also contribute to antibiotic resistance. If antibiotics are not used properly, the bacteria that are not killed by the antibiotic are able to survive and multiply. This can lead to the development of antibiotic-resistant bacteria.

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Andrographis and Eleutherococcus senticosus  
Andrographis paniculata has a history of use in both Ayurvedic and traditional Chinese medicine. It contains a number of bitter compounds (berberines) that may have immune-stimulating and anti-inflammatory activity. Double-blind studies have found that Andrographis may help reduce the severity of symptoms in individuals suffering from the common cold. In the very recent past, Eleutherococcus senticosus, or Eleuthero for short, was commonly called “Siberian Ginseng.” This name was botanically incorrect since Eleuthero is not even in the same family as Ginseng. Nevertheless, like Panax species, Eleuthero shows excellent adaptogenic activity (an adaptogen is an agent that helps the body adapt to stress). Russian explorers, divers, sailors, and miners love Eleuthero to help them cope with the stresses of working in cold and inhospitable climates. In addition, evidence also suggests that Eleuthero may prove valuable in the long-term management of various diseases of the immune system, including HIV infection and chronic fatigue syndrome. In Chinese medicine, Eleuthero is used to prevent respiratory tract infections, colds and flu.

Of particular interest is using a combination of Andrographis and Eleuthero to treat upper respiratory infections. In two randomized, parallel group clinical studies, patients diagnosed with influenza (450 patients and 66 patients, respectively) were treated with a combination of Andrographis and Eleuthero, or nothing at all (in the control group). The patients were randomized to receive Andrographis and Eleuthero for the duration of sick leave (7.2 days versus 9.8 days in the control group) and frequency of post-influenza complications indicated that the Andrographis/Eleuthero combination contributed to quicker recovery and reduced bacterial infections. The results showed that in Andrographis/Eleuthero-treated patients the symptoms had become less pronounced and the temperature had returned more rapidly to normal values, and symptoms such as headache, muscle pain, and respiratory symptoms disappeared sooner than in patients of the control group.

In addition, two randomized double-blind, placebo-controlled, parallel group clinical trials were performed to investigate the effect of an Andrographis/Eleuthero combination in the treatment of uncomplicated upper respiratory tract infections. This includes common cold, rhinitis, sinusitis, inflammation of the nasal passages and of upper sore throat and pharyngitis (sore throat). There were 46 patients in one study, and 179 patients in another. In both studies, the total symptom score and total diagnosis score showed highly significant improvement in the Andrographis/Eleuthero group as compared with the placebo. Throat symptoms/signs, were found to show the most significant improvement. There was a 55 percent better improvement in the symptom score for the treatment group as compared with the placebo group.

In addition, a double-blind, placebo-controlled, parallel group clinical study was carried out to evaluate the effect of an Andrographis/Eleuthero combination in the treatment of acute upper respiratory tract infections, including sinusitis. Ninety-five individuals in the treatment group and 90 individuals in the placebo group completed the study according to the protocol. Temperature, headache, muscle aches, throat symptoms, cough, nasal symptoms, general malaise and eye symptoms were taken as outcome measures with given scores. The total scores had a highly significant improvement in the Andrographis/Eleuthero combination group versus the placebo. The individual symptoms of headache and nasal throat symptoms together with general malaise showed the most improvement while cough and eye symptoms did not differ significantly between the groups. Temperature was moderately reduced in the Andrographis/Eleuthero combination group. The authors of the study concluded that the combination Andrographis/Eleuthero had a beneficial effect in the treatment of acute upper respiratory tract infections and also relieved the inflammatory symptoms of sinusitis.

Doses of Andrographis/Eleuthero should be in the range of 250 mg to 400 mg of the herbal extract (providing 21 mg andrographolide and deoxyandrographolide), 39 mg Eleuthero extract (providing 2 percent total Eleutherolide B and Eleutherolide E).

Berberine  
Berberine is a bitter-tasting, yellow, plant alkaloid found in the roots of various herbs, including goldenseal (Hydrastis canadenis), barberry (Berberis vulgans), Oregon grape (Berberis aquifolium), goldthread (Coptis chinensis) and turmeric (Curcuma longa). This compound has a long history of medicinal use in Chinese and Ayurvedic medicine (Berberis). In the plants they may help promote immune response by increasing the production of antigen specific immunoglobulins, and may also have a direct effect against bacteria. For example, berberine may help fight urinary tract infections and reduce skin infections caused by bacteria. A number of studies have been published demonstrating that berberine is able to cross the lining of the urinary bladder. One possible mechanism by which this takes place is that berberine might inhibit bacterial sorption, a protein responsible for anchoring bacteria to cell membranes. Berberine was also shown to be effective in improving treatment against patients with chronic obstructive pulmonary disease and bacterial-induced diarrhea.

In addition, berberine has activity against Candida yeast. In fact, berberine was demonstrated to be effective in reducing the growth of the invasive mycelial form of Candida albicans. In addition, extracellular enzymes secreted by Candida albicans are responsible for penetration of yeast into host cells, and general overgrowth. Berberine has been shown to reduce these enzymes and the consequent adherence of Candida to epithelial cells. Furthermore, berberine was able to induce apoptosis of Candida overgrowth and accelerated elimination of the yeast. Regardless of the herbal source, try to get 400 mg berberine daily.

Shitake and AHCC  
For thousands of years, mushrooms have been used as both food and medicine in various cultures. One of those mushrooms, Shiitake or Shiitake (Lentinus edodes), is an example of a healthy immune function, healthy liver function, and modulating the unwanted growth of mutated stomach and pancreas cells, and has been validated in scientific literature for these purposes.

Active Hexasome Correlated Compound (AHCC) is an extract derived from Shiitake, as well as other species of Basidiomycete family of mushrooms. AHCC is a mixture of polysaccharides, amino acids, oligosaccharides, vitamins, minerals, with up to 74 percent of AHCC. It like its partner, IFCC has antioxidant effects, and is thought to act at 1 Biological response modifier. It seems to promote the activity of natural killer cells in patients with unconventional growth of cells. In animal models, it also seems to protect against carbon tetrachloride-induced liver damage, promote healthy blood glucose levels within a normal range, and decrease apoptosis (i.e., programmed cell death) of the thymus.64

AHCC demonstrated early clinical promise in promoting immune response. This was shown in animal research where AHCC helped restore immune response that had decreased due to chemotherapy and radiation. 61 In humans, the effect of AHCC on immune response was investigated by measuring the number and function of circulating dendritic cells (DCs), a type of immune cell that activates immune cells and triggers systemic healing.50 In the treatment group, there were 46 patients in one study, and 179 patients in another. In all, 269 patients in the AHCC group versus the placebo group. The results were that the AHCC group had a significantly higher number of total DCs compared to when they first started the study, and compared to the control subjects. Other types of immune cells were also significantly increased in the AHCC group compared to controls.

The effects of AHCC in a clinical setting were examined in a randomized clinical trial for the undesirable growth of mutated liver cells. A total of 213 patients participated in the study, with 113 receiving AHCC. The results were that the AHCC group had a significantly longer period of no recurrence of signs of post-cells, compared to increased overall survival rate when compared to the control group.

A prospective cohort study was performed with 44 patients with undesirable growth of mutated liver cells. All of the patients underwent supportive care. Survival time, quality of life, clinical and immunological parameters related to liver function, cellular immunity, and patient status were determined. Of the 44 patients, 34 were to receive AHCC and placebo (control) orally, respectively. Patients in the AHCC treated-group had a significantly prolonged survival when compared to the control group, and quality of life in terms of mental stability, general physical health status, and ability to have normal activities were significantly improved after three months of AHCC treatment.

An effective daily dose is 3–6 grams AHCC daily.

Pomegranates  
Pomegranates are high in polyphenolic compounds, making its juice higher in antioxidant activity than red wine and green tea. 31 The most abundant of these compounds is ellagic acid, which has been shown in research to be the antioxidant responsible for the free-radical scavenging ability of pomegranate juice. According to some researchers, 32 the actions of pomegranate’s compounds could also increase the number of DCs in the body, which could aid in the treatment and prevention of cancer, as well as other diseases where chronic inflammation is believed to play an essential developmental role, suggesting immune modulatory activity. 33

Other Dietary Supplements For General Immune Response  
In terms of dietary supplements, there are some general immune-promoting supplements which may have benefit promoting immune response:

• Vitamin A—Plays an important role in immune system function and helps mucous membranes, including those in the respiratory tract. Vitamin A is an antioxidant which protects against invasion by microorganisms. 34 Daily dose: 5,000-10,000 IU.

• Vitamin C—Stimulates the immune system by both elevating interferon levels and enhancing the activity of collagenase to reduce cartilage loss. 35 A daily dose of 1 to 2 grams should be taken, or 1000 mg every other waking hour during acute infection.

• Zinc—Marginal deficiencies result in impairments of immune function. 36 Supplementation with zinc has been shown to increase immune function in healthy people. 37 Daily dose: 15 mg. Increase to 30 mg, three times daily in lozenge form during acute infection.

• Probiotics—Probiotics are well established for their role in improving the intestinal flora and immune function. 38 Some are in the treatment of bacterial vaginosis 39,40 and irritable bowel syndrome. 41 Daily dose: 5-10 billion CFU of Lactobacillus and Bifidobacteria species.

Conclusion  
In addition to those listed, there are many other herbs with value to the immune system and/or with antibacterial properties. These include Astragalus, which is known to boost natural killer cells, Turmeric, Thuya occidentalis and Green tea, just to name a few. If it wasn’t included in this article, don’t assume it doesn’t have value. The fact is, it most likely does but I could only choose a few to discuss here. In any case, use of the herbs and other supplements discussed in this article may help you support and maintain a healthy immune system, which is your best defense against any disease. 42-45 Knowing that a number of these herbs may also have direct effects against specific microorganisms. Nevertheless, if you are sick you should see your doctor to have your individual situation assessed. For references click here: http://TOTALHEALTHMAgAZINE.COM/REFEREnCES/JanuarY

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