International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

Role of Homeopathy on Infectious Disease and Alternatives to Antibiotics

Dr. Don J Scott Berin G BHMS (MD)

PG Scholar, Department of Materia Medica, White Memorial Homoeopathic Medical College,
Veeyanoor, Attoor, KK Dist, Tamilnadu, South India.
ORCID ID : 0000-0002-5636-2794
EMAIL: *scottberin[at]gmail.com*

Abstract: ***Towards the end of Louis Pasteur's life, he confessed that germs may not be the cause of disease after all, but may simply be another symptom of disease. He had come to realize that germs seem to lead to illness primarily when the person's immune and defense system (what biologists call "host resistance") is not strong enough to combat them. The "cause" of disease is not simply a bacteria but also the factors that compromise host resistance, including the person's hereditary endowment, his nutritional state, the stresses in his life, and his psychological state. In describing one of his experiments with silkworms, Pasteur asserted that the microorganisms present in such large numbers in the intestinal tract of the sick worms were "more an effect than a cause of disease. With these far-reaching insights Pasteur conceived an ecological understanding of infectious disease. Infectious disease does not simply have a single cause but is the result of a complex web of interactions within and outside the individual.***

Keywords: Homoeopathy, Antibiotics, Alternative, bacteria's.

1. Introduction

Antibiotics (Greek anti, "against; "bios, "life") are chemical compounds used to kill or inhibit the growth of infectious organisms. Originally the term antibiotic referred only to organic compounds, produced by bacteria or molds, that are toxic to other microorganisms. The term is now used loosely to include synthetic and semisynthetic organic compounds. Antibiotic refers generally to antibacterials; however, because the term is loosely defined, it is preferable to specify compounds as being antimalarials, antivirals, or antiprotozoals. All antibiotics share the property of selective toxicity: They are more toxic to an invading organism than they are to an animal or human host. Penicillin is the most well-known antibiotic and has been used to fight many infectious diseases, including syphilis, gonorrhea, tetanus, and scarlet fever. Another antibiotic, streptomycin, has been used to combat tuberculosis.

2. History

The mechanisms of antibiotic action were not scientifically understood until the late 20th century, the principle of using organic compounds to fight infection has been known since ancient times. Crude plant extracts were used medicinally for centuries, and there is anecdotal evidence for the use of cheese molds for topical treatment of infection. The first observation of what would now be called an antibiotic effect was made in the 19th century by French chemist Louis Pasteur, who discovered that certain saprophytic bacteria can kill anthrax bacilli. In the first decade of the 20th century, German physician and chemist Paul Ehrlich began experimenting with the synthesis of organic compounds that would selectively attack an infecting organism without harming the host organism. His experiments led to the development, in 1909, of salvarsan, a synthetic compound containing arsenic, which exhibited selective action against spirochetes, the bacteria that cause syphilis. Salvarsan remained the only effective treatment for syphilis until the purification of penicillin in the 1940s. In the 1920s British bacteriologist Sir Alexander Fleming, who later discovered penicillin, found a substance called lysozyme in many bodily secretions, such as tears and sweat, and in certain other plant and animal substances. Lysozyme has some antimicrobial activity, but it is not clinically useful.

Penicillin, the archetype of antibiotics, is a derivative of the mold Penicillium notatum. Penicillin was discovered accidentally in 1928 by Fleming, who showed its effectiveness in laboratory cultures against many disease-producing bacteria. This discovery marked the beginning of the development of antibacterial compounds produced by living organisms. Penicillin in its original form could not be given by mouth because it was destroyed in the digestive tract and the preparations had too many impurities for injection. No progress was made until the outbreak of World War II stimulated renewed research and the Australian pathologist Sir Howard Florey and German-British biochemist Ernst Chain purified enough of the drug to show that it would protect mice from infection. Florey and Chain then used the purified penicillin on a human patient who had staphylococcal and streptococcal septicemia with multiple abscesses and osteomyelitis. The patient, gravely ill and near death, was given intravenous injections of a partly purified preparation of penicillin every three hours. Because so little was available, the patient's urine was collected each day, the penicillin was extracted from the urine and used again. After five days the patient's condition improved vastly. However, with each passage through the body, some penicillin was lost. Eventually the supply ran out and the patient died.

The first antibiotic to be used successfully in the treatment of human disease was tyrothricin, isolated from certain soil bacteria by American bacteriologist Rene Dubos in 1939. This substance is too toxic for general use, but it is employed in the external treatment of certain infections. Other antibiotics produced by a group of soil bacteria called actinomycetes have proved more successful. One of these, streptomycin, discovered in 1944 by American biologist Selman Waksman and his associates, was, in its time, the major treatment for tuberculosis.

Since antibiotics came into general use in the 1950s, they have transformed the patterns of disease and death. Many diseases that once headed the mortality tables—such as tuberculosis, pneumonia, and septicemia—now hold lower positions. Surgical procedures, too, have been improved enormously, because lengthy and complex operations can now be carried out without a prohibitively high risk of infection. Chemotherapy has also been used in the treatment or prevention of protozoal and fungal diseases, especially malaria, a major killer in economically developing nations. Slow progress is being made in the chemotherapeutic treatment of viral diseases. New drugs have been developed and used to treat shingles and chicken pox. There is also a continuing effort to find a cure for acquired immunodeficiency syndrome (AIDS), caused by the human immunodeficiency virus (HIV).

3. Classification

Antibiotics can be classified in several ways. The most common method classifies them according to their action against the infecting organism. Some antibiotics attack the cell wall; some disrupt the cell membrane; and the majority inhibit the synthesis of nucleic acids and proteins, the polymers that make up the bacterial cell. Another method classifies antibiotics according to which bacterial strains they affect: staphylococcus, streptococcus, or Escherichia coli, for example. Antibiotics are also classified on the basis of chemical structure, as penicillins, cephalosporins, aminoglycosides, tetracyclines, macrolides, or sulfonamides, among others.

a) Mechanisms of Action

Most antibiotics act by selectively interfering with the synthesis of one of the large-molecule constituents of the cell—the cell wall or proteins or nucleic acids. Some, however, act by disrupting the cell membrane (see Cell Death and Growth Suppression below). Some important and clinically useful drugs interfere with the synthesis of peptidoglycan, the most important component of the cell wall. These drugs include the Â-lactam antibiotics, which are classified according to chemical structure into penicillins, cephalosporins, and carbapenems. All these antibiotics contain a Â-lactam ring as a critical part of their chemical structure, and they inhibit synthesis of peptidoglycan, an essential part of the cell wall. They do not interfere with the synthesis of other intracellular components. The continuing buildup of materials inside the cell exerts ever greater pressure on the membrane, which is no longer properly supported by peptidoglycan. The membrane gives way, the cell contents leak out, and the bacterium dies. These antibiotics do not affect human cells because human cells do not have cell walls.

Many antibiotics operate by inhibiting the synthesis of various intracellular bacterial molecules, including DNA, RNA, ribosomes, and proteins. The synthetic sulfonamides are among the antibiotics that indirectly interfere with nucleic acid synthesis. Nucleic-acid synthesis can also be stopped by antibiotics that inhibit the enzymes that assemble these polymers—for example, DNA polymerase or RNA polymerase. Examples of such antibiotics are actinomycin, rifamicin, and rifampicin, the last two being particularly valuable in the treatment of tuberculosis.

The quinolone antibiotics inhibit synthesis of an enzyme responsible for the coiling and uncoiling of the chromosome, a process necessary for DNA replication and for transcription to messenger RNA. Some antibacterials affect the assembly of messenger RNA, thus causing its genetic message to be garbled. When these faulty messages are translated, the protein products are nonfunctional. There are also other mechanisms: The tetracyclines compete with incoming transfer-RNA molecules; the aminoglycosides cause the genetic message to be misread and a defective protein to be produced; chloramphenicol prevents the linking of amino acids to the growing protein; and puromycin causes the protein chain to terminate prematurely, releasing an incomplete protein.

b) Range of Effectiveness

In some species of bacteria the cell wall consists primarily of a thick layer of peptidoglycan. Other species have a much thinner layer of peptidoglycan and an outer as well as an inner membrane. When bacteria are subjected to Gram's stain, these differences in structure affect the differential staining of the bacteria with a dye called gentian violet. The differences in staining coloration (gram-positive bacteria appear purple and gram-negative bacteria appear colorless or reddish, depending on the process used) are the basis of the classification of bacteria into gram-positive (those with thick peptidoglycan) and gram-negative (those with thin peptidoglycan and an outer membrane), because the staining properties correlate with many other bacterial properties. Antibacterials can be further subdivided into narrow-spectrum and broad-spectrum agents. The narrow-spectrum penicillins act against many gram-positive bacteria. Aminoglycosides, also narrow-spectrum, act against many gram-negative as well as some gram-positive bacteria. The tetracyclines and chloramphenicols are both broad-spectrum drugs because they are effective against both gram-positive and gram-negative bacteria.

c) Cell Death and Growth Suppression

Antibiotics may also be classed as bactericidal (killing bacteria) or bacteriostatic (stopping bacterial growth and multiplication). Bacteriostatic drugs are nonetheless effective because bacteria that are prevented from growing will die off after a time or be killed by the defense mechanisms of the host. The tetracyclines and the sulfonamides are among the

bacteriostatic antiobiotics. Antibiotics that damage the cell membrane cause the cell's metabolites to leak out, thus killing the organism. Such compounds, including penicillins and cephalosporins, are therefore classed as bactericidal.

4. Types Of Antibiotics

Following is a list of some of the more common antibiotics and examples of some of their clinical uses. This section does not include all antibiotics nor all of their clinical application

a) Penicillins

Penicillins are bactericidal, inhibiting formation of the cell wall. There are four types of penicillins: the narrow-spectrum penicillin-G types, ampicillin and its relatives, the penicillinase-resistants, and the extended spectrum penicillins that are active against pseudomonas. Penicillin-G types are effective against gram-positive strains of streptococci, staphylococci, and some gram-negative bacteria such as meningococcus. Penicillin-G is used to treat such diseases as syphilis, gonorrhea, meningitis, anthrax, and yaws.

The related penicillin V has a similar range of action but is less effective. Ampicillin and amoxicillin have a range of effectiveness similar to that of penicillin-G, with a slightly broader spectrum, including some gram-negative bacteria. The penicillinase-resistants are penicillins that combat bacteria that have developed resistance to penicillin-G. The antipseudomonal penicillins are used against infections caused by gram-negative Pseudomonas bacteria, a particular problem in hospitals. They may be administered as a prophylactic in patients with compromised immune systems, who are at risk from gram-negative infections. Side effects of the penicillins, while relatively rare, can include immediate and delayed allergic reactions—specifically, skin rashes, fever, and anaphylactic shock, which can be fatal.

b) Cephalosporin

Like the penicillins, cephalosporins have a Â-lactam ring structure that interferes with synthesis of the bacterial cell wall and so are bactericidal. Cephalosporins are more effective than penicillin against gram-negative bacilli and equally effective against gram-positive cocci. Cephalosporins may be used to treat strains of meningitis and as a prophylactic for orthopedic, abdominal, and pelvic surgery. Rare hypersensitive reactions from the cephalosporins include skin rash and, less frequently, anaphylactic shock.

c) Aminoglycosides

Streptomycin is the oldest of the aminoglycosides. The aminoglycosides inhibit bacterial protein synthesis in many gram-negative and some gram-positive organisms. They are sometimes used in combination with penicillin. The members of this group tend to be more toxic than other antibiotics. Rare adverse effects associated with prolonged use of aminoglycosides include damage to the vestibular region of the ear, hearing loss, and kidney damage.

d) Tetracyclines

Tetracyclines are bacteriostatic, inhibiting bacterial protein synthesis. They are broad-spectrum antibiotics effective against strains of streptococci, gram-negative bacilli, rickettsia (the bacteria that causes typhoid fever), and spirochetes (the bacteria that causes syphilis). They are also used to treat urinary-tract infections and bronchitis. Because of their wide range of effectiveness, tetracyclines can sometimes upset the balance of resident bacteria that are normally held in check by the body's immune system, leading to secondary infections in the gastrointestinal tract and vagina, for example. Tetracycline use is now limited because of the increase of resistant bacterial strains.

e) Macrolides

The macrolides are bacteriostatic, binding with bacterial ribosomes to inhibit protein synthesis. Erythromycin, one of the macrolides, is effective against gram-positive cocci and is often used as a substitute for penicillin against streptococcal and pneumococcal infections. Other uses for macrolides include diphtheria and bacteremia. Side effects may include nausea, vomiting, and diarrhea; infrequently, there may be temporary auditory impairment.

f) Sulfonamides

The sulfonamides are synthetic bacteriostatic, broad-spectrum antibiotics, effective against most gram-positive and many gram-negative bacteria. However, because many gram-negative bacteria have developed resistance to the sulfonamides, these antibiotics are now used only in very specific situations, including treatment of urinary-tract infection, against meningococcal strains, and as a prophylactic for rheumatic fever. Side effects may include disruption of the gastrointestinal tract and hypersensitivity.

-

5. Production

The production of a new antibiotic is lengthy and costly. First, the organism that makes the antibiotic must be identified and the antibiotic tested against a wide variety of bacterial species. Then the organism must be grown on a scale large enough to allow the purification and chemical analysis of the antibiotic and to demonstrate that it is unique. This is a complex procedure because there are several thousand compounds with antibiotic activity that have already been discovered, and these compounds are repeatedly rediscovered. After the antibiotic has been shown to be useful in the treatment of infections in animals, larger-scale preparation can be undertaken.

Commercial development requires a high yield and an economic method of purification. Extensive research may be needed to increase the yield by selecting improved strains of the organism or by changing the growth medium. The organism is then grown in large steel vats, in submerged cultures with forced aeration. The naturally fermented product may be modified chemically to produce a semisynthetic antibiotic. After purification, the effect of the antibiotic on the normal function of host tissues and organs (its pharmacology), as well as its possible toxic actions (toxicology), must be tested on a large number of animals of several species. In

addition, the effective forms of administration must be determined. Antibiotics may be topical, applied to the surface of the skin, eye, or ear in the form of ointments or creams. They may be oral, or given by mouth, and either allowed to dissolve in the mouth or swallowed, in which case they are absorbed into the bloodstream through the intestines. Antibiotics may also be parenteral, or injected intramuscularly, intravenously, or subcutaneously; antibiotics are administered parenterally when fast absorption is required.

In the United States, once these steps have been completed, the manufacturer may file an Investigational New Drug Application with the Food and Drug Administration (FDA). If approved, the antibiotic can be tested on volunteers for toxicity, tolerance, absorption, and excretion. If subsequent tests on small numbers of patients are successful, the drug can be used on a larger group, usually in the hundreds. Finally a New Drug Application can be filed with the FDA, and, if this application is approved, the drug can be used generally in clinical medicine. These procedures, from the time the antibiotic is discovered in the laboratory until it undergoes clinical trial, usually extend over several years.

6. Risks and Limitations

The use of antibiotics is limited because bacteria have evolved defenses against certain antibiotics. One of the main mechanisms of defense is inactivation of the antibiotic. This is the usual defense against penicillins and chloramphenicol, among others. Another form of defense involves a mutation that changes the bacterial enzyme affected by the drug in such a way that the antibiotic can no longer inhibit it. This is the main mechanism of resistance to the compounds that inhibit protein synthesis, such as the tetracyclines.

All these forms of resistance are transmitted genetically by the bacterium to its progeny. Genes that carry resistance can also be transmitted from one bacterium to another by means of plasmids, chromosomal fragments that contain only a few genes, including the resistance gene. Some bacteria conjugate with others of the same species, forming temporary links during which the plasmids are passed from one to another. If two plasmids carrying resistance genes to different antibiotics are transferred to the same bacterium, their resistance genes can be assembled onto a single plasmid. The combined resistances can then be transmitted to another bacterium, where they may be combined with yet another type of resistance. In this way, plasmids are generated that carry resistance to several different classes of antibiotic. In addition, plasmids have evolved that can be transmitted from one species of bacteria to another, and these can transfer multiple antibiotic resistance between very dissimilar species of bacteria.

The problem of resistance has been exacerbated by the use of antibiotics as prophylactics, intended to prevent infection before it occurs. Indiscriminate and inappropriate use of antibiotics for the treatment of the common cold and other common viral infections, against which they have no effect, removes antibiotic-sensitive bacteria and allows the development of antibiotic-resistant bacteria. Similarly, the use of antibiotics in poultry and livestock feed has promoted the spread of drug resistance and has led to the widespread contamination of meat and poultry by drug-resistant bacteria such as Salmonella.

In the 1970s, tuberculosis seemed to have been nearly eradicated in the developed countries, although it was still prevalent in developing countries. Now its incidence is increasing, partly due to resistance of the tubercle bacillus to antibiotics. Some bacteria, particularly strains of staphylococci, are resistant to so many classes of antibiotics that the infections they cause are almost untreatable. When such a strain invades a surgical ward in a hospital, it is sometimes necessary to close the ward altogether for a time. Similarly, plasmodia, the causative organisms of malaria, have developed resistance to antibiotics, while, at the same time, the mosquitoes that carry plasmodia have become resistant to the insecticides that were once used to control them. Consequently, although malaria had been almost entirely eliminated, it is now again rampant in Africa, the Middle East, Southeast Asia, and parts of Latin America. Furthermore, the discovery of new antibiotics is now much less common than in the past.

Antibiotics and Homœopathic Antidotes

Adverse Effects of Penicillin

Fever with cold feet. Bell., Cupr-ac.
Wheezing and Pseudoasthmatic attack. Aspidosperma (Quebracho)
When skin eruptions are simultaneouslypresent. Grind.
Anorexia (with Mycin group of drugs likeAureomycin). Abrot.
Peripheral Neuritis. Ant-t.
Brachiaglia Nocturna (with the pronounced symptoms of pins and needles). Sec., Act-s.
Pruritus. Apis and Grind. 10 drops mixed in a cup of milk andapplied locally.
Skin lesions from Penicillin. Agar., Sulph.
Chronic cough after Penicillin. Penicillin 3x or 30, Seneg. 30 or 200.
In cases when Srepto Peniciliin had been used. Streptococcin 30 or Staphelococcin 30 (as an intercurrent remedy.
Heart depressing effects of Penicillin. Ars-a.
Harmful effects of Penicillin. Ars-a., Thuj., Nux-v., Sil.
Specific to counteract the effects of Penicillin. Ars-a.
Diarrhœa from Antibiotics (especially Mycins). Nit-ac.
Allergic reactions to Antibiotics. Sulph., Penicillin, Streptomycin.
Headache due to Streptomycin. Bell.
#. Effects of Chloromycetin: cases of typhoid (where Chloromycetin was given). ----- Chloromycetin 30, 200 or 1M (according to patient's Constitution). With Placebo for a week. In second week Typhoidinum 200 or 1M (with Placebo for a fortnight).
Intestinal effects of Aureomycin. Aureomycin leaves a very weak liver and severe troublewith the bowels. In this case, a

pure constitutional treatment with careful observation of idiosyncrasies is most effective.
#. Effects of Allergy (in general). Ill effects of Penicillin. ----- Carb-v. (Dilutions used: 2x, 3x, 6x, 12x).

The Homeopathic and Ecological View of Infectious Disease:

An analogy to help develop an understanding of the ecological perspective of infectious disease can be developed from the situation of mosquitoes and swamps. It is commonly known that mosquitoes infest swamps because swamps provide the still waters necessary for the mosquitoes to lay their eggs and for them to hatch without disruption. In essence, swamps are a perfect environment for the mosquitoes to reproduce.

A farmer might try to rid his land of mosquitoes by spraying insecticide over the swamps. If lucky, he will kill all the mosquitoes. However, because the swamp is still a swamp, it is still a perfect environment for new mosquitoes to fly in and to lay their eggs. The farmer then sprays his insecticide again, only to find that more mosquitoes infest the swamp. Over time, some mosquitoes do not get sprayed with fatal doses of the insecticide. Instead, they adapt to the insecticide that they have ingested, and with each generation they are able to pass an increased immunity to the insecticide on to their offspring.

Soon, the farmer must use stronger and stronger varieties of insecticide, but as the result of their adaption, some mosquitoes are able to survive, despite exposure to the insecticide. Similarly, finding streptococcus in a child's throat does not necessarily mean that the strep "caused" a sore throat, any more than one could say that the swamp "caused" the mosquitoes. Streptococcus often inhabits the throat of healthy people without leading to a sore throat. Symptoms of strep throat only begin if there are favorable conditions for the strep to reproduce rapidly and aggressively invade the throat tissue. Strep, like mosquitoes, will only settle and grow in conditions which are conducive for them.The child with the strep throat generally gets treated with antibiotics. Although the antibiotics may be effective in getting rid of the bacteria temporarily, they do not change the factors that led to the infection in the first place. When the farmer sprays with insecticide or the physician prescribes antibiotics but doesn't change the conditions which created the problem, the mosquitoes and the bacteria are able to return to those environments that are favorable for their growth.

To make matters worse, the antibiotics kill the beneficial bacteria along with the harmful bacteria. Since the beneficial bacteria play an important role in digestion, the individual's ability to assimilate necessary nutrients to his body is temporarily limited, ultimately making him more prone to reinfection or other illness in the meantime.

Marc Lappe', PhD, University of Illinois professor and author of **When Antibiotics Fail**, notes that, "When these more benevolent counterparts die off, they leave behind a literal wasteland of vacant tissue and organs. These sites, previously occupied with normal bacteria, are now free to be colonized with new ones. Some of these new ones have caused serious and previously unrecognized diseases."

Some clinicians have found that inappropriate antibiotic usage can transform common vaginal "yeast" infections (candida albicans), which are characterized by simple itching, into a system-wide candidainfection which can cause a variety of acute and chronic problems. (3) Although the diagnosis of "systemic candidiasis" is controversial, there is general consensus that frequent antibiotic use can also transform bacteria that normally live in our bodies without creating any problems into irritating and occasionally serious infections in the elderly, the infirm, and the immunodepressed.

And of course, the bacteria learn to adapt to and survive antibiotics. Scientists then must slightly change the antibiotics (there are over 300 varieties of penicillin alone), or make stronger and stronger antibiotics (which generally also have more and more serious side effects). Despite the best efforts of scientists, Dr. Lappe' asserts that we are creating many more germs than we are medicines, since each new antibiotic brings to life literally millions of Benedict Arnolds. Just 15-20 years ago penicillin was virtually always successful in treating gonorrhea. Now there are gonorrhea bacteria which have learned to resist penicillin, and these bacteria have now been found in all fifty states as well as throughout the world. From 1983 to 1984 alone the number of cases in the U.S. with resistant strains of gonorrhea doubled.

Alexander Fleming, the scientist who discovered penicillin, cautioned against the overuse of antibiotics. Unless the scientific community and the general public heed his warning, Harvard professor Walter Gilbert, a Nobel prizewinner in chemistry, asserted, "There may be a time down the road when 80% to 90% of infections will be resistant to all known antibiotics." The scientific community and the general public have ignored the insights of the late Pasteur and have ignored the importance of host resistance in preventing illness. Most scientists broadly accepted the germ theory, while only rare individuals have since acknowledged the importance of the ecological balance of microorganisms in the body. But the wisdom of Pasteur remains relevant, and more and more scientists are beginning to acknowledge the importance of alternatives to antibiotics. Even an editorial in the prestigious **New England Journal of Medicine** affirmed the need for the treatment of infections with "less ecologically disturbing techniques." Homeopathic medicines will inevitably play a major role as one of these alternatives.

Are Antibiotics Helpful in Ear and Throat Infections?

Claude Bernard, the esteemed "father of experimental physiology," affirmed Pasteur's contention that bacteria are not the cause of disease. In his most famous book, An Introduction to the Study of Experimental Medicine, Bernard said, "If the exciting cause were the principle factor, for instance, in pneumonia, everyone exposed to cold would come down with this disease, whereas only an occassional case of chilll turns into pneumonia. Unless the subject is predisposed, the most powerful causes will have no effect on him.

Predisposition is the 'pivot of all experimental physiology' and the real cause of most disease."

At a health conference in 1976 Jonas Salk noted that there are basically two ways to heal sick people. First, one can try to control the individual symptoms the sick person is experiencing, and second, one can try to stimulate the person's own immune and defense system to enable the body to heal itself. (9) Whereas conventional medicine's allegiance is to the first approach, homeopathy and a wide variety of natural healing systems attempt the latter.

A good example of the questionable value of antibiotic use is their application in children's earache. Ear infection has become one of the most common childhood illness. The infection of the middle ear and eardrum is called "otitis media," a condition for which most physicians prescribe antibiotics. Several researchers, however, have found that antibiotics do not improve health of children compared to those not given antibiotics. Others have found that antibiotics provide a brief relief of symptoms, but subsequently there was no difference compared to those children given placebo.

Still others have found that 70% of children with otitis media still had fluid in the ear after four weeks of treatment and that 50% of children experience another ear infection within three months. Although some physicians assert that antibiotics are responsible for the presently low incidence of complications from ear infections such as mastoiditis, research has shown that there no evidence that antibiotics reduce the incidence of mastoiditis. Homeopaths claim a similarly low complication rate without the use of antibiotics.

One of the more significant studies showed that patients with ear infection who were treated with antibiotics had appreciably more recurrences (as much as 2.9 times) than those people who didn't use any treatment. In chronic ear infection it has become standard procedure for physicians to use ear tubes in conjunction with antibiotics or in place of it. These tubes help drain the pus from the ear, but this treatment only deals with the results of the problem; it does nothing to treat the reason the infection was able to spread in the first place. This physiological fact may be the reason ear tubes have been found to be of questionable value. Antibiotics and ear tubes treat symptoms of a problem. They do not strengthen the organism so that it can fight the infection itself, nor do they make the organism less resistant to future infection.

Another myth which continues to be perpetuated is that of the value of antibiotics in treating sore throats. The primary rationale for using antibiotics to treat a sore throat has been to prevent the person from getting rheumatic fever, a potentially fatal condition. Researchers point out that there is presently an extremely low incidence of rheumatic fever. (17)* This low incidence is not the result of antibiotic use because there was a decrease in rheumatic fever incidence even prior to antibiotic use.

In 1986 there have been some reports of new outbreaks of rheumatic fever in some parts of the United States. However, Ellen Wald, M.D., medical director of Children's Hospital of Pittsburgh, noted that too-early treatment with antibiotics may impair the body's normal immunlogic response and open up the possibility of reinfection, and that this problem must be weighed against the benefit of possibly preventing rheumatic fever. One study showed that those children who were treated with antibiotics immediately upon diagnosis had eight times the recurrent rate of strep throat compared to those children who delayed treatment. In the context of other studies cited in this chapter, it may be worthwhile to compare those who received delayed treatment with those who received no antibiotics. It may also be worthwhile to compare these groups with a group of people prescribed a homeopathic medicine.

Recent research has even determined that today's strains of streptococcus very rarely cause rheumatic fever and that antibiotics do not even eradicate the strep in 25-40% of the cases, despite demonstrated sensitivity of the organism to the antibiotic. Also, it is widely recognized that most strep infections are left untreated, and yet, a vast majority of these people do not get rheumatic fever. Further, from 33% to 50% of the cases of rheumatic fever occur without sore throat symptoms.

A recent outbreak of rheumatic fever was reported in the New England Journal of Medicine. Two-thirds of the children with this disease had no clearcut history of a sore throat within a three month period preceding the onset of their condition. Of particular significance, of the 11 children who had throat symptoms and who thus had a throat culture performed, 8 tested positive for strep. These children were prescribed antibiotics, and yet, each still developed rheumatic fever.
New evidence shows that antibiotics do help reduce the symptoms of sore throat faster than placebo.

However, it is questionable if antibiotics should be used simply to relieve self-limited conditions. It is certainly understandable that antibiotic use be considered when there is a life-threatening condition. However, it is uncertain how effective they are in preventing one rare disease. It is also uncertain if it is worth prescribing these powerful drugs to mass numbers of children in the hope that a very small number might benefit.

Antibiotics should definately not be given routinely to children with suspected strep throat. Recent research has now shown that 60% of children's sore throats are virally caused for which antibiotics are useless. This evidence strongly suggests that alternatives to antibiotic usage should be sought for ear and throat infection. Homeopathy offers a viable alternative.

Homeopathic Treatment of Infectious Disease

When people think about the successes of modern medicine, they often assert that we are now living considerably longer than our parents or their parents. They also usually point to modern medicine's successes in treating the infectious diseases

that raged during previous centuries such as the plague, cholera, scarlet fever, yellow fever, and typhoid.

Scientists and historians alike agree that these assumptionsare myths, pure myths. Scientists point out that we are now living longer than ever before, but this has not primarily been the result of new medical technologies. Rather, our lengthening life is mostly because of a significant decrease in infant mortality, which is the result of better hygiene during birth (hurray for soap!), better nutrition (the creation of cities has enabled more people to have access to a greater variety of foods, thereby decreasing malnutrition), and improvements in various public health measures such as sanitation, better sewage, cleaner water, and pest control.

Even with all these considerations, the increase in life expectancy for adults has not been very significant. Statistics show that the average white male who reached 40 years of age in 1960 lives to be 71.9; whereas an average white male who reached 40 years of age in 1920 lives to be 69.9. The average white male who reached 50 years of age in 1982 lives to be 75.6 years, while the average white male who reached 50 years of age in 1912, survived until 72.2 years. (25)

Nobel Prize-winning microbiologist Rene Dubos noted, "the life expectancy of adults is not very different now from what it was a few generations ago, nor is it greater in areas where medical services are highly developed than in less prosperous countries."

Historians remind us that conventional medicine was not at all responsible for the disappearance or decrease in the fatal infectious diseases of the 15th to 19th century. Antibiotics were not even available until the 1940s and 1950s, and no other conventional drugs were successfully used to treat most of the infectious epidemics of the past. Even mortality (incidence of death) from tuberculosis, pneumonia, bronchitis, influenza, and whooping cough were on the sharp decline prior to the introduction of any conventional medical treatment for them.

An important exception was the decrease in the death rate from polio after the introduction of the polio vaccine.A little known fact of history is that homeopathic medicine developed its popularity in the United States as well as in Europe because of its successes in treating the infectious epidemics that raged during the 19th century. Dr. Thomas L. Bradford's **The Logic of Figures,** published in 1900, compares in detail the death rate in homeopathic versus allopathic (conventional) medical hospitals and shows that death rates per 100 patients in homeopathic hospitals were often one-half or even one-eighth that of conventional medical hospitals.

In 1849 the homeopaths of Cincinnati claimed that in over a thousand cases of cholera only 3% of the patients died. To substantiate their results they even printed the names and addresses of patients who died or who survived in a newspaper. (28) The death rate of patients with cholera who used conventional medicines generally ranged from 40 to 70%. The success of treating yellow fever with homeopathy was so impressive that a report from the United States Government's Board of Experts included several homeopathic medicines, despite the fact that the Board of Experts was primarily composed of conventional physicians who despised homeopathy.

The success of homeopathy in treating modern-day infections is comparable to its successes in treating the infectious diseases of the last century. It is common knowledge that homeopathic practitioners rarely resort to using antibiotics or other drugs commonly given for infectious conditions. Homeopaths, like any good medical professional, will use antibiotics when clearly necessary, but it is worthwhile having alternatives that work.

Homeopath Randall Neustaedter of Palo Alto, California, notes that acute ear infection is "a simple problem to manage with acute (homeopathic) remedies." Common acute ear infection medicines are

Belladonna(deadly nightshade), Chamomilla (chamomille), Pulsatilla (windflower), Ferrum phos (phosphate of iron), andHepar sulph (Hahnemann's calcium sulphide). If the child gets treated with antibiotics and then has recurrent ear infections, homeopathic treatment generally takes more time but is often curative. Such recurrent problems, Neustaedter asserts, require the homeopathic "constitutional approach," the approach where a homeopathic medicine is prescribed based on the totality of present symptoms as well as on an evaluation of the patient's past history. While it is common for parents to prescribe successfully for acute ear infections, it is recommended that children receive professional care for recurrent ear infections or for any chronic condition.

Homeopaths have also found great success in treating a wide variety of other bacterial infections. Throat infections are commonly treated with

Belladonna (deadly nightshade), Arsenicum (arsenic), Rhus tox (poison ivy), Mercurius (mercury), Hepar sulph, Lachesis (venom of the bushmaster), Apis (bee venom), orPhytolacca (pokeroot). Boils which result from bacterial infection are often successfully treated withBelladonna, Hepar sulph, Silica (silica), Arsenicum, or Lachesis. And styes, which usually result from a Staphylococcus infection, are effectively treated with Pulsatilla (windflower), Hepar sulph (Hahnemann's calcium sulphide), Apis (bee venom), Graphities (graphite), and Staphysagria (stavesacre).

Homeopathic Treatment of Viral Conditions

Conventional drugs at least relieve the symptoms of bacterial infection; however, there is little in conventional medicine has to treat most viral conditions. Since homeopathic medicines stimulate the body's own defenses rather than directly attack specific pathogens, homeopathy again has much to offer in the treatment of viral diseases. In recent research on viruses that attack chicken embryos, 8 of the 10 homeopathic medicines

tested inhibited the growth of the viruses 50 to 100%. (31) This research is of particular significance because conventional science knows only a very select number of drugs that have antiviral action, and none of these drugs are as safe as the homeopathic medicines.

Homeopaths commonly treat people suffering from acute and chronic viral conditions. People with viral respiratory and digestive conditions, viral infection of the nervous system, herpes, and even a few with AIDS have reported significant improvement using homeopathic medicines. Sometimes this improvement is dramatic and immediate, though most of the time there is a slow, progressive improvement in the person's overall health.

British physician Richard Savage notes, "While the search goes on to find specific antiviral preparations which are free from side effects, homeopathy can be used effectively to treat patients in four ways:

1) Prophylaxis to generate resistance to the infection;
2) Treatment in the acute illness to reduce the length and severity of the illness;
3) Restoration to revitalize the patient during convalescence; and
4) Corrrection of the chronic sequelae to restore the patient to his former state of health."

1) Prophylaxis

Homeopaths have found that their medicines can prevent and treat various infections. There is not much research demonstrating the efficacy of the homeopathic medicines in preventing viral conditions, though there is some evidence that the medicines can be used to prevent other infectious diseases. Homeopathic microdoses can be used as immunizations; for instance, a single dose of Meningococcin 10c (a homeopathic preparation of Neisseria meningitidis), 18,000 people in Brazil were immunized in 1974. The immunized group had significantly less meningitis infections than a control group.

In the 1800s homeopaths commonly used medicines to prevent or cure what later came to be understood as bacterial or viral infections. Aconite and Ferrum phos were frequently given at the early onset of fever and aches as a way to prevent influenza. Belladonna was the most common medicine for preventing or treating scarlet fever, and Camphora (camphor) was the major medicine used to prevent or treat cholera. The dramatic success of the medicines in the prevention and treatment of these dread diseases gained homeopathy a large following.

Homeopaths commonly find that successful treatment of acute or chronic disease with homeopathic medicines often leads to stronger and healthier people who do not get severely or recurrently ill. During the late 1800s many life insurance companies offered lower rates to people who went to homeopathic physicians because actuarial statistics showed that homeopathic patients were healthier and lived longer. There is also a record that these life insurance companies paid out larger sums of money to homeopathic patients since they lived longer than those under conventional medical care.

2) Treatment of Acute Illness

One of the additional advantages of using homeopathy in treating viral conditions is that homeopathic medicines can be prescribed even before a definitive diagnosis has been made. This is because homeopaths prescribe based on the totality of symptoms, and laboratory work is not always necessary to find the correct medicine. Since some viral conditions are difficult to diagnose even after laboratory tests, one is often able to cure people with homeopathy before a conventional medical diagnosis can be made.

Antibiotics are only helpful in certain bacterial infections, and since viral diseases are particularly common, conventional medicine offers little help. In comparison, homeopaths often successfully treat acute viral conditions such as the common cold, virus-induced coughs, influenza, gastroenteritis (sometimes called the "stomach flu"), and viral hepatitis. Homeopaths use Allium cepa (onion), Euphrasia (eyebright), Natrum mur (salt), or other individually chosen medicines for common cold;

Aconite (monkshood), Belladonna, Bryonia (wildhops), Phosphorous(phosphorous), or others are helpful in treating common viral respiratory infections.

Influenza is a condition which results from viral infection, and it is also a condition that is easily treated with homeopathy. Although individualization of homeopathic medicines is generally a necessity in order to them to work, there are conditions in which certain medicines are particularly effective. Oscillococcinum(pronounced o-cill-o-cock-i-num) is a medicine that homeopaths have found particularly effective in treating the flu. Its manufacturer, Boiron Laboratories of Lyon, France, have found that it is 80-90% effective in treating the flu when taken within 48 hours of onset of symptoms. Its success is so widely known in France that it is the most widely used treatment for the flu in that country.

Interestingly enough, Oscillococcinum is a microdose of the heart and liver of a duck. One might easily wonder how such a substance might ever be beneficial for the flu, but there actually is some sound logic to it. Perhaps you too heard about the research at the Mayo Clinic that showed that chicken soup has some antiviral action. Since chicken soup is basically a broth of the organs of chickens, perhaps Oscillococcinumis effective because it is "duck soup."

Ben Hole, M.D., a practicing homeopath in Spokane, Washington, reports, "Oscillococcinum is impressively successful, but if in the rare situations where it doesn't work or isn't available, there are several other homeopathic medicines which can be used with excellent results when they are individually prescribed." Otherher commonly used homeopathic medicines for the flu include Gelsemium (yellow jasmine), Bryonia,Rhus tox, and Eupatorium perfoliatum (boneset).

3) Restoration from Recurrent or Longlasting Viral Infection

Although conventional medicine offers very little relief for recurrent or longlasting viral infections, homeopaths have observed that microdoses relieve the symptoms of various chronic viral conditions such as herpes simplex, herpes genitales, chronic Epstein-Barr virus, and warts. One cannot claim that homeopathic medicines actually "cure" these viral conditions since the virus is assumed to remain in the body throughout one's life, though homeopaths find that their patients get significantly less severe bouts of infection or do not get any symptoms for long periods of time. The homeopathic approach to treating all these disorders includes a thorough analysis of the person's totality of symptoms. There is thus no one medicine for a specific disease.

4) Correction of the Chronic Sequelae

After a viral (or even bacterial) infection people sometimes feel they are still not back to their same healthy self. Generally, an individually chosen homeopathic medicine is prescribed. If the individualized medicine is not working, homeopaths will occasionally give a potentized dose of the specific virus which previously infected the person as a way to strengthen their ability to regain health. Varicellinum (the chickenpox virus) is commonly given in a safe microdose for symptoms that linger after the chickenpox, and Parotidinum (the mumps virus) is often given for symptoms that linger after the mumps. For the post-herpetic neuralgias, the common medicines are Hypericum (St. John's Wort), Kalmia (mountain laurel), Magnesia phosphoria (phosphate of magnesia), Causticum (Hahnemann's potassium hydrate),Mezereum (spurge olive), or Arsenicum.

A state of weakness after a bout of influenza is often treated with China (cinchona bark), Gelsemium, Sulphur (sulphur), Phosphoricum acidum (phosphoric acid), Cadmium (cadmium), and Avena sativa (oat).

Respiratory infections occasionally linger creating chronic nasal discharge, sinusitis, and ear infections. Some of the common medicines given are

Kali bichromium (bichromate of potash), Kali iodatum (potassium iodide), Kali carbonicum (potassium carbonate), Kali muriaticum (Chloride of potassium), Kali sulphuricum (potassium sulphate), Silica, Mercurius, Pulsatilla, Alumina (aluminum), Nux vomica (poison nut), and Conium (hemlock).

7. Conclusion

Overall review makes us conclude that Homoeopathic drugs used in infections are not antibiotics but are Similbiotics (similar to bacteria) i.e. we administer the patient, medicine which is capable of producing similar symptoms in patient, as produced by bacteria hence stimulating defence mechanism of host which kills the bacteria. This is a unrevealed area of research where in more research needs to follow which would promise a new hope in cases where bacteria have become resistant to each every known antibiotic. Rampant unindicated, inappropriate and uncalculated uses of Antibiotics are doing greater harms to humans.

References

[1] Rene Dubos, Mirage of Health, San Francisco: Harper and Row, 1959, 93-94.
[2] Marc Lappe', When Antibiotics Fail, Berkeley: North Atlantic, 1986, xii.
[3] William Crook, The Yeast Connection, New York: Vintage, 1986.
[4] Lappe', xiii.
[5] Lappe', xvii.
[6] R. Cave, editor. "Those Overworked Miracle Drugs," Newsweek, August 17, 1981, 63.
[7] R.B. Sack, "Prophylactic Antibiotics? The Individual Versus the Community," New England Journal of Medicine, 300, 1979, 1107-1108.
[8] Claude Bernard, An Introduction to the Study of Experimental Medicine, New York: Dover, 1957 (originally written in 1865), 160-163.
[9] Jonas Salk, Mandala Holistic Health Conference, San Diego, September, 1976. Proceedings published inJournal of Holistic Health, 1976.
[10] F.L. Buchem, "Therapy of Acute Otitis Media: Myringotomy, Antibiotics, or Neither? A Double-Blind Study in Children," Lancet, 883, October 24, 1981.
[11] J. Thomsen, "Penicillin and Acute Ototis Media: Short and Long-term Results," Annals of Otolology, Rhinology, and Laryngology. Supplement. 68:271, 1980.
[12] E.M Mandel, et.al., "Effifacy of Amoxicillin with and without Decongestant--Antihistamine for Otitis Media with Effusion in Children," New England Journal of Medicine, 316:8, February 19, 1987, 432-437.
[13] Buchem.
[14] Randall Neustaedter, "Management of Otitis Media with Effusion in Homeopathic Practice," Journal of the American Institute of Homeopathy, 79(3-4)87-99, 133-140, September- December, 1986.
[15] M. Diamant, "Abuse and Timing of Use of Antibiotics inAcute Otitis Media," Archives of Otolaryngology, 100:226, 1974.
[16] D. Kilby, "Grommets and Glue Ears: Two Year Results," Journal of Laryngology and Otology, 86:105, 1972. M.J.K.M. Brown, "Grommets and Glue ear: A Fie-year Followup of a Controlled Trial," Journal of Social Medicine, 71:353, 1978. T. Lildholdt, "Ventilation Tubes in Secretory Otitis Media," Acta Otolaryngology. Supplement. 398:1, 1983.
[17] Bisno, 1983. M. Land, "Acute Rheumatic Fever: A Vanishing Disease in Suburbia," JAMA, 249:895-898, 1983.
[18] "Pediatricians Urge Confirmatory Test for Suspected Strep Throat," Medical World News, January 12, 1987, 42.
[19] Alan L. Bisno, "Where Has All the Rheumatic Fever Gone?" Clinical Pediatrics, December, 1983, 804-805.

[20] A. Gastanaduy, "Failure of Penicillin to Eradicate Group A Streptococci During an Outbreak of Pharyngitis," Lancet, 8193:498- 502, 1980. E. Kaplan, "The Role of the Carrier in Treatment Failures After Antibiotic Therapy for Group A Streptococci in the Upper Respiratory Tract," Journal of Laboratory and Clinical Medicine, 98:326-335, 1981.
[21] Alan L. Bisno, The Concept of Rheumatogenic and Non-rheumatogenic Group A Stregtococci," in Red:Streptococcal Diseases and the Immune Response, New York: Academic Press, 1980, 789-803. Alan L. Bisno, "Streptococcal Infections that Fail to Cause Recurrences of Rheumatic Fever," Journal of Infectious Disease, 136:278-285, 1977.
[22] A. George Veasy, et.al., "Resurgence of Acute Rheumatic Fever in the Intermountain Area of the United States," New England Journal of Medicine, 316,8, February 19, 1987, 421-426.
[23] Health Facts, 12, 96, May, 1987, 2.
[24] Rene Dubos, Mirage of Health, New York: Harper and Row, 1959. Thomas McKeown, The Role of Medicine, Princeton: Princeton University, 1979.
[25] Vital Statistics of the United States, 1982, Life Tables, volume II, section 6, Hyattsville, Md.: National Center for Health Statistics, 13.
[26] Rene Dubos, Man Adapting, New Haven: Yale University Press, 1965, 346.
[27] Thomas L. Bradford, The Logic of Figures or Comparative Results of Homoeopathic and Others Treatments, Philadelphia: Boericke and Tafel, 1900.
[28] Ibid., 68.
[29] Harris L. Coulter, Divided Legacy: The Conflict Between Homoeopathy and the American Medical Association, Berkeley: North Atlantic, 1973, 302.
[30] Neustaedter, 87.
[31] L.M. Singh and Girish Gupa, "Antiviral Efficacy of Homoeopathic Drugs Against Animal Viruses," British Homoeopathic Journal, 74(3):168-174, July, 1985.
[32] Richard Savage, "Homoeopathy: When No Effective Alternative," British Homoeopathic Journal, 73(2):75-83, April, 1984.
[33] "Sesenta mil Brasilenos se Vuelcan en Farmacias Homeopaticas: Cunde la Meningitis," (front page headline), Excelsior, July 29, 1974.
[34] Transactions of the New York State Homoeopathic Medical Society, 1867, 57-59.
[35] "Report of Life Insurance Committee," Transactions of the American Institute of Homoeopathy, 1897, 53-58; 1898, 81-90.
[36] Victor Gong, Understanding AIDS: A Comprehensive Guide, New Brunswick, NJ: Rutgers University, 1985, 77-89.
[37] Richard Smith (editor), Newsweek, August 12, 1985, 22.
[38] Physicians' Desk Reference, Oradell, N.J.: Medical Economics Co., 1985.
[39] Hans H. Neumann, "Use of Steroid Creams as a Possible Cause of Immunosuppression in Homosexuals," New England Journal of Medicine, 306,15, 935, April 15, 1982.
[40] Personal Communication. For additional information, see Mike Strange, "Aid: What Homoeopathy Can Offer," The Homoeopath: Journal of the Society of Homoeopaths, 6,3, 1987, 117-124.
[41] Singh and Gupa.42. R.G. Gibson, et.al., "Homoeopathic Therapy in Rheumatoid Arthritis: Evaluation by Double-Blind Clinical Therapeutic Trial," British Journal of Clinical Pharmacology, 1980,9, 453- 459.
[42] Contributed by Dr. M. Maureen Dale and Dr. Joel Mandelstam (MS Encarta Encylopædia 2002).
[43] Homœopathy and Adverse Reactions of Allopathic Drugs by Dr. Sayeed Ahmad.

Author Profile

Dr. Don J Scott Berin G BHMS (MD), PG Scholar, Department of Materia Medica, White Memorial Homoeopathic Medical College, Veeyanoor, Attoor, KK Dist, Tamilnadu, South India. ORCID ID : 0000-0002-5636-2794 EMAIL: *scottberin[at]gmail.com*