

Antibiotics: Use Judiciously or Better Start Looking for Alternatives

“Antibiotics: Need for Alternatives”

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COLUMN ARTICLE

Honoring Fleming and associates with Nobel Prize in Physiology or Medicine (1945) for their work on first antibiotic “Penicillin” spread a new wave of hope in medicinal research. A number of antibiotics are produced till date in order to get rid of pathogenic bacteria, but it is now well accepted that there is not much hope left as far as treatments with antibiotics are concerned. Increased resistance towards antibiotics prompts us to think alternatives of antibiotics. Scientists warned that antibiotics might become useless in near future. Look around, people are nowadays practicing “self-medication”, which is a risky way of treatment and using incorrect medicine in an incorrect dose will certainly make the situation worst. The irrational use of antibiotics by self-medication or by doctor’s prescription (mainly in developing world) is responsible for the increased resistance towards antibiotics. So, the question arises: *what should we do?* The solution to this problem could be to stop irrational use of antibiotics and avoid self-medication.

Now, the next question arises: *what will happen when all microbes got resistance towards antibiotics? Are there any alternatives of antibiotics available?* Answer to these questions cannot be straightforward, as we are not sure what future hold for us? However, there are some paradigms where scientists are working. One such example is “Microbiome or Microbiota”. A microbiota can be defined as “the

ecological community of commensal, symbiotic and pathogenic microorganisms that share our body space”. In simpler terms we can say that microorganisms present in our body plays an important role in health as well as diseases. Every human being might possess a characteristic microbiome and it is microbiome of a person which makes him either more prone to diseases or might help him in maintaining a healthy body. *But how do we know what should be the characteristic features of an ideal microbiome?* In view of this and other related queries, “Human Microbiome Project” was initiated in 2008 by National Institutes of Health (NIH), USA, focused towards designing and development of new tactics to target microbiome. The results of this project will certainly open new horizons in the field of medicinal research and you never know we might find an alternative to antibiotic.

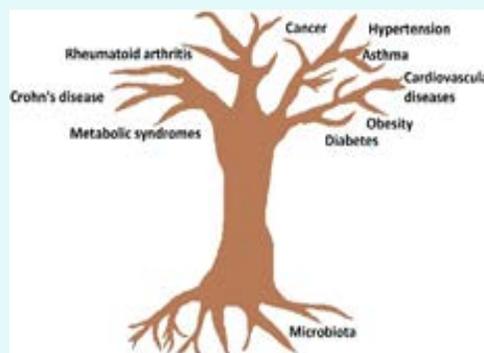


Figure 1: Showing a plant of diseases.

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