Infectious diseases
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Some Technologies and Methods for Prevent and Treatment of Infectious Diseases

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Abstract

Infectious diseases are caused by many microorganisms such as bacteria, viruses, parasites and fungi. The methods for controlling of infectious diseases includes, using of transgenic plants, Targeted therapy of infections by using nanoparticles for production of drug with high activity, DNA technology, Probiotic bacteria and finally fighter of antibiotics resistant.

Background

Infectious diseases are diseases that caused by pathogenic micro-organisms, Which includes bacteria, viruses, parasites or fungi. Spread of diseases from person to another can be direct or indirect methods. Other infectious diseases can transmitted from animals to human and cause diseases which called Zoonotic diseases.

Technologies and Methods:

1- Transgenic plants: The control of disease was achieved by genetically modified plants, The researchers hope for producing toxic molecules carrying insect and for producing vaccine with low cost than conventional vaccines.
2- Targeted Therapy: Drug delivery system (DDS) was suggested for passive targeting of infected cell of the mononuclear phagocystic system to enhance therapeutic index of antimicrobials in the intercellular environments and low side effect comparable with antibiotics.
3- DNA Technology: Developing of new forms of chemotherapy and vaccines can be made by genome sequencing of major infectious agent such as bacteria, virus and other infectious agent. Recombinant DNA technology was used for producing of pure antigen for hepatitis B virus in other organisms for developing of safe vaccines.
4- Probiotics using for infectious disease treatment: A good bacteria was used for describe probiotics or as a replacement for native gut bacteria. The probiotics was identified by World health organization as live micro-organisms that when consumed in adequate amount as part of food, confer a health benefit on the host.
5- Fighter spread of Antibiotic resistant: For fighter spread of antibiotic resistances:

For patients:

1- Antibiotics was taken exactly as the doctor prescribe, the same dose.
2- The patient must be taken of antibiotics as prescribed by doctor, and not share with other antibiotics or use anther.
3- The antibiotic must be not saved for other illness and discard any leftover medication that give after course of treatment was finished.
4- avoid the asking on antibiotics when your doctor thinks do not need them.

For Doctors and Nurses:

1- The types of drug resistant infection in your facility should be known when it occurred and make immediate alerts when identified by laboratory.
2- Make alert when the patient with drug resistant infections transfer from place to anther.
3- The patient should be protected from drug resistant infections.
4- The relevant guidelines and precautions should be followed at every patient encounter.
5- Wisely antibiotics prescribe.
6- The temporary medical device such as catheters and ventilators should be removed after the completion of the need for it .

Results

Developing and spread of infectious diseases can be prevented by using new technology and methods and these method must be also developed and renewal for new infectious agents. These method must be provide:

1- production of safe and new vaccines.
2- production of drug with higher activity and low cost.
3- using of good bacteria for treatment of disease.
4- Fighter and prevent of antimicrobial resist microbes.

Conclusions

Infectious diseases should be prevented by new methods, technologies and drugs which having low cost with higher activity. Fighter of antimicrobial resist microbes must be achieved.

References

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