

Otorhinolaryngology

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Editorial

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Editorial

The Otorhinolaryngology is a wide field study which includes different types of scientific branches. The microbiological aspect of otorhinolaryngology has its own properties and concerns. The presence of complicated populations of microbial normal flora in the related areas of ears, nose and larynx makes it hard to have an accurate diagnosis when the host suffers from an infectious disease in his/her ears, nose and/or larynx. So, the best option for an appropriate diagnosis is the use of advanced molecular diagnostic techniques. Among different types of advanced molecular diagnostic tools, the polymerase chain reaction and DNA microarray are recommended.

The long term of otorhinolaryngology is terminologically constructed from tree roots and a suffix including ot/o (Ear [outer and inner side]), rhin/o (nose), laryng/o (larynx) and -logy (study of). This study encompasses a vast range of scientific branches including anatomy, physiology, biology and microbiology. The natural complex of otorhinolaryngology is an interesting field for different types of scientists. From our view, the microbiological otorhinolaryngology covers the human body properties and the related micro biome. Interestingly, bacteria and fungi represent the most important parts of the normal flora populations while the pathogenic microorganisms involve bacterial, fungal and viral agents. Any variation in the micro flora natural balance results in acute to chronic infections within the areas of the host's ears, nose and/or larynx. As these areas have their own special situations, so the process of diagnostics may be harder and longer than that must be.

Today, there are several appropriate diagnostic tools which can be used for detection and identification pathogenic microbial agents. The diagnostic methodologies are consisted of classic and advanced techniques. As we know, the classic diagnostic tools in

microbiology are time consuming and their results are not enough sensitive and specific [1-5].

In contrast to classic microbiological diagnostic techniques, the advanced molecular ones are accurate, easy to use, and fast with high sensitivity and specificity. Regarding advanced molecular diagnostics, there are several options for the users; but polymerase chain reaction (PCR) is an accessible tool for everyone around the world. The PCR technology is an appropriate molecular diagnostic tool when you are trying to detect or identify a limited range of microbial agents within limited clinical samples. In the case of huge number of clinical specimens, the use of PCR technique is going to be very EXPENSIVE [3,6,7]. A proper alternative for PCR when your clinical samples include hundreds or thousands is microarray technology. DNA microarray technology is a suitable molecular diagnostic technique for detection and identification of a wide range of pathogens [5,8-10].

DNA microarray technology is a proper advanced molecular diagnostic technology which is accurate, fast, with high sensitivity and specificity. The DNA microarray technology is recommended for complicated clinical samples obtained from ear, nose and larynx regions. Moreover, as the multidrug resistant microbial pathogens are rising up in recent decade, the simultaneous recognition of antimicrobial resistant and sensitive pathogens is possible via the application of DNA microarray [4,5,8-11].

Conflict of interest

The authors declare no conflicts of interest.

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