



Investigating the incidence and control of hospital infections

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Abstract

Introduction:

Mostly generating within the environment of the hospital, hospital infection refers to those kinds of infection which occur when the patient is hospitalized; the patient is not initially infected; rather he picks the infection up while being hospitalized in the hospital at least for 48 hours.

Methods:

In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies Investigating the incidence and control of hospital infections. In this review, the papers published until early January 2017 that were conducted to study the Investigating the incidence and control of hospital infections were selected.

Findings:

An infectious disease that occurs in a person after being admitted to a hospital or after birth in a hospital, in which the person has not been infected before being admitted to hospital during the period of the disease, is called a hospital infection. Since the incubation period is, on average, 2-3 days, hospital infections are reported after 48 hours or the first 72 hours of hospitalization; consequently, patients whose infections appear prior to the passage of 48 hours of hospitalization are not usually categorized in this group.

Discussion and conclusion:

Some important recommendations which might help alleviate the burden of this serious healthcare system problem include trying to improve the quality of nursing care, providing particle instruction for the staff, continuous monitoring of hospital infections, provision of facilities, implementation of infection control programs, prioritizing the hospital departments for the precise application of health measures, emphasizing preventive measures such as through hand cleansing, and designing and advertising informative training programs through mass media.

Keywords: incidence ,control ,hospital infections

Introduction

Mostly generating within the environment of the hospital, hospital infection refers to those kinds of infection which occur when the patient is hospitalized; the patient is not initially infected; rather he picks the infection up while being hospitalized in the hospital at least for 48 hours. However, the infection may also appear after the patient's discharge(1). In addition, infections acquired by personnel in the hospital environment are also categorized under the label of hospital infections(2). In addition to interfering with primary and secondary allocated sources, these kinds of infections direct management policies towards controlling the spread of infection within health care centers(3). These kinds of infections are among major health problems within healthcare centers of both developed and developing countries(4). Hospital infections cause mental stress, disability, paralysis, and considerable reduction of the quality of the life of the patient(5). Studies have shown that hospital infections are one of the leading causes of death in all countries, resulting in prolonging the length of patient hospitalization and imposing huge costs on, both, patients and healthcare system(6). These infections cause increased illness and mortality, huge costs, and prolongation of the hospitalization period for the patients(7). The hospitalization period increases from 1 to 30 days, depending on the kind of the infection; this problem is more serious in countries which are struggling with insufficient space, where a patient might even die due to scarcity of required hospitalization beds and facilities(8). Since the treatment of a hospital infection imposes huge costs on the healthcare system, it seems that the implementation of an infection control program, or even a small but effective change in the performance of healthcare professionals in controlling hospital infections, can be very useful from the perspective of health economics.

Methods

In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies Investigating the incidence and control of hospital infections. In this review, the papers published until early January 2017 that were conducted to study the Investigating the incidence and control of hospital infections were selected.

Findings

An infectious disease that occurs in a person after being admitted to a hospital or after birth in a hospital, in which the person has not been infected before being admitted to hospital during the period of the disease, is called a hospital infection(9). Since the incubation period is, on average, 2-3 days, hospital infections are reported after 48 hours or the first 72 hours of hospitalization; consequently, patients whose infections appear prior to the passage of 48 hours of hospitalization are not usually categorized in this group(10).

Common pathogens causing hospital infections:

Bacteria: Basically, any breed of bacteria in the hospital can lead to hospital infection, but the most commonly occurring bacterial infections are opportunistic enterocytes (especially E coli) that live in the human gut and can cause infection in case of exposure to sterile areas of the body(11). Staphylococcus aureus lives on the skin surface of 20% of adults, and can, under appropriate conditions, cause surgical ulcer infections or lung infections(12). Pseudomonas aeruginosa lives in the body of about 5% of adults; it is easily replicated in water and wet environments, such as distilled water or damp tubes and can cause deadly infections in people whose immune system does not function properly; particularly, it easily passes through burn patients and causes a considerable rate of mortality(13).

Viruses: The most common viruses that cause infectious diseases are enteroviruses, influenza viruses, hepatitis B and hepatitis C and AIDS(14).

Protozoans: Like Toxoplasma gondii and Pneumocystis carini, these organisms can cause cause particularly severe infections in those whose immune system is severely impaired(15).

Discussion and Conclusion

Regarding the fact that hospital infection is a known health problem that is becoming increasingly important due to changes in the treatment and care of patients and given the fact that the pace of the developmental processes of building hospitals and health centers is excruciatingly low in our country, the significance of the under-study topic should not be overlooked(16). Due to resource constraints, governments need to identify the most important health needs by monitoring the health of the community and try to increase the quality of provided

services through the integration of effective interventions. Based on the analysis of reviewing conducted studies all over the country and considering the prevalence rate of various infections, it can be concluded that the overall prevalence of nosocomial infections is, relatively, high in Iran(17). In spite of the growing development of health standards and the development of hospitals in recent years, an overview of the outbreaks reveals a relatively uneven trend between this developmental pace and different types of hospital infections in different parts of the country; this issue needs to be anatomized by healthcare section policymakers in order to find an appropriate solution for the development of effective and evidence-based training and control programs to reduce this health problem in Iran(18). Some important recommendations which might help alleviate the burden of this serious healthcare system problem include trying to improve the quality of nursing care, providing particle instruction for the staff, continuous monitoring of hospital infections, provision of facilities, implementation of infection control programs, prioritizing the hospital departments for the precise application of health measures, emphasizing preventive measures such as through hand cleansing, and designing and advertising informative training programs through mass media.

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