سامية محمد مصطفى



شبكة المعلومات الحامعية

# بسم الله الرحمن الرحيم



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سامية محمد مصطفي



شبكة العلومات الحامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





سامية محمد مصطفى

شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

# قسو

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



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سامية محمد مصطفى

شبكة المعلومات الحامعية



بالرسالة صفحات لم ترد بالأصل



### NOSOCOMIAL INFECTIONS AMONG LEUKAEMIAS AND LYMPHOMA PATIENTS UNDERGOING CHEMOTHERAPY AND IRRADIATIO

#### THESIS

Submitted to The High Institute of Public Health in partial fulfillment of the requirements for the Degree of Doctor of Public Health

(Microbiology)



## Wafaa Muhamed Kamel Baks

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### **SUPERVISORS**

#### Prof. Dr. Laila El Attar

Professor of Microbiology
Microbiology Department
High Institute of Public Health
Alexandria University

#### Prof. Dr. Nier M. El-Ghamry

Professor of Clin. Oncology

Nuclear Medicine

Faculity of Medicine

Alexandria University

#### Dr. Aida Aly Nazeir

Professor of Haematology and Internal Medicine
Internal Medicine Department
Faculty of Medicine
Alexandria University

#### Dr. Moustafa Mourad

Assist. Professor of Microbiology
High Institute of Public Hearth
Alexandria University

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#### Dr. Abd El-Fattah I/v

Assist. Professor of Micretically

High Institute of Public Head

Alexandria University

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## INTRODUCTION

#### INTRODUCTION

#### **Nosocomial Infections**

Nosocomial infections are hospital acquired infections that are neither present nor incubating at the time of admission. (Nosokomeion = hospital).<sup>(1,2)</sup>

As most nosocomial infections are identified as caused by vegetative bacteria, it is by convention that hospital-acquired infections are those that become manifest after 48 hours from admission. For organisms with longer incubation periods (e.g. *Legionella* or some viruses), infections are not called nosocomial after 48 hours, but only at a time beyond their incubation. (3,4)

The first stage in the history of nosocomial infections have begun with the investigations of Semmelweis in 1850 when he made the unpopular suggestion that puerperal fever was carried on the hands of physicians who came directly from attending an autopsy to the delivery ward without washing. (5,6) But interest in nosocomial infection began long before microorganisms have been implicated as their cause and probably date back to the first hospital, room, or gathering sick people in a geographic area together, therefore, it has occurred for the first time when one person was cared for by another. (7)

Despite the many advances in modern medicine, patients are at increased risk for acquiring infections merely by being hospitalized. (1)

Nosocomial infections represent an important endemic problem affecting about 5% to 10% of all hospitalized patients. (8) In other words 1 in every 7 patients may acquire an additional infectious disease after hospital admission. (2)

Nosocomial infections result in numerous adverse outcome and add significant morbidity, mortality, and economic burden to those expected from the underlying disease alone. (3,9)

The Center of Disease Control and Prevention (CDC) in 1993 has conducted an ongoing collaborative surveillance system called the National Nosocomial Infections Surveillance System (NNIS), among selected hospitals in the United States to obtain national data on nosocomial infections where they found that the average nosocomial infection prolongs hospital stay by about 2-3 days and this results in excess hospital stay costs of more than \$10 billions annually. (3,10)

# Factors Associated with Nosocomial Infections

For the development of nosocomial infections three components are necessary, a source of infectious organisms, a mean of transmission, and a susceptible host.<sup>(11)</sup>

The mechanisms and interactions of these three components are often referred to as the chain of infection (Fig 1). When all components are present under the right circumstances, an infection develops.<sup>(12)</sup>

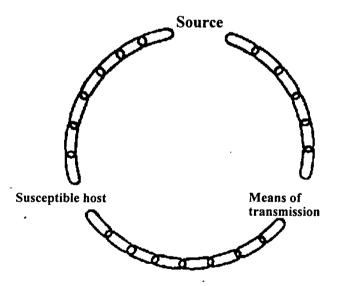


Figure (1): For an infection to occur, all three parts of the infection chain must be present, and all criteria must be met<sup>(11)</sup>

#### I- Sources of infection

Hospitals are unavoidably reservoirs of virulent and opportunistic pathogens which pose no danger to normally healthy persons or to persons