KNOWLEDGE, ATTITUDE AND PRACTICE STUDY FOR MISCONCEPTION OF CONTRAINDICATIONS OF VACCINATION AMONG HEALTH CARE PROVIDERS AND CONSUMERS

Thesis

Submitted as a partial fulfilment of the requirements of the Master degree in Epidemiology.

By

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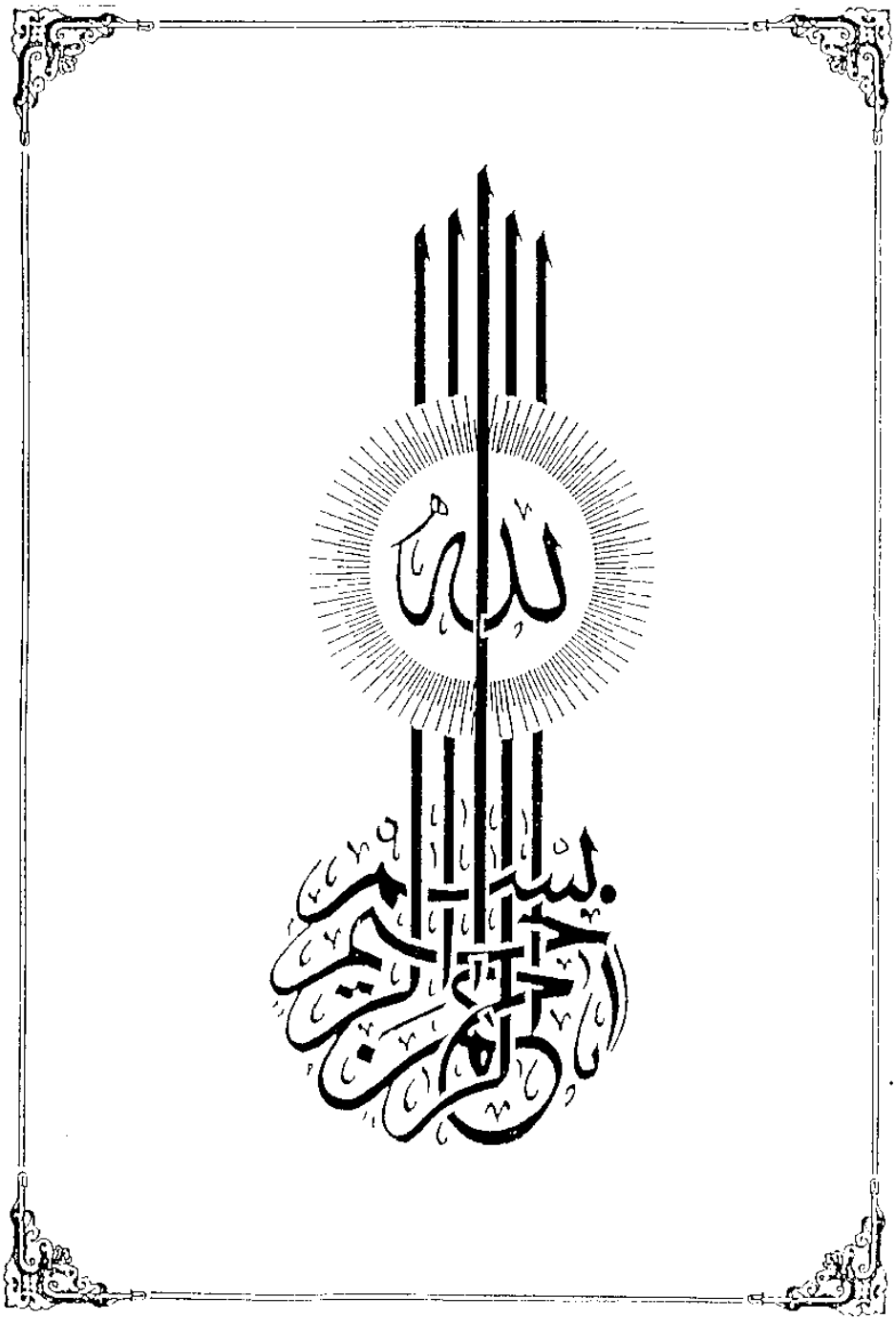

Contents

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List of abbreviations

AIDS	Acquired immunodeficiency syndrome
BCG	Bacille Calmette Gerin
CDC	Centres of disease control
CP	Cerebral palsy
DOH	Official department of health memorandum for guidance
DPT	Diphteria Pertussis Tetanus
DPVC	doctor of public vaccination centre
DT	Diphteria Tetanus
E.P.I.	Expanded Programme on Immunization
GPs	General practitioners
HB	Hepatitis B
HBCV	Hepatitis B conjugate vaccine
HBSAg	Hepatitis B surface antigen
KAP	Knowledge attitude practice
MMR	Measles Mumps Rubella
O.P.V.	Oral Polio vaccine
PCPs	Primary care physicians
PHC	Primary health care
S.d.	Standard deviation
SPSS	Statistical package for social science
SSPE	Sclerosing panencephalitis
T.B.	Tuberculosis
T.T.	Tetanus toxoid
WHO	World Health Organization

INTRODUCTION

WHO established the E.P.I. in 1974 to reduce morbidity and mortality by making immunization services available for all children of the world by 1990 (WHO, 1985a).

Vaccinal coverage is the most important factor in the eradication of an infectious disease and the effectiveness of an immunization programme. Coverage is defined as the percentage of children under the age of one year who have received at the correct age, the correct number of doses of the vaccine reffered to (WHO, 1988a).

One of the problems facing the E.P.I was the general public's lack of awareness and knowledge of immunization (Vittachi, 1985). Another problem was a scarcity of skilled personnel. A first need was to train managers at the national level. Training courses for mid level managers and peripheral health workers soon followed. (WHO, 1985a).

Misconceptions about contraindications to vaccine use are frequently the cause of unnecessary delay in administring vaccines. The established contraindication to active immunization are concurrent moderate or severe illness, a previous anaphylactic reaction to the specific vaccine, and a severe hypersensitivity reaction to a vaccine constituent such as egg protein or antibiotic . In addition, live-virus vaccines should usually not be given during pregnancy or to immunocompromised patients (Peter G., 1992 Dec.).

We aim by this study to determine the misconception of contraindications of vaccination in Egypt with an ultimate goal to recommend educational programs directed at increasing both providers'and consumers' knowledge about vaccination contraindications must be developped .

AIM OF THE STUDY

The aim of the present work is to study knowledge, attitude and practice of health care providers and consumers towards contraindications of vaccination.

The ultimate goal of the present study is to convince health authorities to correct the misconceptions in knowledge, attitude and practice of health care providers and consumers towards contraindications of vaccination.

REVIEW

Expanded Programme on Immunization E.P.I.:

The expanded programme on Immunization (E.P.I) is a programme adopted by the World Health Organization (WHO) in 1974.

In includes th immunization of children with vaccines to protect them against six target diseases; Tuberculosis (T.B.), Tetanus, Measles, Diphteria, Poliomyelitis and Pertussis (Whooping cough). These are very serious infectious diseases which can kill or cripple many children, even though other children survive and become immune. We can prevent these diseases by immunization.

It also includes immunization of pregnant women with Tetanus Toxoid TT vaccine . This protects mothers against Tetanus and protects new born babies from neonatal Tetanus.

The objectives of E.P.I. are to reduce the incidence of the six diseases and to reduce the morbidity and mortality rate from these disease by making immunization services available for all children of the world by 1990. (WHO 1990).

Among the nine goals to be achieved before the year 2000 in Egypt, Polio shall be eradicated from Egypt by 2000 and elimination of neonatal Tetanus by 2000 (WHO 1990).

What are vaccines? :

Vaccines are weapons to prevent diseases. They may be made of microorganisms similar to the ones that cause diseases, or to toxins produced by the organism but changed to toxoid so that they cannot harm people.

Immunization is giving the child a specific vaccine to protect him against a specific disease as a result of te developed immunity. (WHO, 1990).

Immunization is one of the most powerful cost effective weapon of modern medicine.

Immunization services, however, remain tragically underutilized in the world especially in the developing countries (WHO, 1985).

Side effect of vaccines:

Modern vaccines are safe and effective but not completely so. Adverse event have been reported following the administration of all vaccines. These events range from frequent minor local reactions to extremely rare severe systemic illness such as paralysis associated with O.P.V.

Despite the high safety of the vaccines used in the Expanded Programme on Immunization (E.P.I.), complications do occur. Although their rates are difficult to estimate precisely, it is known that

they are far less frequent than the complications caused by the disease themselves (Galazka et al., 1984). They concluded that the decision to withhold the benefit of immunization from an eligible child should not be taken lighlty, particularly in areas where access to immunization services is limited and the incidence of the target diseases are still high.

Side effect of BCG vaccine:

Sometimes there is a severe local inflammation or a deeper abscess. The most common complication; suppurative lymphadenitis, has been reported in 0.1% to 4% of immunized children under two years of age.

Disseminated infection with the BCG bacillus and BCG osteitis are the most serious but rare complications associated with severe abnormalities of cellular immunity.

Adverse reaction	Estimated adverse reaction rate/100000 vaccinees
- Disseminated BCG infection	< 0.1
- Osteitis/osteomyelitis	< 0.1-30
- Suppurative adenitis	100-400

Side effect of DPT vaccine:

Fever and mild local reactions are commmon. It is estimated that 2-6% of vaccinees develop fever of 39°C or higher and that 5-10% experience swelling and induration or pain lasting more than 48 hours at the site of injection.

The most severe complications following DPT immunization are neurological and are thought to be due primarily to the pertussis component of the vaccine. It was estimated that a severe neurological illness (encephalitis, encephalopathy, prolonged convulsions, infantile spasms and Reye's syndrome) attributable to DPT occurred once in 110000 DPT immunization doses and that lasting neurological damage occurred once in 310000 immunization doses.

The hazards of DPT immunization must, however, be balanced against the risks of remaining unimmunized. Convulsions, for example, occur more often during whooping cough than following DPT immunization and pertussis may be a cause of encephalopathy or death.

Side effects of Polio vaccine:

Serious adverse reactions to inactivated poliomyelitis vaccine currently in use have not been reported.

Paralytic polio is the only serious adverse reaction associated with oral poliomyelitis vaccine. The risk is increased in

immunodefficient children. The risk of vaccine-associated paralysis was estimated to be about one case per million vaccinees and the risk of a close contact of a vaccinee developing paralytic polio was one case per 5 million doses of vaccine.

Side effects of Measles vaccine:

Severe reactions following measles immunization are rare. In the United States, neurological disorders, including encephalitis and encephalopathy, have been reported once for approximately every million vaccine doses.

About 5-15% of measles vaccinees develop at temperature of 39.4°C or higher ,beginning on the sixth day and usually lasting one or two days. Transient rash may occur in about 5% of vaccinees.

Measles immunization, by preventing measles, reduces the risk of developing subacute sclerosing panencephalitis (SSPE) (Galazka, et al., 1984).

Vaccine Coverage:

Vaccination coverage is the most important factor in the eradication of an infectious disease and the effectiveness of an immunization programme.

Coverage is defined as the percentage of children under the age

of one year who have received at the correct age, the correct number of doses of the vaccine referred to (WHO, 1988a).

The goal of achieving 90% immunization coverage for all antigens by the year 2000 is a critical objective of E.P.I and must be seen as the basis for controlling all the target diseases and to meet the aims of measles reduction, neonatal tetanus elimination and poliomyelitis eradication. This challenging goal will require additional resources as efforts focus on identifying and accessing high-risk, difficult to reach and underserved population (WHO, 1992).

At the present levels of corerage , it is estimated that immunization programmes prevent about 3.2 million deaths annually from measles, neonatal tetanus and pertussis as well as roughly 440000 cases of paralytic poliomyelitis . Nevertheless, there is an urgent need to continue to increase immunization coverage levels as indicated by the approximately 1.7 million deaths per annum caused by these diseases and the 120000 cases of paralytic poliomyelitis. Furthermore the 1-2 million deaths attributable to viral hepatitis B underline the need to add new vaccines (hepatitis B vaccine)to immunization programmes. (WHO, 1992).

One of te problems facing te E.P.I was the general public's lack of awareness and knowledge of immunization (Vittachi, 1985).

Another problem was a scarcity of skilled personnel. A first need was to train managers at the national level. Training courses for mid