Implication of Powdered Milk in Staphylococcal Intoxication: A Case Study

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ABSTRACT
Foodborne diseases are diseases and acute evolution occurs mostly with digestive signs to more consumers of food contaminated with specific pathogens. Staph food poisoning due to consumption of contaminated food is staph enterotoxins enterotoxogeni producing certain temperature conditions. Enterotoxins are 7 types, depending on the type of contaminant stafiloc strain, so enterotoxin detection and diagnosis of the disease is relatively difficult. In the study examined the evolution of an episode of Foodborne staphylococcus in a school unit where 35 children fell ill between 252 consumers of milk reconstituted from milk powder. Duration of evolution was 4-10 hours.

Keywords: powdered milk, ELISA test, Staphylococcus aureus intoxication.

INTRODUCTION
Staphylococcal food poisoning Staphylococcal toxins are produced in food preformed by Staphylococcus strains that contaminate food. Enterotoxic Staphylococcus aureus contaminate certain foods (milk, cheese, cream) and produce heat resistant enterotoxin. Based on antigenic properties and preparation of antisera is estimated that there are 7 types of enterotoxin A, B, C₁, C₂, C₃, D, E. Some strains of stafiloci produce several types Staphylococcus enterotoxins. Staphylococcus enterotoxins production is genetically encoded, and these are resistant to gastric acid and at a temperature of 100 ° C for 30 minutes, it means that the food does not become contaminated with staphylococcal enterotoxin harmless by boiling. These enterotoxin have action on the central nervous system, which explains the severe vomiting that occur in food poisoning. It is estimated that approximately 20-30% of food poisoning are caused by Staphylococcal enterotoxins. Staphylococcus aureus is the main agent of staphylococcal food intoxications. It is estimated that about 20-30% of food intoxications are produced by Staphylococcal enterotoxins. The incubation period is 12-36 hours, nut can raise to a range of 4-48 hours.

AIMS AND OBJECTIVES
The present work aimed the microbiological analysis of powdered milk offered in kindergarten children diet.

MATERIALS AND METHODS
There was examined the evolution of Staphylococcus aureus food poisoning to children of kindergarten age. A group of 35 children of 252 subjects got ill after consuming milk reconstituted from milk powder. The period of incubation was between 4-10 hours. Elisa test (Bommeli
Diagnostics Company, Switzerland) and brain-heart infusion medium (BHI) for *Staphylococcus* were used in analysis of 25 samples of powdered milk. The working method followed exactly the steps and indications of the kit package.

**RESULTS AND DISCUSSION**

The number of intoxicated persons was 35 including children between 0-9 years, and 2 persons of the personnel, according to Table 1.

**CONCLUSION**

It was found that one of batches of the powdered milk consumed after reconstitution was insufficient thermally processed and contaminated with *Staphylococcus aureus* (10,000 bacteria/mL). Intoxicated persons consumed all the same batch of reconstituted powdered milk. The most important risk epidemiology factor in the onset of this disease is administering food left at room temperature for a long period, a situation that allows staph release of toxins before eating. To prevent staph food poisoning recommend keeping food cold processed or to be processed to avoid production of *Staphylococcal enterotoxins*. Is also recommended eliminating the consumption of foods high loads detected bacterial germs, in this case *Staphylococci*. It is also recommended health education for the population especially those who manipulate food.

**REFERENCES**


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