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Occurrence of foodborne pathogen in some types of soft cheese in local market

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7- Summary

This study was carried out to investigate isolations and serological identification of pathological pathotypes of *Escherichia coli* from Kariesh, Tillage, and Damietta types of cheeses in El _Gharbia governorate; as well as molecular identifications of some virulence genes from the isolated strains. One hundred and fifty samples of soft cheese, including 50 of each Kareish cheese, Damietta cheese, and Tallga cheese were collected from supermarkets, dairy shops, and street vendors at El- Gharbia governorate.

Microbiological examination of the examined samples revealed that *E. coli* could be detected in 54%, 42%, and 32% of examined Kareish cheese, Damietta cheese , and Tallage cheese samples, respectively. Serological typing of isolated strains of *E. coli* proved that they belong to Six Serotypes : O1119, O111, O86, O18, O128, and O124).

The Serologically Identified Pathotypes Of *E. coli Isolates* From Some Types Of Soft Cheese Were: (O119) **(EPEC)** Enteropathogenic *Escherichia coli*, (111)

(EHEC) Enterohemorrhagic *Escherichia coli*,(O86:) **)** Enteropathogenic *Escherichia coli*, (O 18) (**Ex PEC)** Extraintestinal pathogenic *Escherichia coli*,**(O128) (Atypical EPEC) Atypical EPEC** *Escherichia coli*, (**O124) (EIEC**) Entero Invasive Escherichia coli. *E. coli* infections from contaminated cheeses surely constitute the publics hazards of living creatures especially in humans likes meningeal encephalitis, pyelonephritis, hepatitis, pneumonitis, pleurisy, pericarditis, peritonitis, osteomyelitis an appendicitis.

And even causes outbreaks and death of the consumers because cheeses eating without further heating for pasteurizations.

On the other hand, molecular identifications of some virulence genes from the isolated strains. *stx1* gene was negative in all examind sample ; e*ae A* gene were detected in 28.5% of examind sample, while *fim H* gene was discovered in all samples.

In conclusion, isolation of EPEC serogroups from domestic soft cheese represents a potential, as well as an indication, of the presence of other enteropathogenesis. Although recent studies on virulence factors indicate that not all EPEC strains can attaching /effacing lesion, it is however believed that a high prevalence of contamination with EPEC strains increases the risk of infection for children, due to the consumption of domestic soft cheese. It seems that further epidemiological investigations are needed to reveal the importance of contamination in domestic soft cheese in this area of Egypt.