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ISOLATION OF YERSINIA SPECIES OF
 PUBLIC HEALTH IMPORTANCE
 FROM SOME MEAT PRODUCTS
 (With One Table)

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**عزل ميكروب اليرسينيا من بعض منتجات اللحوم
 وأهميته على الصحة العامة**

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تناولت هذه الدراسة فحص عدد ١٠٠ عينة من السجق واللانسون بالتساوى بكتريولوجيا لعزل ميكروب اليرسينيا .
 وقد أسفرت الدراسة عن عزل ميكروب اليرسينيا انتيروكوليتكابنسبة ١٤% ، ١٠% من كل من السجق واللانسون على الترتيب وكذلك تم عزل ميكروب اليرسينيا انترميديا بنسبة ٤% من كل من السجق واللانسون .
 هذا وقد نوقشت الأهمية الصحية للمعزولات ومدى تأثيرها على الصحة العامة للإنسان .

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SUMMARY

One hundred samples of sausage and luncheon were examined bacteriologically for detection of *Yersinia* species. *Y. enterocolitica* was isolated 7(14%) and 5(10%) from sausage and luncheon, respectively. While *Y. intermedia* was isolated 2(4%) from each of sausage and luncheon. The public health significance of isolated species have been discussed.

INTRODUCTION

Yersinia is one of the bacteria which have been accorded the dubious distinction of being termed pathogenic bacterial.

SCHIEVEN and RANDALL (1974) reported that infection may arise through cross-contamination of the food during kitchen preparation.

OLSOUSKY (1975) implicated that the food may be contaminated with *Yersinia* by a food handler.

BLACK *et al.* (1978) reported that *Yersinia enterocolitica* has been implicated as the causative agent of food-borne enteritis outbreaks.

The pathogen might even be transmitted from raw meat to cooked meat by chopping board and thence to human (ASAKAWA *et al.*, 1979).

MARKS *et al.* (1980) stated that diarrhea was the major symptom associated with Yersiniosis and occur at a 98% frequency among children.

SCHIEMAN (1980) isolated potentially pathogenic *Y. enterocolitica* from raw pork-sausage links and implicated in a single case of gastroenteritis.

STERN (1981) stated that the bacterium is spread in the same way as *Salmonellae*. Yersiniosis is therefore of zoonotic importance like salmonellosis.

Y. enterocolitica has been isolated from a variety of foods such as milk and milk products, meat and poultry.

So, it was considered of interest to investigate the presence of *Y. enterocolitica* and related species in some meat products.

MATERIAL and METHODS

One hundred random samples of sausage and luncheon (50 of each) were collected from Alexandria Governorate and examined bacteriologically for detection of *Yersinia* species.

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For the purpose of the investigation, 10 g of each sample were aseptically placed in a homogenizer flask with 90 ml of Trypticase Soya broth (T.S.B.) as enrichment media according to DUDLY and SHOTTS (1979).

The homogenate was incubated at 25°C for 48 hours before being plated onto *Yersinia* selective agar plate (SCHIAMANN, 1979 b). Suspected colonies were purified and identified according to BRENNER et al. (1980).

RESULTS

Are presented in table 1.

Table 1: Frequency distribution of *Yersinia* species isolated from examined samples (sausage and luncheon).

Types of micro-organisms	No. of examined samples	Sausage		Luncheon	
		+v	%	+ve	%
<i>Y. enterocolitica</i>	50	7	14.0	5	10.0
<i>Y. intermedia</i>	50	2	4.0	2	4.0

DISCUSSION

The present investigation revealed that the *Y. enterocolitica* could be isolated from 7 samples (14%) out of 50 examined sausage, while detected in 5 samples (10%) out of 50 examined luncheon (Table 1).

On the other hand, *Y. intermedia* are detected in 2 samples (4%) out of 50 (of each) examined sausage and luncheon.

The same microorganisms could be isolated by SCHIAMANN (1980); SWAMINATHAN et al. (1982) and ZAMORA & ENRIQUEZ (1987).

Yersinia species are ubiquitous bacterium indigenous to the gastrointestinal tract of warm-blooded animals and are associated with human diseases. The types of infection reported include gastroenteritis, terminal ileitis, mesenteric lymphadenitis, septicaemia, meningitis and skin and eye infections (WINBLAD, 1973 and BOTTONNE, 1966).

On the other hand, *Y. intermedia* is found in surface water more frequently (MOLLARET et al., 1982). So, the isolation of it from these products allows to assume that these species are widely distributed in the environment and the probably contaminated water could act as an important vehicle spreading the organisms in different environments.

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