Isolation and identification of " *Salmonella* species " from local chicken meat samples in Al-Qadesiayh province

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Abstract

A total of 30 samples of chicken meats were examined for the presence of *"Salmonella* species" **.** The samples were randomly obtained from butchered supermarket in "Al-Q adesiayh province" from N ovember month (2017) to F ebruary month (2018) . The results revealed the contamination of chicken meats (8) of (3 0) by (26.6 %) of the "bacterium Salmonella" . The current study aims at isolating and diagnosing a bacterium " *Salmonella* species " from local chicken meat using traditional methods and investigating the extent to which these meat are contaminated by the pathogenic strain of a bacterium "*Salmonella*".

Introduction

Salmonella is a genus of rod-shaped (bacillus) gram-negative bacteria of the family Enterobacteriaceae (1). *Salmonella* species are non-spore-forming, predominantly motile enterobacteria and peritrichous flagella (all around the cell body). They are also facultative anaerobes (2).

"Salmonella" bacteria are one of the most serious causes of contamination of food products and beef, which is a way of transmitting pathogens to humans (3,4)

These pathogen It has the ability to hide in the digestive tract of healthy animals and in the environment (5)

"Salmonella" serotypes can be divided From the point of view of human diseases into three groups that cause distinctive clinical syndromes, typhoid fever, bacteremia and enteritis, animal models are often used to study the virulence factors of "salmonella serotypes".(6)

The current study aims at isolating and diagnosing a bacterium *"Salmonella* species " from local chicken meat using traditional methods and investigating the extent to which these meat are contaminated by the pathogenic strain of a bacterium "*Salmonella*".

Material and methods

Collected 30 samples of local chicken meat sample from November month 2017 to February month 2018 and immediately put in test tube contain nutrient broth, all meat samples were fresh, uncooked, in vitro cultured on **"Mac Con key A gar**" then incubated in incubator for{ 24 h} at {37° C} to allow development of colonies after then cultured the colony that appeared pale color " XL D" **"X ylose L ysine Deoxy cholate**" which considers differential for ***(S almonella – Sh igella)*** bacteria , then the colony that appeared black color in center suspected "*Salmonella"* species or "*Proteus*" species , for deferential between "*Salmonella*" about "*Proteus*" we worked b iochemical test (u r ease

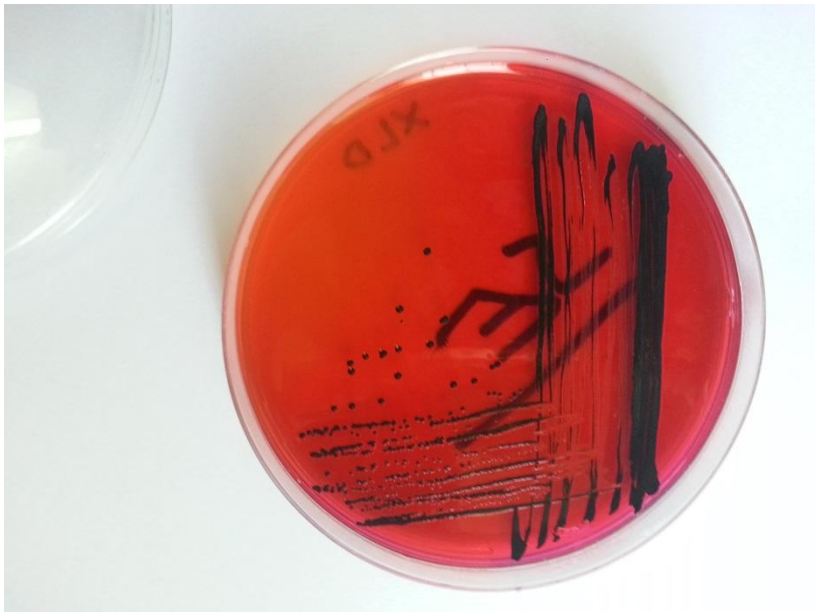
test) that give positive result for "*pro teaus*" species and negative result for "*Salmonella*" species .

Results

The results appeared 21 infected sample of total samples at percent (26.6 %) all of which gave the positive result for u r ease test , as shown in the following table 1 and the picture 1 :

Table (1): P revalence of "*Salmonella species*" in chicken meat:

Total number of sample	N.of Positive sampie	Percentage %	N.of Nagative sampie	Percentage %
30	8	26.6%	22	**73%**



F igure (1) showed "Salmonella species" on (X LD) media

discussion

The results of the current study agree with (7) study which recorded the percent (25 %) and nearly agree with (8) study that recorded (35.83 %). But these results were lower than the result of the study (9) in Canada that recorded percent (60.9 %).

The result of study (10) were lower than result of present study which recorded (19.2 %) of chicken carcasses contaminated of "*salmonella* species" in S pain , also study (11) recorded lower rate (2.74 %) in Brazil .

Recommendations

1- Handling chicken meat samples safely for housewives.

2- Conduct molecular tests to detect the presence of virulence factors in these isolates.

3- Perform drug sensitivity tests for isolates and observe antibiotic resistance of bacteria.