

Isolated Bacteria from body surface and gut for (Turckestan Cockroach) *Shelfordella laterlis* (Walker) in Baghdad city

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Summary

The Cockroach *Shelfordella lateralis* (Walker) as a vector to bacteria decided in this research in Baghdad and included four Species and two genera . The results of the study show the infection percentages after dissecting (56) Samples .

Bacteria	gut	body surface
<i>Escherichia coli</i>	%48	%33.9
<i>Klebsiella pneumonia</i>	%14	%1.7
<i>Shigella Sp .</i>	%12.5	-----
<i>Proteus Sp .</i>	%7	%1,7
<i>Bacillus subtilis</i>	%3.5	% 26.7
<i>Streptococcus faecalis</i>	%19.6	%26.7

Introduction

The Cockroaches is historically Known from insects and old . Species of which are currently scattered resemble fossilized assets . Description of 4000-5000 were Somewhat divided in to the 440 genera of Cockroaches Ismail (1) feeding on different kinds of food which made them a varirty of nutrition depending on the members of her mouth biting chewing . Given the lack of studies on this Cockroache and there is no proof its importance in medical transfer bacteria in Iraq . It has been prepared in this research .

Through living in nearby places for humans to be a Candidate as a vector a mechanic bacteria . Rueger& Olson (2) . Have many kinds of bacteria by isolation Glasere (3) . Steinhaus (4) . Said Rivault et.al. (5). The possibility of a Kind bacteria isolated from the total 157 model for Cokrouches in different environment and 56 were 14 of them Causing disease in humans .

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Material and methods

Finding ensure isolate bacteria from the outside of the Turkestan Cockroache . as well as from the gastrointestinal tract according to the following steps :

- 1 – Collecting samples from different areas in Baghdad .
- 2 – Planting the suspension record from the outer surface of the Cockroaches development among bacteria
- 3 –Planting the Suspension of cruch gut of Cockroaches on development among bacteria .

Cockroaches collected Samples of (56) (35males.21female) from nearby heavy water discharge opinions outside houses in different places in Baghdad and diagnosed according to the available Keys . yelfer (6) . Encyclopedia of life (7) . He is also Classified by the Natural history museum in Baghdad University .

The Collection has models by the process according to the Peterson (8), Ash & Green berg (9) .

Preparing the Culture Media from .

- 1 – Blood agar 2- Macconkey agar

Suspensions have been prepared in accordance to Ismail (1)

- 1 – Recognition in the form of bacterial colonies .
- 2 – Swab from each colony and use Gram stain .
- 3 – Took swabs from each colony and planted in Nutrient agar slant for the purpose of diagnosis according to Poinar& Thomas (10) Cowan (11) . Difco(12) Holt (13) .Mpuchane et.al. (14)

Results and Discussion

The Suspensions taken from the surface of the body and gastrointestinal tract of Turkestan Cockroach were transplanted to identify the isolates that we can get from each model in order to be diagnosed using the Table (1 , a , b) of the Biochemistry and tests Note the shape of Bacteria and the Presence or absence of the spors .

The expense of the natural infection rate Table (2) bacteria previously was also diagnosed and the number of isolates that can be obtained from each growth .

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Table (1.a) the Biochemistry for diagnosed Bacteria (Gram Negative)

Bacteria	Shape	indole	Methyl red	Simmons citrate	urea	motility	Gas from glucose	lactose	sucrose	D_mannitol	Growth in air	catalase	oxidase	
<i>Escherichia coli</i> <i>Klebsiella pneumonia</i> <i>Shigella sp.</i> <i>Proteus sp.</i>	Rod haped = = = = =	+	+	-	-	+	+	+	+	+	+	+	-	
		-	+	+	+	+	-	+	+	+	+	+	-	
		-	+	-	-	-	-	-	-	-	+	+	+	-
		+	+	+	+	+	+	+	-	+	-	-	-	-
Positive = + Negative = -														

Table (1,b) the Biochemistry for diagnosed Bacteria (Gram , Positive)

Bacteria	Shape	Spores	Indole	Acid fast	Growth in air	Catalase	Motility	Glucose oxidase	Heamolysis	Glycerol	lactose	Mannitol	Sucrose
<i>Bacillus subtilis</i>	Rod shaped	Subter m-inal	-	-	+	+	+	-	-	-	-	+	-
<i>Streptococcus faecalis</i>	Coccus		-	-	+	-	-	-	-	+	+	+	+
Positive = + Negative = -													

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Table (2) the natural infection rate for Cockroaches by Bacteria

Bacteria	Natural infection rate	
	Gut	Body surface
<i>Escherichia coli</i>	48%	33.9%
<i>Klebsiella pneumonia</i>	14%	1.7%
<i>Shigella sp.</i>	12.5%	-----
<i>Proteus sp .</i>	7%	1.7%
<i>Bacillus subtilis</i>	3.5%	26.7%
<i>Streptococcus faecalis</i>	19.6%	26.7%

References

- 1- Ismail , Sadoon Ibrahim (1998) study of Taxonomy and medical Importance of the Brown – Banded Cockroach . *Supella longipalpal* (F) (Dictyoptera – Epilampridae) in Bachdad city Athesis of PH . D. Al – Mustansiriya pp . 1- 138 .
- 2- Rueger , M. E. and T.A. Olson , (1969) . Cockroaches as vectors of Food poisoning and food infection organisme . J.Med. E.6(2):185-189
- 3- Glaser, R.W.(1930 b) . Cultivation and Classification of bacteroids Symbionts , or rickettsiae of *Blattela germanica* .j.Expti .Med. 51 :7- 903
- 4- Steinhau , E.A. (1967) Insect Microbiology . Hafner Published Compang . New York and London 691 PP .
- 5- Rivault , C.,A. Cloarec , and A.Le – Guyader , (1993) . Bacteria load Cockroaches in relation to urban environment Epidemiol . Infect 11o(2) : 25 – 317 .
- 6- Helfer , J.R. (1962) . How to Know the grasshoppers , Cockroaches and their aillies . WM.C.Brown Company Publishers U.S.A . 35-39 .
- 7- Taxonomic Information for Turckestan Cockroach (*Shelfordella lateralis* Encyclopedia of life – Retrieved 5 January 2014 .
- 8- Peterson , A. (1976) . Entomological techniques (how to work with insects) . California . 113- 115 , plates : 89, 195 – 183 .
- 9- Ash , N .and B.Greenberg , (1980 . vector potential of the GermanCockroach in Dissemination of *Salmonella enteritidis*. J.Med.Entomol . Vol . 17 ,no .5: 417- 423 .
- 10- Poinar , G.O. And G.M. Thomas , (1978) . Diagnostic Manual for the Identification of insect Pathogens . Plenum Press . New York and London . 218 PP .
- 11- Cowan , S.T. (1977) . Manual for the Identification of Medical bacteria . Cambridge university Press : 238 PP .
- 12- Difco Laboratorie , (1980) . Differentaition of enterobacteriaceae by biochemical tests – Detroit . U.S.A .
- 13- Hoit , J.G.(1984- 1989) . Bergeys Manual of Systematic Bacteriology .vol .1-4 Editor – in – chief . Williams and Wilkins , Baltimore . MD , U.S.A.
- 14- Mpuchane .s. Allotey .J.Matsheka.i Simpanya .M. Coetzee. S.Jordaan.A.Mrema .N.cockroaches and implications on food safety,International Jornal of Tropical Insect Science \Volume 26\Issue 03\September 2006,PP166 _ 175.