

LACTOBACILLUS SPECIES IN INFANTS WITH COLIC

Submitted for partial fulfillment
Of Master Degree in Pediatrics

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"لِلّهِ مَا فِي السَّمَاوَاتِ وَالْأَرْضِ إِنَّ اللَّهَ هُوَ الْغَنِيُّ
الْحَمِيدُ () وَلَوْ أَنَّمَا فِي الْأَرْضِ مِنْ شَجَرَةٍ
أَقْلَامٌ وَالْبَحْرُ يَمُدُّهُ مِنْ بَعْدِهِ سَبْعَةُ أَبْحُرٍ مَا
نَفَدَتْ كَلِمَاتُ اللَّهِ إِنَّ اللَّهَ عَزِيزٌ حَكِيمٌ ()"

(نقمان - الآات)

List of Contents

	Page
Acknowledgement	١
List of Tables	٣
List of Figures	٥
List of Abbreviations	٧
Introduction	٩
Aim of the work	١١
Review of Literature	١٢
Chapter ١: Infantile colic	١٢
Chapter ٢: Lactobacillus species	٥١
Material and Methods	١٠٤
Results	١١٧
Discussion	١٢٦
Recommendations	١٣٧
Summary & Conclusion	١٣٨
References	١٤٠
Arabic Summary	١٧٢
Appendix Tables	١٧٤



List of Tables

		Page
Table ١	Grading of fussiness.	١٥
Table ٢	Baseline of standard infant crying.	١٨
Table ٣	Percentage frequencies of positive characteristics found in clusters I based on api ٥٠ chL.	٧٠
Table ٤	Phenotypic and genetic affiliation and api ٥٠ ch L fermentation of isolates.	٧٣
Table ٥	Primers and probes used in duplex ٥ nuclease assays	٧٧
Table ٦	Identification of Lactobacilli and growing PH values and H٢S production of lactobacillus isolates.	٧٩
Table	Antibiotics resistance of lactobacillus isolates from infants faeces.	٨١
Table	Basic clinical data for group I (Non-Colicky infants)	١١٦
Table	Basic clinical data of group II (colicky infants)	١١٧
Table	Comparison of mean levels of some clinical parameters among the two studied groups	١١٧
Table	Comparison of non parametric data in both groups	١١٨
Table	Comparison between other micro-organism else lactobacilli in both groups	١٢٠
Table	Lactobacillus species comparison in both Non-colicky and Colicky +ve Lactobacilli infants.	١٢٢
Table	Basic clinical data in positive lactobacillus infants.	١٢٤

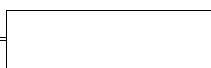


Table	Basic clinical data comparison in negative Lactobacillus infants.	۱۲۴
Table	Comparison of mean levels of some clinical parameters between negative and positive lactobacillus infants.	۱۲۵
Table	Comparison between L. acidophilus +ve cases and –ve cases to the crying time.	۱۲۶
Table	Comparison between +ve and –ve L. brevis cases to the crying time.	۱۲۶
Table	Comparison between +ve and –ve L. lactis cases to the crying time.	۱۲۷
Table	Comparison of family history of atopy in between +ve and –ve cases of L. acidophilus.	۱۲۸
Table	Comparison of family history of atopy in between +ve and –ve cases of L. brevis.	۱۲۹
Table	Comparison of family history of atopy in between +ve and –ve cases of L. lactis.	۱۲۹
Table	Comparison of paternal history of smoking in between +ve and –ve cases of L. acidophilus.	۱۳۱
Table	Comparison of paternal history of smoking in between +ve and –ve cases of L. brevis.	۱۳۱
Table	Comparison of paternal history of smoking in between +ve and –ve cases of L. lactis.	۱۳۲
Table	Nonparametric correlations in Group I (non colicky).	۱۳۳
Table	Nonparametric correlations in Group II (colicky).	۱۳۴

List of Figures

		Page
Figure	Frequency of infant's time spending to cry in minutes per week	۱۴
Figure	Decision tree for infant crying.	۳۷
Figure	Lactobacilli in vaginal wall under microscopy.	۴۷
Figure ۴	Clustering and relationships of food isolates based on api ۵۰ chl	۷۴
Figure	RAPD electrophoresis band patterns of type strains and food isolates of Lactobacillus and Weissella species	۷۷
Figure	L. acidophilus under microscopy.	۸۳
Figure	<i>Lactobacillus delbrueckii</i> subsp. <i>lactis</i>	۹۹
Figure	Api ۵۰ chL strips.	۱۰۲
Figure	<i>Lactobacillus casei</i> ssp <i>casei</i> identified as <i>Lactobacillus paracasei</i> ssp <i>paracasei</i> with API ۵۰ CH.	۱۰۷



Figure	Comparison between some clinical parameters in the groups	۱۱۸
Figure	Non-parametric data comparison in both groups.	۱۱۹
Figure	Positive Lactobacillus cultures in both groups.	۱۲۰
Figure	Comparison between different other types of organisms else lactobacilli in both groups.	۱۲۱
Figure	Comparison of significant lactobacillus species difference in between colicky and non colicky +ve Lactobacilli infants.	۱۲۳
Figure	Comparison of non-significant lactobacillus species difference in between colicky and non colicky +ve Lactobacilli infants	۱۲۳
Figure	Comparison of Basic clinical parameters between positive and negative lactobacilli infants.	۱۲۵
Figure	Comparison between +ve and –ve cases of L. acidophilus, L. brevis and L. lactis to the mean levels of crying time.	۱۲۸
Figure	Frequency of Family history of atopy in +ve cases of (L. acidophilus, L. brevis and L. lactis).	۱۳۰
Figure	Frequency of Paternal history of smoking in +ve cases of (L. acidophilus, L. brevis and L. lactis).	۱۳۲



List of Abbreviations

DSS	Dextran sulfate sodium.
TNBS	Trinitrobenzene sulfonic acid
IBS	IBS.
HLA	Human leucocytic antigen.
CRD	Colorectal distension.
LR	<i>Lactobacillus reuteri</i> .
IL	Interleukin.
GI	Gastro-intestinal.
ROS	reactive oxygen species.
CFU	Colony forming units.
SOD	superoxide dismutase.
CAT	catalase.
GSHPx	glutathione peroxidase.



MRS	Man Rogosa Agar.
spp	Species.
PCR	Polymerase chain reaction.
DGGE	Denaturing gradient gel electrophoresis.
TSI	Triple Sugar Iron.
GIT	Gastrointestinal tract.
LA	Lactic acid.
HAI	Hospital acquired infection.
HIV	Human immunodeficiency virus.
ICU	Intensive care unit.
IgG	Immunoglobulin G.
IgM	Immunoglobulin M.
MIC	Minimal inhibitory concentration.
MRSA	Methicillin resistant staphylococci aureus.
NAC	Non-albicans Candida species.
NACHRI	National association of children's hospitals and related institutions.
NCCLS	National committee for clinical laboratory standards.
NICU	Neonatal intensive care unit.

NOSEP	Nosocomial sepsis prediction score for neonates.
NNIS	National nosocomial infections surveillance.
NPV	Negative predictive value
NS	Nosocomial sepsis.
OD	Optical density.
PMN	Polymorphnuclear neutrophil.
PPN	Pediatric prevention network.
PPV	Positive predictive value
REA	Restriction endonuclease analysis.
RFLP	Restriction fragment length polymorphism.
RGD	Arginine-glycine-aspartic acid.
RSV	Respiratory syncytial virus.
Saps	Secreted aspartyl proteinases.
SBH	Southern blot hybridization.
sIgA	Secretary immunoglobulin A (sIgA).
TMB	Tetramethylbenzidine.
TPN	Total parenteral nutrition
VE	Virotech einheiten units.



VLBW	Very low birth weight infants.
VRE	Vancomycin-resistant enterococci.



	<i>Summary</i>	

ACKNOWLEDGEMENT

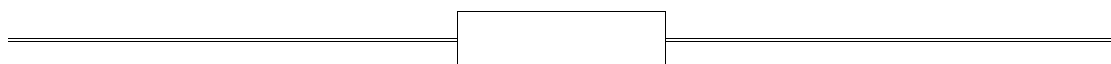
First and foremost, thanks are due to God, the beneficent and merciful.

I am greatly honored to express my deepest gratitude to Professor Dr. **Ismael Sadek**, professor of Pediatrics, faculty of medicine, Ain Shams university, who sacrificed a great deal of his very precious time in choosing the subject of this thesis and meticulously revising it.

I really have the honor to express my heartily thanks to Dr. **Safaa Shafik**, assistant professor of Pediatrics, faculty of medicine, Ain Shams university, who gave me a lot of moral support, encouragement and who spent a lot of her really busy time in meticulously revising this work.

I greatly acknowledge Dr. **Hala Hafez**, lecturer of Microbiology, faculty of medicine, Ain Shams University, for her kind supervision, arrangement and revision of this thesis.

Lastly, I have to thank every one of my colleagues who gave hand or advice for the sake of producing this work.



Introduction

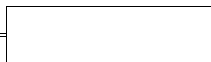
Infantile colic is one of the most common problems in infancy with a frequency of (-) and can be described as follows: a healthy infant with paroxysms of excessive, high-pitched, inconsolable crying, frequently accompanied by flushing of the face, drawing up the legs and passing of gas. (**Wessel et al,**).

Even if infantile colic is a common disorder, the etiology is not completely understood. Abnormal gastrointestinal function & allergic problems such as food protein intolerance seem to be related to these disorders. (**Hill et al.,**).

This syndrome begins before the sixth week of the life in of cases and generally resolves spontaneously by the fourth month, but sometimes might be considered the first clinical manifestation of atopic diseases (i.e. intolerance to milk cow's protein). (**Iacono et al.,**).

It has been reported that intestinal microbiota plays an important role in the pathogenesis of allergic diseases. This is in accordance with Bjorkstein et al. Who reported that allergic -yr-old children have an altered gut flora with a lower level of lactobacilli in comparison with healthy non colicky infants. (**Bjorkstein et al.,**).

An aberrant gut microbial composition, such as inadequate lactobacillus level occurring in the first months of life, may affect immune responses and could favour the development of different disorders, such as



infantile colic that could represent a precocious clinical manifestation of atopic diseases. (**Lehtonen et al.,**).

Lactobacilli could be considered one of the most attractive microbiota because of their role in the development of the immunophysiological regulatory mechanisms in the gut mucosa. (**Savino et al.,**),
(**Kalliomaki et al.,**).

