LACTOBACILLUS SPECIES IN INFANTS WITH COLIC

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Of Master Degree in Pediatrics

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"لله ما في السَّماوَاتِ وَالأَرْضِ إنَّ اللهَ هُوَ الغنيُّ
الْحَمِيدُ (٢٦) ولَوْ أنمَا فِي الأَرْضِ مِن شَجَرَةٍ
أَقْلامٌ وَالبَحْرُ يَمُدُّهُ مِن بَعْدِهِ سَبْعَةُ أَبْحُرٍ مَّا
نفِدَت كلِمَاتُ اللهِ إنَّ اللهَ عَزِيزٌ حَكِيمٌ (٢٧)"

(لقمان- الآيات ٢٦،٢٧)

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DSS	Dextran sulfate sodium.
TNBS	Trinitrobenzene sulfonic acid
IBS	IBS.
HLA	Human leucocetic antigen.
CRD	Colorectal distension.
LR	*Lactobacillus reuteri*.
IL	Interleuken.
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.

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Introduction

Infantile colic is one of the most common problems in infancy with a frequency of (١٠-٣٠٪) 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, ١٩٥٤).**

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., ٢٠٠٠).**

This syndrome begins before the sixth week of the life in ٩٠٪ 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., ١٩٩١).**

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 ٢-٣-yr-old children have an altered gut flora with a lower level of lactobacilli in comparison with healthy non colicky infants. **(Bjorkstein et al., ١٩٩٩).**

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., ١٩٩٤).**

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., ٢٠٠٤),**

(Kalliomaki et al., ٢٠٠١).