

量產乳酸菌組合對酒精性脂肪肝及肝損傷改善機制之探討

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摘要

酒精性肝疾病(Alcoholic Liver Disease)及脂肪肝(Alcoholic Steatohepatitis)為慢性疾病,藉由酒精而引發酒精性肝損傷。因現代人生活習性關係,此問題在近年越來越受到重視。本研究目的以飼料添加組合乳酸菌方式來改善及降低酒精性肝損傷的發生。在C57BL/6N小鼠餵食流質性酒精飼料之條件下,探討此乳酸菌組合對於改善由酒精所引發的酒精性肝損傷之影響。本實驗將24隻C57BL/6N雄性小鼠分為空白組、酒精組及組合乳酸菌組。空白組以Lieber-DeCarli流質一般飼料自由取食;酒精組與組合乳酸菌組則以Lieber-DeCarli流質酒精飼料自由取食,試驗之乳酸菌樣品直接添加至流質飼料中。實驗共為期八週,在實驗期間記錄體重、採集血液分析GOT、GPT、三酸甘油酯及總膽固醇,並在第八週時犧牲,採集小鼠肝臟進行相關基因表現量、抗氧化酵素活性、肝臟中三酸甘油酯含量及組織切片等檢測。實驗結果顯示,組合乳酸菌組血清中GOT、GPT及三酸甘油酯的數值有下降之趨勢($P < 0.05$),而總膽固醇方面則無顯著差異性($P > 0.05$)。肝臟中SREBP-1及TNF- α 基因相對表現量降低約4倍和4.3倍($P < 0.05$)。在肝臟組織中GSH、GPx及GSH Rd酵素都有顯著上升($P < 0.05$),分別增加約6.8%、58.1%及22.7%;而catalase與SOD酵素活性則無顯著差異($P > 0.05$)。在肝臟中三酸甘油酯含量亦有明顯的降低($P < 0.05$);在組織切片方面,組合乳酸菌組較酒精組有明顯減少肝臟中油滴的堆積。綜上所述,本實驗結果顯示在服用此組合乳酸菌之後,具有改善及降低因酒精所引起之酒精性脂肪肝及相關肝損傷。

關鍵詞: 酒精性肝損傷、脂肪肝、三酸甘油酯、膽固醇、組合乳

目錄

封面內頁	簽名頁	中文摘要	iii	英文摘要	v	誌謝	vii	目錄	viii	圖目錄	xii	表目錄	xiv	1. 前言	1	2. 文獻回顧	3	2.1 肝臟介紹	3	2.1.1 肝臟功能與組成	3	2.1.2 肝臟酵素	4	2.2 酒精在人體中代謝途徑	5	2.2.1 酒精造成肝臟損傷的類型	6	2.2.2 酒精性肝病的內毒素血症	7	2.3 酒精性脂肪肝相關基因	8	2.3.1 固醇調控序列結合蛋白	8	2.3.2 過氧化體增生活化受體	9	2.3.3 腫瘤壞死因子	10	2.4 自由基與氧化壓力	10	2.5 抗氧化防禦系統	11	2.6 酵素性抗氧化系統	12	2.6.1 超氧化物歧化酶	12	2.6.2 觸酶	12	2.6.3 羰基甘氨酸過氧化酶	13	2.7 乳酸菌介紹	14	2.7.1 乳酸菌定義	14	2.7.2 乳酸菌的種類	14	2.7.3 乳酸菌對人體健康之保健	15	2.7.3.1 營養素合成及生物利用度	15	2.7.3.2 腹瀉的預防和治療	16	2.7.3.3 減緩乳糖不耐症	16	2.7.3.4 免疫調節功能	17	2.7.3.5 降血壓功效	17	2.7.3.6 抗癌性	17	3. 材料與方法	19	3.1 實驗架構	19	3.2 實驗動物及飼養	20	3.2.1 飼料配製	20	3.2.2 菌株種類	21	3.2.3 菌粉飼料配製	21	3.3 實驗方法	21	3.3.1 動物分組	21	3.3.2 實驗步驟	22	3.3.3 實驗測定方法	22	3.3.3.1 肝功能生化指數檢測	22	3.3.3.2 羰基甘氨酸濃度分析	23	3.3.3.3 羰基甘氨酸過氧化酶活性分析	23	3.3.3.4 觸酶活性分析	25	3.3.3.5 超氧化物歧化酶活性分析	26	3.3.3.6 羰基甘氨酸還原酶活性分析	27	3.3.3.7 肝臟中三酸甘油酯濃度測定	28	3.3.3.8 肝臟Total RNA萃取	29	3.3.3.9 反轉錄-即時定量聚合酶鏈鎖反應	30	3.3.3.10 組織包埋與切片	31	3.3.3.11 H&E染色	32	3.3.3.12 統計分析	32	4. 結果與討論	33	4.1 體重變化	33	4.2 肝臟/體重比值變化	35	4.3 血清生化指標分析	37	4.3.1 血清中羰基氨基酸草醋酸轉氨基酵素活性之變化	37	4.3.2 血清中羰基氨基酸焦葡萄糖轉氨基酵素活性之變化	39	4.3.3 血清中總膽固醇含量之變化	41	4.3.4 血清中三酸甘油酯含量之變化	43	4.4 肝臟中抗氧化酵素活性之測定	45	4.4.1 羰基甘氨酸肝臟中相對含量	45	4.4.2 羰基甘氨酸過氧化酶/抗氧化酵素之活性	47	4.4.3 觸酶/抗氧化酵素之活性	49	4.4.4 超氧化物歧化酶/抗氧化酵素之活性	51	4.4.5 羰基甘氨酸還原酶/抗氧化酵素之活性	53	4.5 酒精性肝損傷相關基因表現	55	4.5.1 肝臟中固醇調控序列結合蛋白基因相對表現量	55	4.5.2 肝臟中腫瘤壞死因子基因相對表現量	58	4.5.3 肝臟中過氧化體增生活化受體- α 基因相對表現量	60	4.6 肝臟中三酸甘油酯含量之變化	62	4.7 組織切片	64	5. 結論	66	參考文獻	67	圖目錄		圖2.1 肝臟組織構造	4	圖2.2 酒精的代謝途徑	5	圖2.3 酒精性肝疾病中引起內毒素血症的不同機制	8	圖2.4 SREBPs基因的調控途徑	9	圖4.1 八週實驗期間各組C57BL/6N小鼠體重之變化	34	圖4.2 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠肝重比之影響	36	圖4.3 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠血清羰基氨基酸草醋酸轉氨基酵素活性之影響	38	圖4.4 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠血清羰基氨基酸焦葡萄糖轉氨基酵素活性之影響	40	圖4.5 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠血清總膽固醇含量之影響	42	圖4.6 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠血清三酸甘油酯含量之影響	44	圖4.7 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠羰基甘氨酸肝臟中相對含量之影響	46	圖4.8 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠羰基甘氨酸過氧化酶/酵素活性之影響	48	圖4.9 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠觸酶/酵素活性之影響	50	圖4.10 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠超氧化物歧化酶/酵素活性之影響	52	圖4.11 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠羰基甘氨酸還原酶/酵素活性之影響	54	圖4.12 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠肝臟中固醇調控序列結合蛋白基因相對表現量之影響	56	圖4.13 餵食組	
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合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠肝臟中固醇調控序列結合蛋白基因相對表現量之影響 57 圖4.14 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠肝臟中腫瘤壞死因子基因相對表現量之影響 59 圖4.15 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠肝臟中過氧化體增生活化受體- 基因相對表現量之影響 61 圖4.16 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠肝臟中三酸甘油酯含量之影響 63 圖4.17 餵食組合乳酸菌八週後對於流質酒精飼料飲食C57BL/6N小鼠肝臟組織傷害之影響 65 表目錄 表3.1 流質飼料配製及成分 20 表3.2 EnzyChrom Glutathione Peroxidase Assay Kit標準品稀釋法 25 表3.3 EnzyChrom Catalase Assay Kit標準品稀釋方法 26 表3.4 三酸甘油酯濃度計算因子 29 表3.5 SuperScript 反應試劑配置方式 30

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