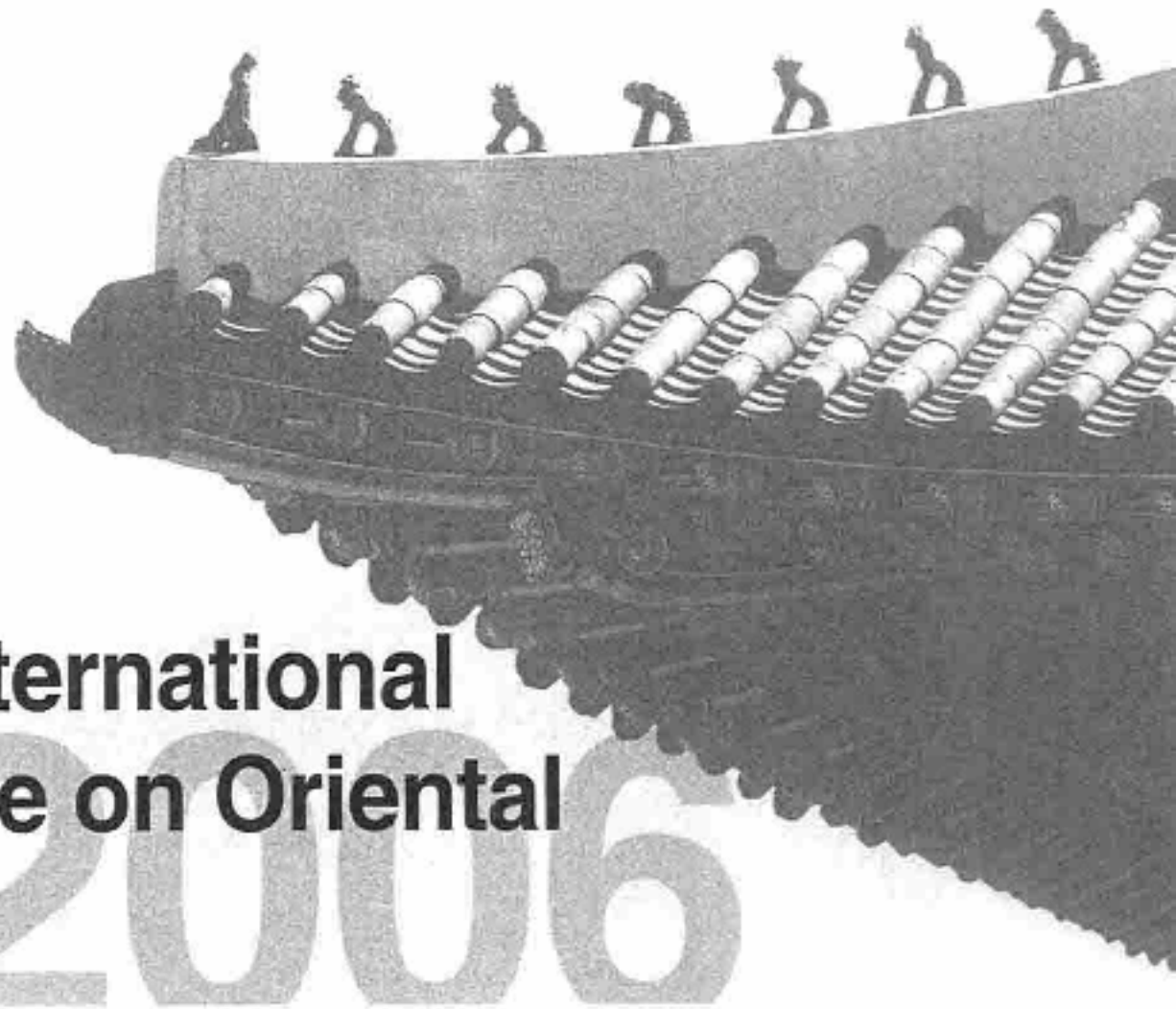

The 10th International Conference on Oriental Medicine 2006

Oriental Medicine as Evidence Based Medicine 2006

September 28 (Thursday), 2006

COEX Conference Center 320BC, Seoul, Korea

Host	Institute of Oriental Medicine, Kyunghee University, Seoul, Korea College of Oriental Medicine, Kyunghee University, Seoul, Korea Brain Korea 21 Oriental Medical Science Center, Kyunghee University, Seoul, Korea
Sponsors	Ministry of Health and Welfare (MOHW), Republic of Korea JoongAng Ilbo Regional Office for the Western Pacific, WHO

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Hyperlipidemia effect in *Enteroccous Facalis (EF 2001)*

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Abstract

Recognition of ill severity is low in hyperlipidemia in comparison with life-style related diseases such as diabetes mellitus or high blood pressure. In this study, we used an **Enterococcus Faecalis** 2001 (EF 2001), and studied antihyperlipidemia using a model mouse of hyperlipidemia. We used an HcB-19/Dem (HcB-19) mouse for animal used for experiment and we divided it into control group, **EF2001** 250mg/kg treated group, **EF2001** 400mg/kg treated group and tested it. We performed fast of 12 hours before drawing blood and we collected blood by fundi drawing blood in a hungry state and took out serum after centrifugal separation and measured total cholesterol, quantity of triglyceride than the serum. In addition, we measured a lipoprotein of surplus triglyceride, plasma apolipoprotein B of surplus cholesterol. As for the total cholesterol, the total cholesterol value showed a low value in comparison with Control group. We compared it with Control group, and, in measurement results of triglyceride, significant difference was seen with 250mg/kg treated group five weeks later three weeks later two weeks later. In addition, significant difference was seen with 400mg/kg treated group in comparison with Control group five weeks later three weeks later two weeks later. As for the cholesterol fall action of **EF2001,** it is speculated with a thing by constancy of the polysaccharides that are included a lot in **EF2001,** immune system by other various active principles, endocrine system.

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研究方法1

- 研究資料および方法
- 実験動物にHcB-19/Dem(HcB-19)マウスを用い、22±3℃、湿度60-70%の状況下で、飼料および水は自由摂取とし、1週間の予備飼育後、1群(Control群)、2群(*EF2001* 250mg/kg投与群)、3群(*EF2001* 400mg/kg投与群)とする。血漿により、トリグリセリド、コレステロール量を測定する。過剰トリグリセリドのリポプロテイン、過剰コレステロールのプラズマ・アポリポ蛋白Bを測定する。

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研究方法2

- 研究資料および方法
- *EF2001*による総コレステロール量およびトリグリセライド量の変化
- 実験群
- ICRマウス　5週齢　雄
- 1群　Control　　蒸留水投与　10匹
- 2群　*EF2001*　250 mg / kg投与 10匹
- 3群　*EF2001*　400 mg / kg投与 10匹
- 4群　Normal　蒸留水投与（ICRマウス　6週齢　雌）11匹

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研究方法3

- 実験方法
- 和光純薬工業[株]の測定キッド コレステロール E テストワコーおよびトリグリセライド E テストワコーを使用して吸光度測定をすることにより、総コレステロール量とトリグリセリド量を測定し、対象群と比較して高脂血症モデルマウスであることを確認後、1群（Control（蒸留水）群）、2群（*EF2001* 250mg/kg投与群）、3群（*EF2001* 400mg/kg投与群）4群（Normal（対象）群）とする。採血前に12時間の絶食を行い、空腹状態で眼底採血により採血し遠心分離後、血清を取り出し、その血清より、総コレステロール、トリグリセライド量を測定した。測定方法はそれぞれのプロトコールにのっとって行った。
- 実験材料および測定機器
- *EF2001*（（株）日本ベルム）
- 吸光度計
- コレステロール E テストワコー（和光純薬工業（株））
- トリグリセライド E テストワコー（和光純薬工業（株））
- マウス・ラット・ハムスター飼育繁殖型　CE-2（日本クレア）
- マウス、ラット、ハムスター用 CLEA　Rodent Diet Quick Fat（日本クレア）
- 統計処理法
- 研究結果は平均値 ± 標準誤差であらわし、一次検定として1群（Control）に対して各試験群の評価を*ANOVA*検定により行い、その後有意差のあるものに対して二次検定として*Fisher*検定を実行し、1群（Control）と各試験試料塗布群との比較を行う。

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Table.1. 総コレステロール濃度 (平均±S.E)

Weeks	Control			250 mg / kg			400 mg / kg			Normal		
0	123.79	±	9.46	123.76	±	9.90	125.93	±	7.75	95.34	±	5.92
1	162.80	±	7.11	150.59	±	8.99	154.09	±	8.43	72.43	±	4.97
2	168.11	±	8.32	142.33	±	7.22	153.93	±	9.72	85.68	±	7.85
3	152.35	±	11.42	158.07	±	9.96	135.84	±	7.76	87.43	±	5.43
4	130.61	±	6.54	127.15	±	9.45	124.00	±	8.08	85.43	±	4.72
5	151.67	±	8.48	148.26	±	7.58	133.76	±	7.05	84.84	±	4.51
6	179.37	±	12.24	151.87	±	7.96	164.37	±	14.96	105.90	±	9.29
7	158.49	±	7.76	133.26	±	8.08	125.84	±	9.97	92.68	±	5.17
8	147.70	±	9.76	149.23	±	12.00	150.48	±	6.35	77.29	±	5.18

Table.2 トリグリセライド濃度 (平均±S.E)

weeks	control			250 mg / kg			400 mg / kg			normal		
0	102.95	±	11.03	82.13	±	9.88	96.80	±	11.41	70.30	±	8.71
1	62.35	±	6.02	23.97	±	8.52	19.63	±	7.98	70.68	±	5.54
2	97.50	±	5.81	35.58	±	5.47	39.13	±	3.87	85.22	±	10.71
3	87.50	±	6.65	3.91	±	8.95	37.63	±	10.92	66.28	±	7.83
4	67.95	±	6.08	65.21	±	7.08	65.63	±	7.39	69.13	±	7.69
5	56.63	±	3.33	33.73	±	4.00	30.63	±	6.24	83.58	±	3.61
6	83.91	±	11.89	71.97	±	11.84	62.52	±	3.20	107.24	±	12.28
7	75.22	±	8.59	60.76	±	8.45	71.47	±	5.80	116.30	±	11.66
8	74.13	±	17.11	40.58	±	3.82	61.41	±	5.89	73.91	±	13.43

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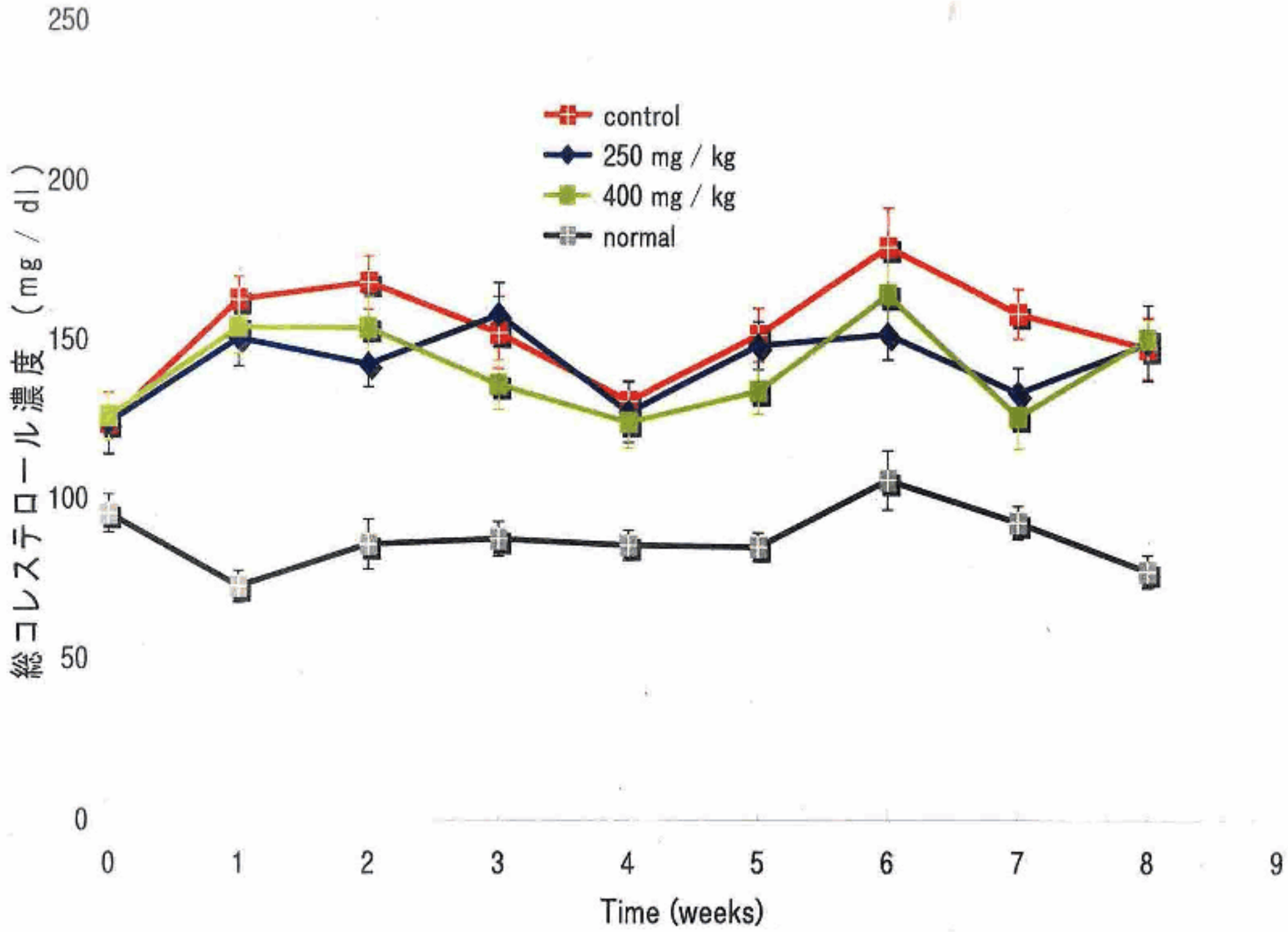

Fig.2. 総コレステロール濃度

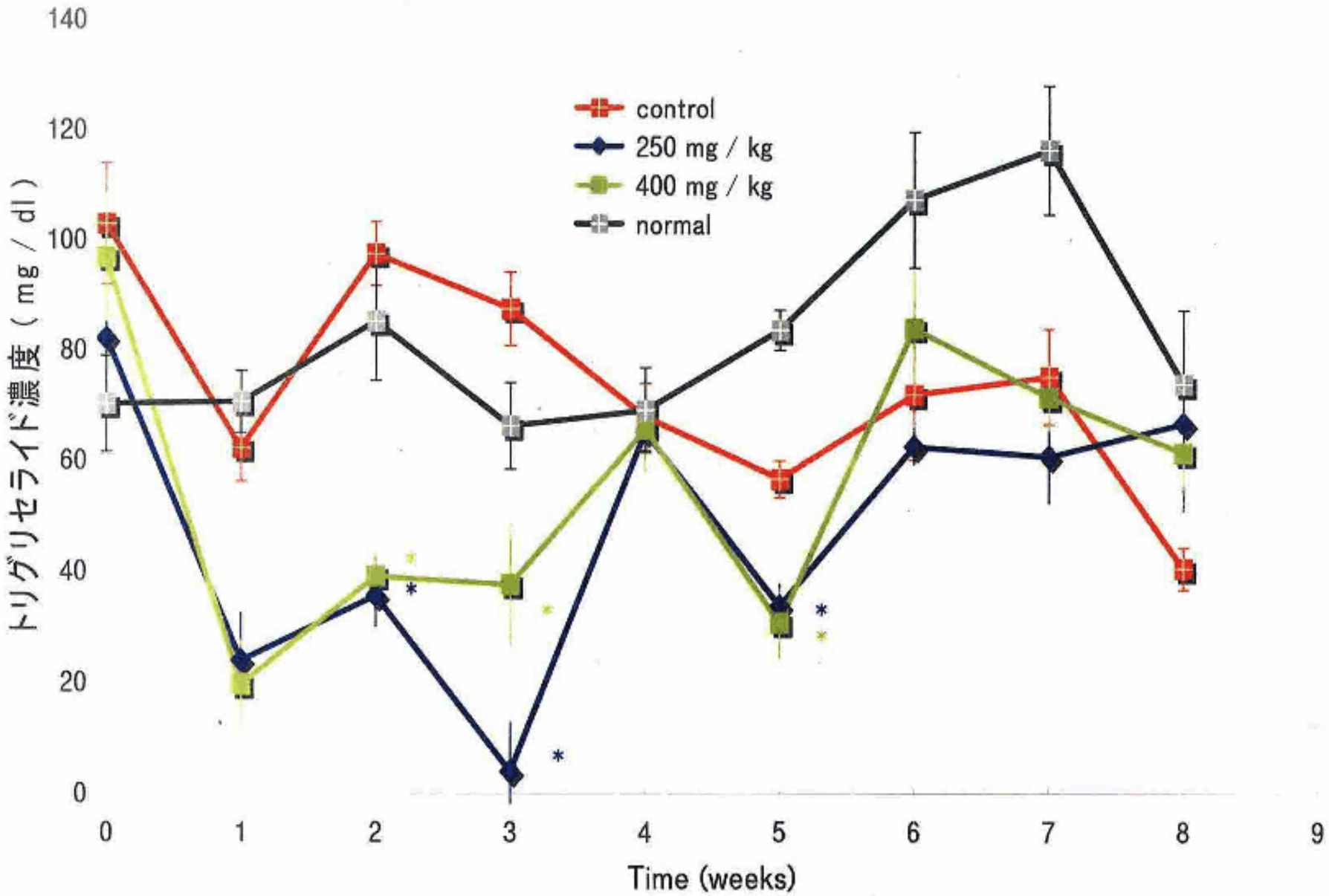

Fig.3. トリグリセライド濃度

結論

- Control群に比べ投与群は有意な差は得られなかったが、Control群に比べ総コレステロール値は低い値を示した。
- Control群に比べ250mg/kg投与群で2週間後、3週間後、5週間後に有意差が見られた。また、Control群に比べ400mg/kg投与群で2週間後、3週間後、5週間後に有意差が見られた。

EF 2001 β (1-3)・(1-6)D-Glucan

β (1-3)D-Glucan ⇨ It is lymphocyte activity of small intestinal from intestinal absorption difficulty

β (1-6)D-Glucan ⇨ Enteral good bacteria disintegrate (connection with intestinal flora)

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2006 INTERNATIONAL CONFERENCE ON BLOOD STASIS

27 Sep. 2006 13:00 - 17:10
Lecture Room 1F,
College of Oriental Medicine,
Kyung Hee University

Host: The Korean Society of Oriental Pathology

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Key words: *Enterococcus Faecalis, EF2001,* hyperlipidemia