

고콜레스테롤혈증 환자에 대한 아토바스타틴의 효과와 안전성을 검토하기 위한 다기관 공동 임상 연구

21
1, 2, 3, 4, 5, 6
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13. 14. 15. 16. 17. 18

Multicenter Clinical Trial of Atorvastatin in Patients with Hypercholesterolemia

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ABSTRACT

Background & Objectives : The aim of this study was to investigate the efficacy & safety of a new HMG-CoA reductase inhibitor, atorvastatin, to improve serum lipid profiles in patients with primary hypercholesterolemia. **Materials & Methods :** Three hundred and six patients from 21 hospitals, all with total cholesterol level over 240 mg/dl and triglyceride level below 400 mg/dl were enrolled in the study. Following diet therapy for 2 weeks, atorvastatin 10 mg was taken for 6 weeks if the total cholesterol level remained higher than 240 mg/dl. The percent change of total cholesterol, triglyceride, LDL-cholesterol and HDL-cholesterol from baseline

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to 6 weeks of treatment were evaluated. Patients were monitored for safety through careful history talking, physical examination, serum sampling for liver and muscle enzyme. **Results** : 1) The study was completed in a total of 166 patients. The mean age of patients the was 58 1/2 years and the percent of male and female patients was 37%, 37% and 63%, respectively. 2) The baseline mean values of total cholesterol, triglyceride, LDL-cholesterol, HDL-cholesterol following diet therapy for 2 weeks were 280 ±34 mg/dl, 172 ±77 mg/dl, 190 ±35 mg/dl, 56 ±13 mg/dl, respectively. 3) After 6 weeks treatment, the level of total cholesterol, triglyceride, LDL-cholesterol, HDL-cholesterol were 195 ±34 mg/d, 150 ±67 mg/dl, 110 ±33 mg/dl, 55 ±12 mg/dl, respectively, and the rates of change were -30%, -7%, -42%, -0.2%, respectively. 4) The level of LDL-cholesterol at the end of treatment was below 100 mg/dl in 44%, 100-130 mg/dl in 33%, 130 -160 mg/dl in 14%, over 160 mg/dl in 9% of patients. 5) 77% of total patients achieved the target goal of LDL cholesterol (below 130 mg/dl) according to the NCEP guideline. 6) The reduction rate of LDL-cholesterol was different among the patients. At the end of treatment, the patients with initial LDL-cholesterol below 100 mg/dl achieved a higher reduction rate (52%) as compared with those patient's inithal LDL-cholesterol level were higher. 7) There are was only 1 patient (0.6%) who showed 3 times a three-fold increase of liver enzyme and no patient showed an increase of creatine kinase. **Conclusion** : Atorvastatin is effective and safe in improving the lipid profiles in of patients with hypercholesterolemia without serious side effects. (**Korean Circulation J 2001;31(4):434-441**)

KEY WORDS : Atorvastatin · Hypercholesterolemia · Multicenter clinical.

서 론

mg/dl 4159 가 115~174

(pravastatin) 24%

가

가 (statins)

가 She - (ato-

pherd¹⁾ 가 272 mg/dl rvastatin)

6,595 (pravastatin) 26% .⁴⁻⁶⁾

20%

가 31%

28%

4S²⁾ 가

가 212.3 - 308 mg/dl 4444

(simvastatin)

가 25%, 가 35%

8% 가

가 34%,

42%, 30%

CARE³⁾ 가 240 연구 개요

1999 2 1999 12 21

연구 방법

가 240 mg/dl 가

(가)⁷⁾ 가 240 mg/dl (pass - word)

10 mg 6 가 240 mg/dl

연구 대상

가 2 가 240 mg/dl

1) 18 80 가 3)

, 2) 가 400 mg/dl , 4)

, 5)

Friedewald ⁸⁾ aminotransferase (AST/ALT) 가

1.5 , 6) creatine phospho- kinase (CPK) 가 3

, 7) 110 mmHg

180 mmHg , 8) , 9)

연구자료 수집 3 , 10)

21

306 , 41

39

185 19

166 가 5

ASP(Active Server Page) () (, 14 ,

())

가 자료분석 및 통계

6

paired t - test SPSS 9.0 (SPSS Inc., Chicago. IL, USA)

± p

0.05

결 과

환자의 인적 사항

166
 104 (63%),
 54 ± 13,
 60 ± 12
 48 (29%),
 3 (2%)

치료전의 지질 수치

280 ± 34 mg/dl,
 190 ± 35 mg/dl,
 13 mg/dl,
 172 ± 77 mg/dl,
 56 ± 13 mg/dl,
 110 ± 33 mg/dl,
 55 ± 12 mg/dl
 (Table 1).

아토바스타틴의 지질 강화 효과

280 ± 34 mg/dl
 172 ± 77 mg/dl
 190 ± 35 mg/dl
 195 ± 34 mg/dl
 150 ± 67 mg/dl
 110 ± 33 mg/dl
 56 ± 13 mg/dl
 55 ± 12 mg/dl
 (Table 2).

Table 1. Baseline mean lipid level

| Serum lipids | Male (N = 62) | Female (N = 104) | Total (N = 166) |
|---------------|---------------|------------------|-----------------|
| TC (mg/dl) | 276 ± 37 | 282 ± 31 | 280 ± 34 |
| TG (mg/dl) | 182 ± 83 | 165 ± 73 | 172 ± 77 |
| LDL-C (mg/dl) | 188 ± 37 | 191 ± 34 | 190 ± 35 |
| HDL-C (mg/dl) | 53 ± 14 | 57 ± 12 | 56 ± 13 |

Values are mean SD. There was no statistical difference between male and female. TC : Total Cholesterol, TG : Triglyceride, LDL-C : LDL Cholesterol, HDL-C : HDL Cholesterol

Table 2. Mean change of value in lipid level

| Treatment level | Total-C (mg/dl) | TG (mg/dl) | LDL-C (mg/dl) | HDL-C (mg/dl) |
|-----------------|-----------------|------------|---------------|---------------|
| Pre Tx | 280 ± 34 | 172 ± 77 | 190 ± 35 | 56 ± 13 |
| Diet | 274 ± 36 | 181 ± 78 | 184 ± 39 | 54 ± 13 |
| Drug Tx | 195 ± 34 | 150 ± 67 | 110 ± 33 | 55 ± 12 |

Values are mean SD. Pre Tx : Pre-Treatment
 Diet : After Diet Treatment,
 Drug Tx : After Drug Treatment

7%,
 0.2%,
 30%,
 42%,
 (Fig. 1).

성별에 따른 아토바스타틴의 지질 강화 효과

276 ± 37 mg/dl
 182 ± 83 mg/dl
 112 ± 35 mg/dl
 53 ± 14 mg/dl
 197 ± 35 mg/dl
 160 ± 70 mg/dl
 188 ± 37 mg/dl
 52 ± 12 mg/dl
 283 ± 31 mg/dl
 194 ± 33 mg/dl
 144 ± 65 mg/dl
 192 ± 34 mg/dl
 57 ± 12 mg/dl
 31%,
 8%,
 0.3%,
 (Table 3, Fig. 2).

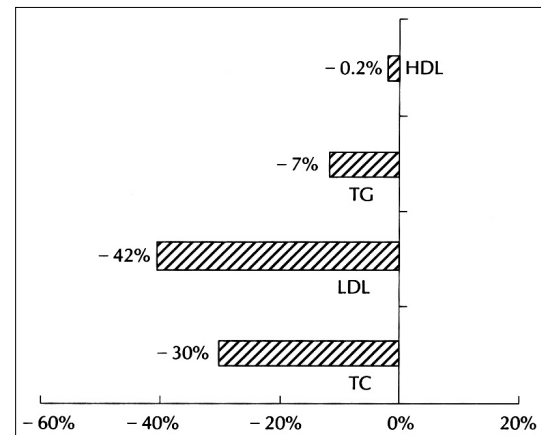


Fig. 1. Mean % change of value in lipid level after drug treatment.

Table 3. Mean % change of value in lipid level between male and female

| Serum lipid (% change) | Male (N = 62) | Female (N = 104) | Total (N = 166) |
|------------------------|---------------|------------------|-----------------|
| Total-C | -29 | -31 | -30 |
| TG | -6 | -8 | -7 |
| LDL-C | -40 | -42 | -42 |
| HDL-C | -1 | +0.3 | -0.2 |

There was no statistical difference between male and female

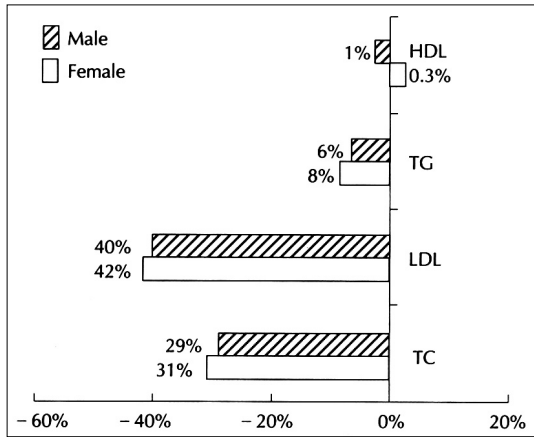


Fig. 2. Mean % change of value in lipid level between male and female.

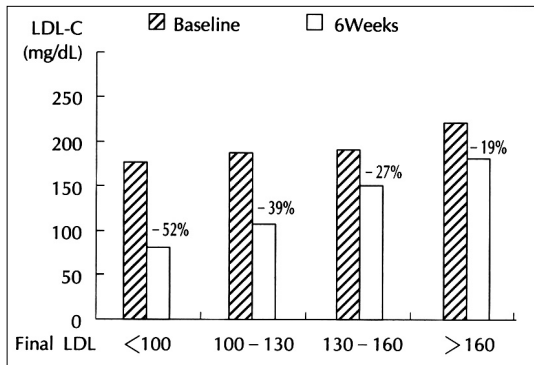
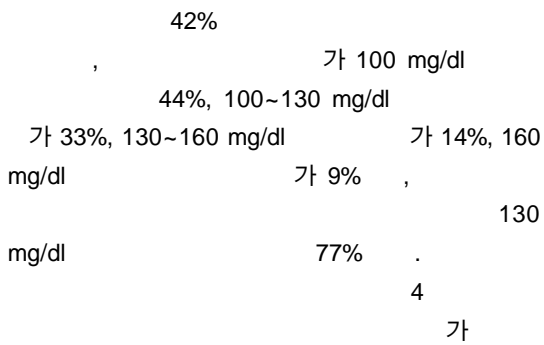


Fig. 3. Mean % reduction of LDL-C according to final LDL-C level.

아토바스타틴의 저밀도 콜레스테롤 강하 효과의 다양성



52% 가
19% (Fig. 3).
아토바스타틴의 부작용
(SGOT/SGPT)가 3
가 1 0.6% 가
가 3
6 (3.1%)

고 안

가
HMG CoA
가
가
41% 61%
4)
10 mg
가

5)
가
가 600 mg/dl
46% 6)
가
phase III

가 10 mg 6
30%
42%
가
가

130 mg/dl , 9%
160 mg/dl
9)
가
가
가
60 가
가
가
10 mg
가
CURVES 5) 10 mg
20 mg, 40 mg,
60 mg 가
172 ± 77 mg 150 ± 67 가 400 mg 가
10)
56 ± 13 mg 7% 55 ± 12 mg/dl 가
가 15% ,
가 6%
가
가 1% , , , ,
가 2 가
가
2.7% ,
3.1% 가
7) 가 (NECP) , 가
130 mg/dl , 가 3
가 130 mg/dl , 77% 가 2.5% , 가 10
가 47% , 가 0.4% , 가 3
13% 가 가 1 0.6% 가 ,
10 가

가 , 3) 6
195 ± 34 mg/dl 30%, 150 ±
67 mg/dl 7%, 110 ± 33
가 , mg/dl 42% ,
55 ± 12 mg/dl 0.2% .
4)
, ,
5) 6
. 42%
, 가 100 mg/dl
44%, 100~130 mg/dl
가 33%, 130~160 mg/dl 가 14%,
160 mg/dl 가 9% .
요 약 6)
가 130 mg/dl
연구목적 : 77% .
가 7) 4
가 가
, 방 법 : 52%
21 가 가
가 240 mg/dl 400 , 19% .
mg/dl 8)
, 10 mg 6 가 3 가 1
6 , , 0.6% 가 10
, 결 론 :
. 가 .
결 과 :
1) 306 166 가 ,
, 62 (37%), 104
(63%) , 58 ± 12 ,
54 ± 13 , 60 ± 12 .
2)
280 ± 34 mg/dl, 172 ± 77 mg/dl,
190 ± 35 mg/dl, 56 중심 단어 :
± 13 mg/dl , .

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