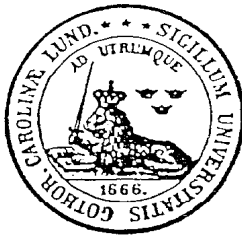


Lunds Universitet
Institutionen för klinisk kemi
Lasarettet
221 85 Lund



University of Lund
Department of Clinical Chemistry
University Hospital
S-221 85 Lund (Sweden)

POLLEN AS A CHOLESTEROL-LOWERING AGENT

A handwritten signature in cursive script, appearing to read 'P.A. Öckerman'.

P.A. Öckerman

M.D., Professor

Department of Clinical Chemistry

University Hospital

S-221 85 Lund, Sweden

Cernilton: Each capsule contains 60 mg of a water-soluble extract (Cernithin T 60) from flower-pollen and 3 mg of a lipid-soluble extract (Cernithin GBX). Flower-pollen has been purified of pollen-capsules and partially hydrolyzed, to obtain a pure preparation which does not give rise to allergic reactions. This preparation is different from bees-pollen that is more heterogeneous and more allergenic.

Cernitromb: Each capsule contains Cernithin T 60, 120 mg and Cernithin GBX, 6 mg.

Both Cernilton and Cernitromb are registered as "naturmedel" (naturopathic remedies) by the Swedish State Medical Board.

Dosage: Four capsules daily for two months.

Analyses: Cholesterol, HDL-cholesterol, LDL-cholesterol and triglycerides were assayed in fasting plasma by routine methods at the Department of Clinical Chemistry, University Hospital, Lund. For fractionation of cholesterol a simple precipitation method was used.

RESULTS

As evident from Table I a significant decrease of 11 - 13 per cent was noted for plasma-cholesterol both with Cernilton and Cernitromb, perhaps slightly more so with Cernitromb. No change was seen in the placebo group.

The decrease was explained exclusively by a 17 - 18 per cent decrease of LDL-cholesterol with no change or a slight increase for HDL-cholesterol. There was no significant change of plasma triglyceride levels. The preparations were well tolerated and no side-effects could be recorded.

TABLE I

Plasma lipid levels during treatment with pollen.

All values given as mmol/l.

		0 months	2 months	p-value
P-cholesterol	Placebo (n = 18)	7.73	7.77	n s
	Cernilton (n = 20)	7.67	6.81	< 0.001***
	Cernitromb (n = 20)	7.68	6.68	< 0.001***
P-HDL- cholesterol	Placebo	1.29	1.32	n s
	Cernilton	1.10	1.21	< 0.05*
	Cernitromb	1.25	1.27	n s
P-LDL- cholesterol	Placebo	5.85	5.87	n s
	Cernilton	5.95	4.95	< 0.001***
	Cernitromb	5.74	4.73	< 0.001***
P-Tri- glycerides	Placebo	1.39	1.30	n s
	Cernilton	1.39	1.37	n s
	Cernitromb	1.94	1.84	n s

p-values denote comparison between time 2 months and 0 months.

n s = not significant

* = significant change at the 5 per cent level.

*** = significant change at the 0.1 per cent level.

DISCUSSION

Our result support those of Kosmider et al (6) as regards P-cholesterol levels. The Polish group found a more marked decrease with a higher dose (six capsules). Possibly, our results might indicate a slightly better effect with the higher dose.

The decrease in cholesterol noted in this study was explained by a decrease only in the LDL-fraction, sometimes called "the bad cholesterol". This should imply a reduced risk for atherosclerosis and cardiovascular disease. The fact that the HDL-fraction did not decrease or even increased slightly would tend to reinforce the positive effect of this treatment.

Pollen in the preparation used here has been used for many years. It has been shown to be effective in prostatitis and prostatic hyperplasia (7), to reinforce immunological defense mechanisms (8) and improve personal capacity (9). Flower-pollen, in conclusion, would be a very interesting natural product. Its effects on plasma cholesterol may come to be of great value, considering the very large need for a lowering of cholesterol levels in the population by means of simple and safe agents in addition to improved diet.

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P. A. Öckerman

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CERNILTON

Initials	Sex	Age	Kolesterol		HDL-kol.		LDL-kol.		Triglycerides	
			0 - 2	0 - 2	0 - 2	0 - 2	0 - 2 months	0 - 2 months		
E.A.	F	70	7.50	6.08	1.20	1.39	6.00	4.25	1.40	0.98
S.A.	M	61	7.26	7.36	0.88	0.98	5.94	5.79	0.98	1.31
H.A.	F	70	7.54	7.24	1.32	1.66	5.10	4.96	1.55	1.37
S.E.B.	M	51	6.86	6.35	1.16	1.39	5.26	4.59	0.97	0.82
E.M.B.	F	55	7.30	7.19	1.40	1.17	5.86	5.55	0.70	1.04
B.B.	M	43	7.82	7.08	1.18	1.27	6.28	5.28	0.95	1.18
J.E.	F	70	7.92	6.49	1.39	1.58	5.73	4.49	0.92	1.01
B.G.	F	58	7.70	7.35	1.09	1.81	5.71	5.15	0.67	0.86
D.H.	F	70	8.67	7.55	0.97	1.14	6.74	5.34	2.14	2.37
A.J.	F	69	10.5	8.93	0.71	0.73	8.04	6.89	3.88	2.92
K.J.	M	60	7.48	5.77	1.27	1.21	5.76	4.25	1.00	0.69
S.J.	M	57	8.26	6.62	1.61	1.33	6.22	4.68	0.95	0.94
I.K.	M	58	7.54	5.83	0.91	1.07	6.06	3.92	1.27	1.86
G.K.	F	66	7.25	6.58	0.91	1.07	5.98	4.67	1.97	1.73
L.L.	M	53	6.50	6.16	0.91	1.13	4.76	4.60	0.95	0.96
L.N.	F	70	7.91	7.08	1.19	1.37	6.19	4.76	2.14	1.19
N.N.	M	70	7.85	7.36	1.00	0.99	6.13	5.69	1.28	1.37
E.P.	M	63	7.41	5.78	1.09	0.86	5.98	4.55	0.75	0.83
B.S.	M	63	6.60	6.10	1.10	1.16	5.20	4.66	0.80	0.62
K.S.	M	46	8.01	7.30	0.79	0.86	6.13	--	2.42	--
Mean			7.67	6.81	1.10	1.21	5.95	4.95	1.39	1.37
p			< 0.001		< 0.05		< 0.001		n.s.	

P. A. Öckerman

P.A. Öckerman 1986-04-09

CERNITROMB

Initials	Sex	Age	Kolesterol		HDL-kol.		LDL-kol.		Triglycerides	
			0 - 2	0 - 2	0 - 2	0 - 2	0 - 2 months	0 - 2 months		
I.A.	F	65	7.10	6.41	1.10	0.90	5.30	4.86	1.50	1.46
K.A.	F	62	8.05	6.72	1.10	1.10	6.94	4.88	2.96	1.99
U.A.	F	60	7.55	6.46	1.50	1.49	5.36	4.48	1.47	1.40
Å.A.	M	69	7.52	6.21	1.44	0.95	5.49	4.51	1.31	1.66
B.B.	M	57	8.05	7.52	1.63	1.53	6.05	5.59	0.83	0.89
E.B.	M	51	6.60	6.83	1.40	1.44	4.80	5.00	0.96	0.86
I.B.	F	70	7.22	6.84	1.89	1.89	4.37	4.54	1.55	1.23
P.C.	M	65	7.81	6.53	0.72	0.93	5.99	4.50	2.33	2.74
B.H.	M	53	8.10	6.72	1.13	1.09	6.24	4.90	2.34	2.11
C.N.	M	45	6.50	6.15	0.67	0.58	2.92	--	5.36	6.04
H.N.	M	64	7.05	6.10	0.75	0.78	5.44	4.52	2.21	2.09
S.O.	M	65	6.50	5.30	0.91	0.90	3.83	3.18	3.04	2.72
K.O.P.	M	64	8.64	6.87	1.09	0.86	5.30	4.35	5.00	3.68
K.P.	M	60	7.44	6.50	1.58	1.40	5.45	4.61	0.90	1.09
N.P.	F	66	8.86	7.30	1.43	3.30	6.95	3.71	1.07	0.64
I.S.	F	58	8.01	7.37	1.69	1.63	5.84	5.30	1.38	1.30
G.S.	F	70	9.19	7.64	1.42	1.24	7.01	5.68	1.69	1.59
A.G.S.	F	62	7.30	6.04	1.40	1.31	5.35	4.25	1.23	1.07
Y.S.	M	60	7.70	6.80	1.20	1.20	6.20	5.13	0.80	1.04
M.S.	F	68	8.80	7.28	0.96	0.84	7.14	5.90	1.56	1.20
Mean			7.68	6.68	1.25	1.27	5.74	4.73	1.94	1.84
p			< 0.001		n.s.		< 0.001		n.s.	

Initials	Sex	Age	Kolesterol		HDL-kol.		LDL-kol.		Triglycerides	
			0 - 2	0 - 2	0 - 2	0 - 2	0 - 2 months	0 - 2 months		
S.E.A.	M	46	6.50	6.21	0.70	0.81	3.70	4.37	4.10	2.28
I.B.	F	68	7.38	8.05	0.94	1.07	5.58	5.72	1.92	2.81
K.E.B.	M	51	7.40	6.50	1.00	0.94	5.30	4.80	2.50	1.68
G.B.	F	57	7.32	7.97	1.75	1.86	5.25	5.71	0.71	0.89
M.D.	F	62	8.24	8.05	1.65	1.42	6.19	6.26	0.88	0.82
L.E.	M	56	7.51	7.91	1.03	1.20	5.81	6.15	1.48	1.24
L.G.	M	63	7.48	7.78	1.10	1.12	6.01	6.04	0.81	1.38
M.G.	F	52	7.26	7.54	0.99	1.32	5.72	5.67	1.23	1.23
A.I.	F	54	7.90	7.98	1.03	1.11	6.10	5.67	1.70	2.66
G.J.	M	59	8.48	8.58	1.21	1.08	6.44	6.86	1.84	1.41
C.J.	M	61	7.71	7.41	1.49	1.66	6.11	5.59	1.12	0.74
L.L.	F	70	7.11	6.86	1.05	1.13	5.81	5.27	1.40	1.02
B.L.	F	45	6.81	6.86	0.98	1.30	5.41	5.26	0.94	0.66
M.L.	F	63	9.01	8.91	1.87	1.59	6.83	7.02	0.69	0.67
I.N.	F	65	9.91	10.4	1.58	1.41	7.85	8.55	1.05	0.98
I.N.	F	68	8.10	8.04	1.51	1.57	6.01	6.01	1.30	1.02
K.S.	F	52	8.55	8.19	1.95	1.99	6.26	5.70	0.75	1.10
M.S.	F	68	6.60	6.64	1.31	1.20	4.98	5.08	0.68	0.80
Mean			7.73	7.77	1.29	1.32	5.85	5.87	1.39	1.30
P			n.s.		n.s.		n.s.		n.s.	