

비만의 약물요법

Treatment of Obesity with Drugs

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Abstract

Obesity is a major global health problem. However, current therapeutic strategies for obesity are limited. Obesity results from an imbalance between energy intake and energy expenditure, and the treatment of obesity is based on the correction of this metabolic imbalance. Anti - obesity drugs can shift this balance in a favorable way by reducing food intake, altering metabolism, and by increasing energy expenditure. There is a growing consensus that pharmacotherapy is appropriate for many individuals who are unable to lose weight through less intensive measures. However, side effects may ensue phamacotherapy for obesity. Only two drugs (sibutramine and orlistat) are currently approved for the long - term treatment of obesity. Sibutramine inhibits the reuptake of serotonin and norepinephrine. Orlistat works by blocking the pancreatic lipase. However, phamacotherapy may not be the ultimate resolution for obesity management. Because the underlying pathophysiology in each individual varies in many aspects, it is recommended to provide individualized and tailored medication in addition to other anti - obesity supportive treatments.

Keywords : Obesity; Energy intake; Expenditure; Phamacotherapy; Anti - Obesity drugs; Individualized medication

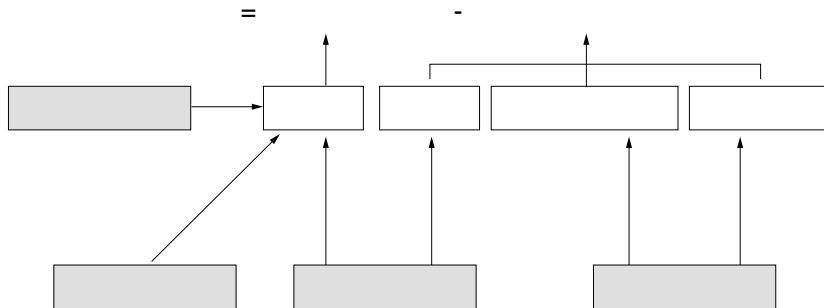
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gy expenditure) (ener-
(intake)

(reducing food intake)

(altering metabolism)

가(increasing ener-
gy expenditure)



1.

1. (*)

Noradrenergic	₁ - Agonist ₂ - Antagonist ₂ - Agonist Norepinephrine Norepinephrine reuptake	Phenylpropanolamine Yohimbin Clebuterol Phentermine, Phendimetrazine* Mazindol, sibutramine*	FDA FDA sibutamine
Serotonergic	5 - HT _{1B} 5 - HT _{1C} agonist 5 - HT 5 - HT reuptake	Metagline Fenfluramine Fluoxetine*	
Dopaminergic	D ₂ agonist, reuptake	Apomorphine, Bupropion*	
Histaminergic	H ₁ antagonist	Chlorpheniramine	

2. (*)

Noradrenergic	, - Agonist 3 - Agonist Norepinephrine reuptake	Ephedrine* Caffeine* BRL26830A sibutramine*	 FDA
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3. (*)

pancreatic lipase - glucosidase - amylase	orlistat * acarbose* *	(14	가)
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1893 (1). Fenfluramine/Phen-
 termine ,
 Ephedrine/
 Caffeine
 Sibutramine Olistat

(1~3).

가 가

가

가 30

kg/m²

25 kg/m²

3~6

1. Fluoxetine

Fluoxetine
 serotonin

Presynaptic

2~3

Fluoxetine 10 mg, 20 mg, 40 mg, 60 mg 8

가

0.9, 1.9. 2.2, 3.9 kg

가

20 mg

1

가

. cytochrome P450 - II - D6

. 12

가

Fluoxetine

5 (20)

. 10 mg 2 kg . lipase
 60% 5% 4 30%
 2 kg 5% . Orlistat 1 360 mg
 10% . Sibutramine 1 가 120 mg 3
 Sibutramine Sibutramine Orlistat 가 . Orlistat
 30% 가
 가 가 1~2
 가 1~2
 가 . Orlistat
 1
 Orlistat 2
 .
 . Sibutramine serotonin Orlistat 120 mg 1
 10.2%, 6.1% 가
 가 (3.9 kg
 가 2 MAO 가). 1
 , , , , , .
 , 가
 . Orlistat
 . Ephedrine, Phenyl- 가 10.1%(
 propanolamine 4.6%) , LDL - 12.6%(
 가 , Cytochrome 5.2%) ,
 P450 ketoconazole, erythromycin, .
 cimetidine 가 가
 .
 3. Orlistat(Xenical) (Fecal urgency), (oily
 Orlistat lipase serine spotting) 가 , 가 가

가 가 ,
(Fecal incontinence) .
가
.
.
(nifedipine, furosemide, captopril, atenolol),
(glyburide) .
pravastatin pravastatin
가 . cyclosporin
Orlistat
가
- caro-
tene 30%, E 60%
, Orlistat
, ,
가 , 14
가 ,
.

1.
가
Bupropion(Dopamine reuptake) Topira-
mate(GABA , glutamate , Na channel
) . Bupropion
FDA 6 90 mg,
300 mg 6
가 , Topira-

mate
. Carbonic anhydrase GABA(-
aminobutyric acid)
가
가
.
Posatirelin(Thyrotropin - releasing hor-
mone analogue), Pegylated leptin(NPY ,
) , Linitript(CCK - A)
GLP(Glucagon like peptide - 1) Am-
yotropic lateral sclerosis
가 Ciliary Neuro-
tropic factor(leptin
)
가 .
2.
가 .
Chromium picolinate, Citric acid(Garcia cambosia)
가
가
(),

Guarana .
ephedra alkaloid
Guarana 200 mg 3
가 , 1 4 Holter

monitor

4 가 가

3.

DHEA(Dehydroepiandrosterone)가

가 가

가 가

, Testosterone

가 1 2~3

가 1 0.5~1 kg 가

가 , 6
5.8 kg , 6.2 kg 3 2~4

가 가 , 3 10%

Carnitine, Capsicin

가 가

가

6 1
3 kg 가



가 3
가
6
가
가 가
가
가

1. 1998 : 7 : 3, 227 - 51
2. Peter G. Kopelman, Michael J. Stock. Clinical Obesity "Drug treatment of obesity : General Principles and Current Therapies. Blackwell Science press, 1999 : 469 - 507
3. Levine LR, Enas GG. Use of Fluoxetine, a serotonergic dreg for obesity control. Obesity in Europe, 1988 : 319 - 21
4. Glazer G. Long - term phamacotherapy of obesity 2000 : a review of efficacy and safety. Arch Intern Med 2001 ; 161 : 1814 - 24
5. Rockville. Food and Drug Administration. Guidance for the clinical evaluation for weight control drugs, 1996