

HIV-Associated Lipodystrophy

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Metabolic Complications

- Lipodystrophy
- Hyperlipidemia
- Insulin resistance
- Lactic acidosis
- Peripheral neuropathy

Lipodystrophy

- Fat accumulation (redistribution)
 - Abdomen, neck, occiput
- Lipoatrophy
 - Face, limbs, buttocks

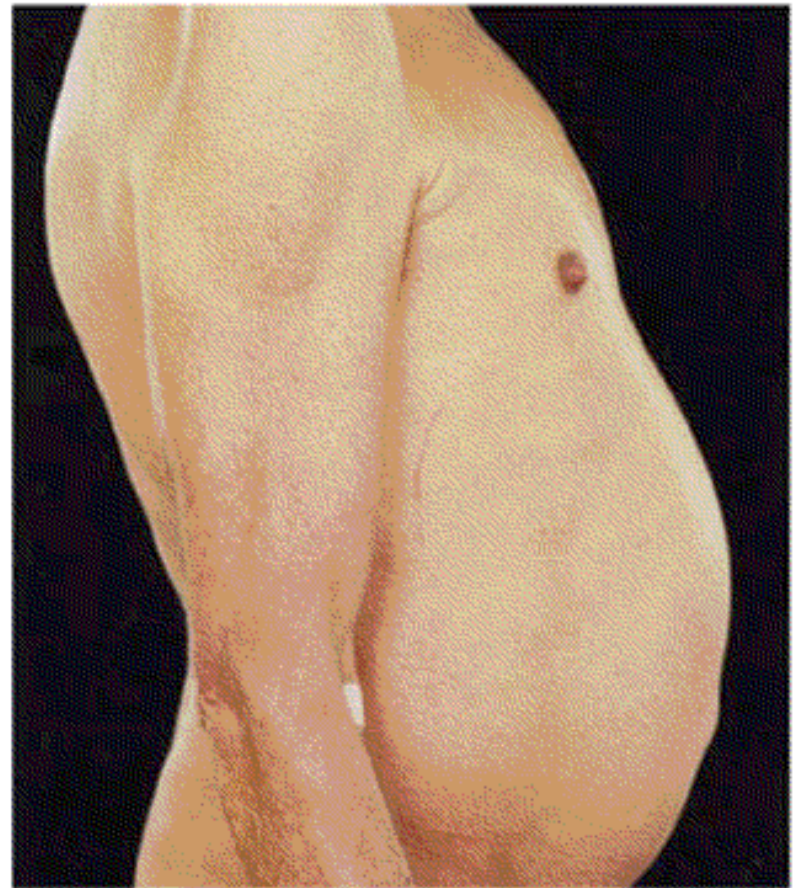
HIV-Associated Body Composition Changes



Buffalo Hump



Facial Wasting



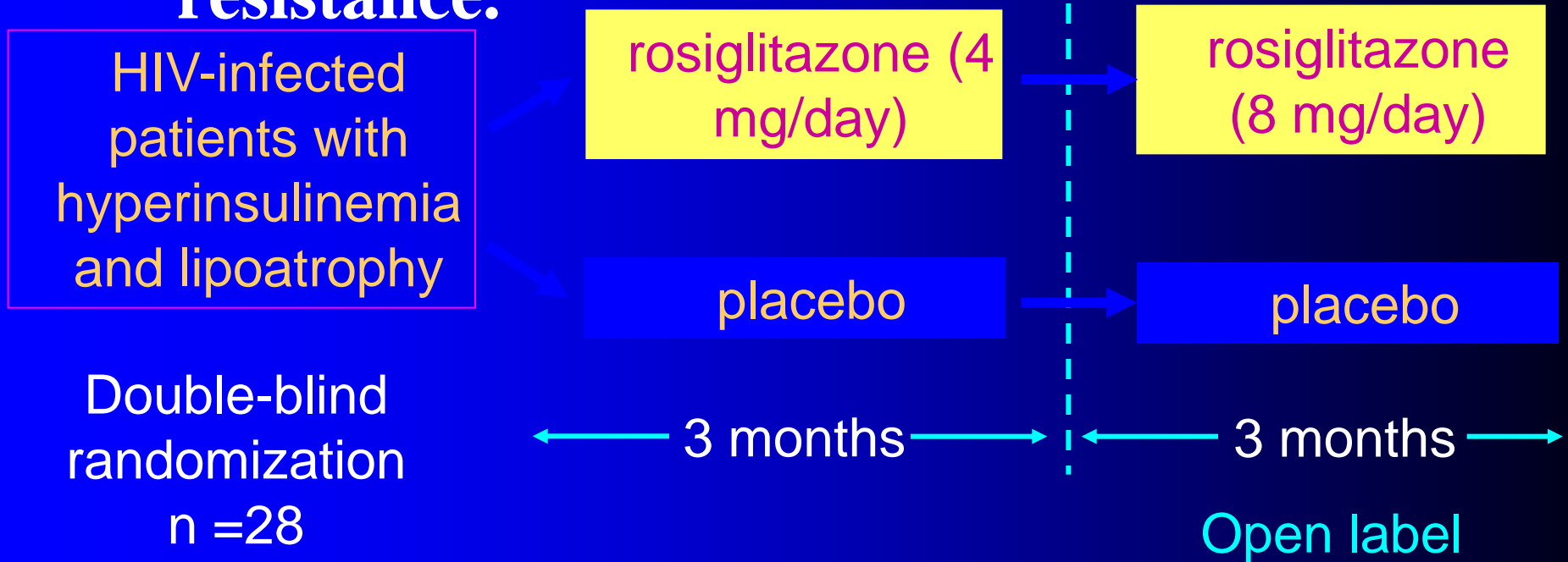
Visceral Fat Accumulation

A Randomized, Double-blind,
Placebo-controlled Study of
Rosiglitazone for Patients with
HIV Lipodystrophy.

C. Hadigan, S Yawetz, A Thomas, *et al.*

Study of Rosiglitazone for Patients with HIV Lipodystrophy

- ARV therapy often leads to loss of subcutaneous fat and metabolic abnormalities including insulin resistance.



Study of Rosiglitazone for Patients with HIV Lipodystrophy

At 6 months:

**Insulin sensitivity remained improved
SAT from baseline ↑15%**

Study of Rosiglitazone for Patients with HIV Lipodystrophy

- **Positive effects of rosiglitazone on insulin sensitivity and fat in HIV-infected patients**
- **Study powered to look at insulin resistance, but not body shape changes**
- **Body shape changes small**
- **Larger studies are required to:**
 - Identify optimal dose, duration of treatment, subpopulations most likely to benefit, and choice of specific thiazolidinedione

Recombinant Human Growth Hormone in HIV Wasting

- 757 pts, with 646 completing 12 wks of Rx
- Double-blind, randomized, placebo-controlled
 - 1:1:1 6mg/d r-hGH: 6mg r-hGH qod: placebo
- Assessment by DEXA or bioelectrical impedance spectroscopy
- Body wt and lean body mass increased significantly compared to placebo
- Greater impact on truncal fat compared to limb fat

Recombinant Human Growth Hormone in HIV Wasting

- LBM increased by 3.44kg in daily group, and by 2.62kg (both $P < 0.0001$ vs placebo)
- Total and trunk fat mass decreased by 1.4kg & 1.1 kg, respectively, in QD group, and by 1.2kg & 1.1 kg in qod group (both $p < 0.0001$ vs placebo)
- Net weight gain occurred in both Rx arms