

Poster Sessions – Abstract P027

Lipohypertrophy and metabolic disorders in HIV patients on antiretroviral therapy: a systematic multidisciplinary clinical approach

Sculier, Delphine¹; Toutous-Trellu, Laurence²; Verolet, Charlotte³; Matthes, Nicolas¹; Lecompte, Thanh¹ and Calmy, Alexandra¹

¹Infectious Diseases, University Hospitals of Geneva, Geneva, Switzerland. ²Dermatology and Venerology, University Hospitals of Geneva, Geneva, Switzerland. ³Pediatrics, University Hospitals of Geneva, Geneva, Switzerland.

Introduction: Morphological and metabolic complications in HIV patients on antiretroviral therapy remain a challenge. While new cases of lipoatrophy (LA) disappear, irreducible central lipohypertrophy (LH) and metabolic complications require highly specialized management. We described a day hospital dedicated to lipodystrophy (LD) and metabolic disorders in HIV patients on treatment in Geneva, Switzerland, with a focus on LH.

Materials and Methods: The “Groupe Lipo & Metabolism” is a multidisciplinary consultation where patients undergo a standard evaluation including questionnaire, physical examination, dual-energy x-ray absorptiometry (DEXA) and L5-level CT scans, blood tests and consultations with various specialists. Based on prospectively maintained data, we describe clinical, biological and radiological characteristics of patients ≥ 18 years who attended the consultation between 2008 and 2013. We defined LH by CT scan, the gold standard method, as abdominal visceral adipose tissue (VAT) ≥ 130 cm², value associated with increased risk of cardiovascular event.

Results: A total of 195 patients attended the consultation during study period. Reasons for referral included LH in 28.3%, LA in 25% and mixed syndrome in 15.5% of cases. Metabolic disorders accounted for 19% of referrals with or without LD features. Among patients with a CT scan performed ($n = 183$), 46 (25%) had LH with a VAT ≥ 130 cm². In this population, mean age was 49.1 years and 53.6% were male. HIV viral load was < 50 cp/ml in 87% of patients. Mean body mass index was 24.6 kg/m². Mean waist to hip ratio (WHR) was 0.98 for males and 0.89 for females. A total of 9.8%, 29.5% and 35% of patients had abnormal levels of total cholesterol (≥ 6.5 mmol/L), triglycerides (≥ 2.0 mmol/L) and HDL cholesterol (≤ 1.0 mmol/L), respectively. Mean fasting glycaemia was 5.7 mmol/L and HbA1c was $> 6\%$ in 10.5% of patients. Vitamin-D level was < 75 nmol/L in 70.7% of patients. Respectively 31.2% and 12.1% of patients had osteopenia and osteoporosis on the spine and 44.8% and 6.6% on the hip neck. Factors associated with a VAT ≥ 130 cm² included male gender (OR 3.7 [95% CI 1.7–8.2] $p < 0.001$), triglycerides ≥ 2 mmol/L (OR 2.6 [95% CI 1.3–5.4] $P < 0.01$) and increase in BMI category (OR 1.8 [95% CI 1.2–2.8] $p < 0.01$).

Conclusions: Lipohypertrophy is a prevalent feature of fat redistribution among HIV patients on treatment. Risk factors for LH include male gender, dyslipidemia and overweight. Glucose impairment and bone disorders are also common. A multidisciplinary approach is important to identify and promptly address these disorders.

Acknowledgments: The “Groupe Lipo & Metabolism” team.

Published 2 November 2014

Copyright: © 2014 Sculier D et al; licensee International AIDS Society. This is an Open Access article distributed under the terms of the Creative Commons Attribution 3.0 Unported (CC BY 3.0) License (<http://creativecommons.org/licenses/by/3.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.