

Lipodystrophy

The changes produced in the body shape because of an abnormal distribution of fat are called Lipodystrophy. The first cases related to HIV were reported in 1997 amongst people who were receiving antiretroviral therapy.

In the beginning they thought it was caused by protease inhibitors (PI), but now it is known that the changes in the body fat can also appear at times in people receiving anti-retroviral therapy, which does not include PI and possibly in people with HIV that have never been treated by anti-retroviral medications.

What is lipodystrophy?

Strictly speaking, it means abnormal redistribution of body fat, with rises in some parts and/or losses in others. As a result this can cause waist rise (without belly), breast rise; accumulation of fat in the back of the neck; accumulation of fat around the neck and the double chin; loss of facial fat especially in the cheeks; loss in buttocks; prominent veins; arms and legs (because of fat loss). The rise of abdominal fat caused by lipodystrophy comes from the intense fat that accumulates around the internal organs provoking the feeling of strained or swollen abdomen. This fat is different to the fat gained by overeating or lack of physical activity, which can be lost by physical exercises or diets.

How often does lipodystrophy happen?

Calculating its frequency varies considerably according to the definition and the sensitivity used in its measurement, but Lipodystrophy can affect between 5 to 80% of the people with antiretroviral treatment.

Metabolic disorders

The term metabolism refers to combined processes that keep the body in good shape, including the transformation of fat and sugar into energy. People with Lipodystrophy can generally be seen affected by metabolic disorders, such as fat or (lipids) rise in their blood. However the relationship between the changes of body fat and these metabolic disorders is not clear yet. Some examples include high levels of fat in blood called triglycerides or cholesterol; elevated blood sugar; diabetes (accumulation of sugar in the blood); insulin resistance (incapacity to react to insulin, necessary to assimilate the sugar); and elevation of hepatic enzymes.

What causes lipodystrophy?

The changes of body fat have been linked to several factors, including the type and the length of the antiretroviral treatment, the gender, the age, the family history, the diet, the body mass, and the fat previous to the treatment. Nevertheless, there is no proof of any of these factors causing Lipodystrophy on their own. Some experts believe that the wide range of distribution of body fat and metabolic changes observed, represent diverse independent conditions, whose causes can be or not be linked to each other.

What are the implications?

Body fat changes by themselves do not seem to be linked with development of a poor health. Nevertheless, changes in body fats can cause social stigma, and are a potential source of stress and a common worry amongst people who receive antiretroviral treatment. High levels of blood fat associated with heart attacks, pancreatitis, and the fact that the metabolic disorders linked with combined therapy could lead to an increased risk of heart diseases, is a source of worries (See InfoVIHtal#16: "Cholesterol"). The tests done so far are not very clear. There is probably a higher risk amongst people who have other factors of risk, like a high blood pressure, diabetes, obesity, smoking or a family history with heart infection.

Treatment

Up to now there is no proven treatment for the changes of the body fat associated with antiretroviral therapy. However cholesterol and triglycerides levels can be improved at times or controlled by regular exercises, giving up smoking, changing the contraceptive pills to another method of birth control and diet changes, taking medical advice from a reputable dietician.

Omega-3 supplements can also have an important impact on cholesterol levels. This can be a lot more effective than trying to get sufficient amount of Omega-3 only through diet. For example, a daily dosage of 4gr of Omacor® (90%

Omega-3 and ethyl acid esters), it is the same as 150gr of mackerel, 700 gr of tuna fish, 210gr of herring, 1.1kg of cod, 280gr of salmon, 1.7kg of eel or 850gr of prawns.

If diet supplements and exercise are not enough, medicines that lower the lipids like fibrates that reduce the triglycerides can be taken. In extreme cases fat lumps can be removed by surgery, although in the case of accumulation of abdomen fat, it could be inappropriate. For facial recovery other types of surgery have been used.

To reduce de cholesterol, statins can be used. Nevertheless, these can interact with the HIV medication and should be prescribed by an HIV specialist; they must be taken with precautions, because they can affect the levels of HIV medications.

Changing the antiretroviral therapy can also be an alternative method to control Lipodystrophy and metabolic disorders, especially changing a PI to non-nucleoside

reverse transcriptase inhibitor (NNRTI) or abacavir. In most people it remains undetectable, when changed to a new combination. However, some people may prefer to continue with their current system of treatment, because regardless of undesirable effects, it works for them.

Control of the changes

People who start an antiretroviral therapy can be controlled to detect primary body fat changes. Amongst possible options of control, scanners that show a distribution panel of fats, muscles and bones in the body are included, and an anthropometry that can measure the size of skin folds. Your doctor can weigh you, take your blood pressure and measure levels of blood sugar and fat for future references. These mentioned last vary after food consumption, therefore the tests are done after an all night fast.

