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Archi-Prevaleat project. A National Register of color-Doppler ultrasonography of the epi-aortic vessels in Patients Living with HIV.

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Introduction

The introduction of effective antiretroviral (ARV) regimens has produced a deep impact on the natural history of HIV infection, leading to a dramatic decrease in its mortality improving life expectancy of Persons Living with HIV (PLWH)[1], nevertheless, in these patients cardiovascular disease (CVD) is more frequently than the general population[2]. Measurement of carotid Intima Media Thickness (IMT) with color-Doppler ultrasonography is a non-invasive, sensitive and highly reproducible technique for identifying and quantifying atherosclerotic lesions, even at a very premature stage. It is a well-validated research tool and is widely used in clinical practice. In preventive medicine, IMT measurement is especially important for subjects with an intermediate CV risk, being consistently related to future CV events[3].

Aim

PREVALEAT (PREmature VAscular LEsions and Antiretroviral Therapy) is a multicenter, longitudinal cohort study involving several Italian centers, aimed to the evaluation of CV risk in HIV-infected patients since 1998.The cohort produced, during years, several studies in this field. Our aim is to generate a National Register of color-Doppler ultrasonography (Archi-Prevaleat) to evaluate the characteristics of vascular lesions in PLWH on a large number of data.

Methods

The project involves, at present,9 Italian centers in which the ultrasonographic examination is performed by specifically trained physicians during a Continuing Medical Education stage. The Register is based on a on-line platform (www.archiprevaleat.com) aimed at collecting data regarding patients routinely submitted to the examination for the first time and at all the subsequent follow-up examinations. We have enrolled until now 150 patients who performed color-Doppler ultrasonography whose data are summarized in Table 1.IMT of common and internal carotid for both left and right sides is registered. A minimum of three measurements are requested: on the common carotid artery:1 cm before the carotid bifurcation and at carotid bifurcation; on the internal carotid:1 cm after the carotid bifurcation and 2 cm after the carotid bifurcation. An IMT of >1 mm is considered pathological. Atherosclerotic plaques, if present, are described.

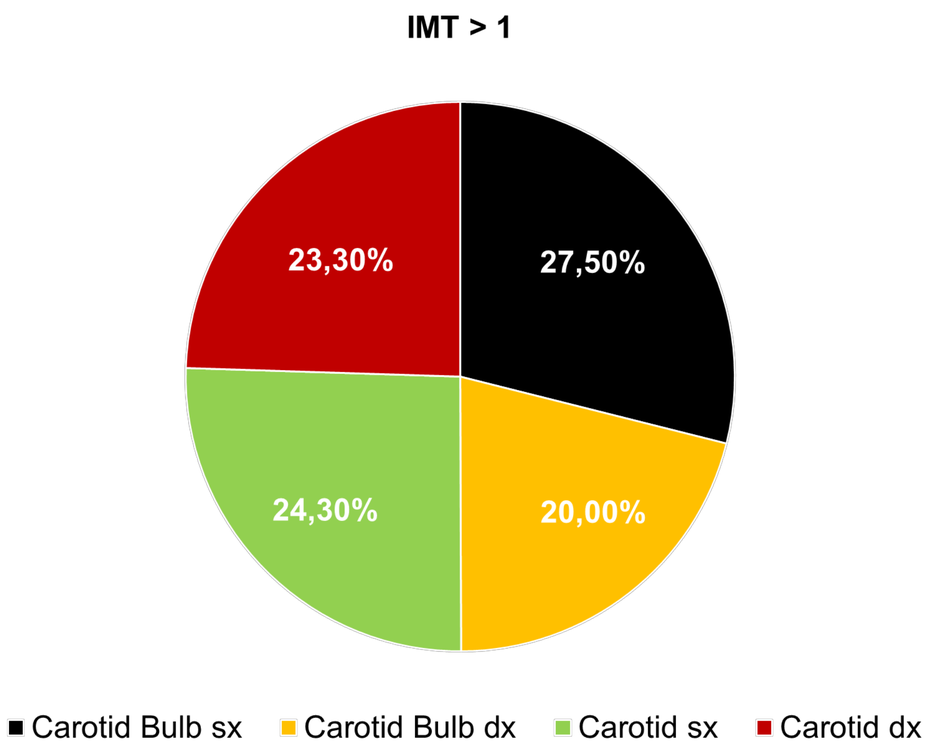
Results

The tendency is to perform the investigation in older patients, in males and subjects with an history of AIDS. The prevalence of IMT has been 27,5% at left carotid bulb, 20% at right carotid bulb, 24,3 % at left common carotid and 23,3% at right common carotid (Fig.A).

Table 1 Baseline data

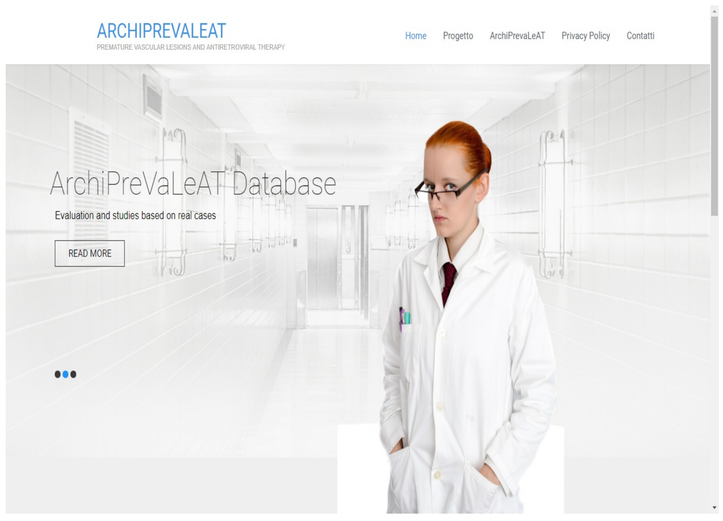
ARCHIPREVALEAT DATA	
Numbers of patients	150
% of patients >50 years old	77/150 (51,2 %)
Male/Female	113/37
Italians/Strangers	109/41
Risk Factors for HIV infection	MSM 36 (24%) PWID 24 (16%) HETERO 90 (60%)
CDC CLASSIFICATION: C (late presenters)	C: 37 (24,6 %)
CD4+, cell/μL mean ± SD	703,76± 355
PI based regimens	48 (32%)
CV DISEASE	15 (10%)
Triglycerides (mg/dl) mean± SD	162 ± 111,88
Cholesterol mean (mg/dl) ± SD	184,36 ± 46,22
HDL mean (mg/dl) ± SD	43,63 ± 13,98
LDL mean (mg/dl) ± SD	112,12 ± 34,30
% of IMT > 1 at Carotid bulb sx	33/120 (27,5%)
% of IMT > 1 at Carotid bulb dx	24/120 (20%)
% of IMT > 1 at Carotid sx	19/78 (24,3%)
% of IMT > 1 at Carotid dx	18/77 (23,3%)

Fig. A Prevalence of IMT



Conclusions

The preliminary data of our Register show an unexpectedly high prevalence of pathological IMT even if the investigation is performed in patients at higher risk. This will prompt extend the investigation to all patients and will help to proactively prevent CVD, that, in association to aging, inflammation and dyslipidemia, will have a negative impact on good prognosis conquered by advent of safer antiretroviral drugs.



Reference

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