

Penile Vascular Status in Young Men Living with HIV Experiencing Erectile Dysfunction: a Comparative Cross-Sectional Study

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BACKGROUND

Erectile dysfunction (ED) is a prevalent concern among young men living with HIV (yMLWH). We aimed to assess the penile vascular status of yMLWH experiencing ED using dynamic penile color-Doppler echography (dpCDE).

METHODS

This is a monocentric comparative cross-sectional study in which we enrolled yMLWH attending our Unit of Infectious Diseases in Brescia, Italy. Inclusion criteria were a HIV-infection and age between 18 and 50 years old. All yMLWH from June 2023 to December 2023 were asked for symptoms of ED during the routine follow up visits. For those reporting ED, dpCDE was performed by an Andrology Specialist. We employed a comparative group of HIV-negative individuals experiencing ED stratified by age into two cohorts: young (yC, under 50), and middle-aged controls (maC, aged 51 to 60).

RESULTS

In the study period, 310 yMLWH were assessed for eligibility, 50 (50/310, 16.1%) reported ED and were enrolled. Regarding the dpCDE results, the proportion of yMLWH with pathological intima-media thickness (IMT) was significantly higher compared to that of the yC (76.0% Vs 61.0%, $p=0.004$) (Figure 1A). Although not statistically significant ($p = 0.053$), yMLWH exhibited a higher prevalence of pathological end-diastolic velocity (EDV) compared to both the yC and maC (Figure 1B). Furthermore, yMLWH showed more frequently altered peak systolic velocity (PSV) when compared to the yC, although this difference was not observed when compared to the maC ($p = 0.074$) (Figure 1C).

CONCLUSION

In our cohort, the proportion of yMLWH exhibiting pathological penile IMT was similar than that observed in a population 10 years older. IMT is considered as an early predictor of major cardiovascular events in specific populations, such as individuals with diabetes.

