Does menopause increase the incidence of cardiovascular disease risk factors in urban, HIV positive, African American females?

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Heart Disease in the United States

Age-Adjusted Death Rates (per 100,000) for Coronary Heart Disease (CHD), Stroke, and Lung and Breast Cancer for White and Black Females, 2008

Heart Disease in the United States
Percentage of Deaths Caused by Cardiovascular Disease (CVD)
Plus Congenital CVD, 2008

Heart Disease in the District of Columbia (DC)
CHD Mortality Rates (per 100,000) by Age (>35 and >65 years) and Race, 2007 – 2009, DC

HIV / AIDS in the United States
Percentages of Diagnoses of HIV Infection among Adults / Adolescents, by Race / Ethnicity, 2007 - 2010

HIV / AIDS in the United States
Adults / Adolescents Living with Diagnosis of HIV in 2009

- American Indians / Alaskan Natives (<1%)
- Asians (1%)
- Blacks/African Americans (43%)
- Hispanic / Latino (19%)
- Native Hawaiian / Other Pacific Islander (<0.5%)
- White (35%)
- Multiple Races (1.5%)

HIV / AIDS in the United States
Death Rates of persons with a diagnosis of HIV Infection, by Race/Ethnicity, 2009

- American Indian / Alaska Native (<0.5%)
- Asian (<0.5%)
- Black/African American (49%)
- Hispanic / Latino (15%)
- Native Hawaiian / Other Pacific Islander
- White (31%)
- Multiple races (3%)

HIV / AIDS in DC
Proportion of Adults/Adolescents Diagnosed and Living with HIV by Race/Ethnicity and Gender, DC, 2010

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Gender</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Females</td>
<td>0.10%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Females</td>
<td>0.60%</td>
</tr>
<tr>
<td>Black</td>
<td>Females</td>
<td>2.60%</td>
</tr>
<tr>
<td>White</td>
<td>Males</td>
<td>2.40%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Males</td>
<td>3.00%</td>
</tr>
<tr>
<td>Black</td>
<td>Males</td>
<td>6.30%</td>
</tr>
</tbody>
</table>

HIV / AIDS in DC
Proportion of Adults / Adolescents Diagnosed and Living with HIV by Current Age, DC, 2010

As of December 2010 there were 14,465 people living with HIV.

- 74% were African American (AA).
- 27% were female (92.4% of which were AA).
- 37.7% of the total were 50 years of age or older.
Increased Risk of Heart Disease Due to HIV and It’s Treatment

The Virus
Inflammation, immune dysfunction and blood clotting problems caused by HIV appear to lead to increased risk of CHD.

The Treatment
Highly active antiretroviral therapy (HAART), particularly protease inhibitors, enhance CHD risk by increasing blood cholesterol levels and changing fat distribution in the body.

Purpose of this Research

The purpose of this research was to compare the cardiovascular disease risk factors of AA, HIV positive patients living in an urban setting to learn if there is an increase in these factors at or after the onset of menopause.
Methodology

This was a retrospective, observational cohort study. A chart review was conducted at the Center for Infectious Disease Management and Research (CIDMAR) at Howard University Hospital. All female patients and male patients, 50 years of age or greater, having had at least one medical visit annually between 2008 and 2011, underwent chart review.
Methodology Continued

Inclusion Criteria

- African American females ≥ 18 years of age.
- African American males ≥ 50 years of age.
- HIV Positive.
- Prescribed and taking HAART.
Methodology Continued

**Exclusion Criteria**

- Deceased prior to January 1, 2012.
- Not taking HAART.
- Less than one medical visit annually between 2008 and 2011.
- No documentation of risk factor treatment.
## Data

<table>
<thead>
<tr>
<th>Charts Reviewed</th>
<th>314</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charts Excluded</td>
<td>94</td>
</tr>
<tr>
<td>Charts Included</td>
<td>220</td>
</tr>
<tr>
<td>Men (≥ 50 years of age)</td>
<td>71</td>
</tr>
<tr>
<td>Females (≥ 50 years of age)</td>
<td>55</td>
</tr>
<tr>
<td>Females (&lt; 49 years of age)</td>
<td>94</td>
</tr>
</tbody>
</table>

**Data Points Extracted:**
- Diagnosed & treated for hypertension
- Diagnosed & treated for hyperlipidemia
- Diagnosed & treated for diabetes
Results
CVD risk factors by age groups.
Results
Incidence (%) of all three CVD risk factors by age group.
Findings / Discussion

All risk factors, although not all statistically significant, were higher in the menopausal group compared to the younger women and same aged men. This data shows that this group of menopausal women is at a higher risk of CVD than men of the same age within the cohort. Therefore, menopause does increase the incidence of CVD risk factors in these urban, HIV positive, AA women.
Limitations of this Research

- Failure to identify other significant risk factors including smoking, obesity, family history and/or history of myocardial infarction, stroke or thrombosis.
- Failure to identify exact age of menopause for each female patient.
- Small sample size.
Future Work

- Compare this cohort of menopausal women to a group of AA, menopausal, HIV negative women living in an urban setting.
- Compare this cohort of menopausal women to a group of AA, menopausal, HIV positive women living in an urban setting that are not taking HAART.
- Study larger groups of HIV positive patients in other settings within DC and in other US cities.
- Collaborate with cardiovascular disease experts.
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Citations


Thank You