An aging epidemic

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In Canada and other high-income countries, the widespread availability of potent combination anti-HIV therapy (commonly called ART or HAART) has greatly reduced deaths from AIDS-related infections. ART is so powerful that researchers increasingly expect that some young adults who become HIV positive today and who begin ART shortly thereafter and who are engaged in their care and treatment are likely to live into their 80s.

An initially young epidemic

One of the first reports about the emerging HIV epidemic appeared in a bulletin from the U.S. Centers for Disease Control and Prevention (CDC) called MMWR (Morbidity and Mortality Weekly Reports) in June 1981. Inside MMWR was a report from doctors in California who reported the mysterious appearance of life-threatening infections in previously healthy young men.

A month later, another issue of MMWR reported the very strange appearance of skin lesions (called Kaposi's sarcoma or KS) also in previously healthy young men residing in California and New York City. At the time these reports were issued they caused astonishment among doctors. Until those reports, cases of KS in high-income countries were rare and did not occur in clusters. Furthermore, prior to the arrival of AIDS, when KS had been previously diagnosed it was typically seen in elderly men of Mediterranean descent, in whom it generally caused mild disease in the feet or lower legs. However, KS was different in the young men mentioned in MMWR and other reports from the early 1980s in North America and Western Europe. In these men, KS lesions could appear anywhere on the body and could quickly spread to lymph nodes and affect internal organs. Although chemotherapy was sometimes effective, the underlying immune deficiency caused by HIV remained.

Present and future

Fortunately, in high-income countries, KS is no longer as common as it was in the early years of the HIV epidemic. If it does occur, sometimes the use of ART alone is sufficient to make KS regress (though this regression can be slow in some people). In the current era, only rarely is chemotherapy needed in addition to ART to treat HIV-related KS.

Another change in the HIV epidemic is that today, thanks to ART, people are living longer. Here are some examples from two high-income countries:

Switzerland

Researchers reported that in 1990 the proportion of HIV-positive people who were between 50 and 64 years was less than 3%. However, by 2010 that proportion had increased to 25%.

United States

The CDC estimated that in 2009 about one-third of HIV-positive people were at least 51 years old. Furthermore, the CDC has forecasted that by the year 2020, more than 50% of HIV-positive people in the U.S. will be over the age of 50.

The trends reported in these two countries are very likely occurring in other high-income countries as well.
New infections

It is not just the aging of people with longstanding HIV that is occurring. Reports from the CDC suggest that a significant number of new cases of HIV are occurring in people aged 50 or older. According to figures supplied by the Public Health Agency of Canada (PHAC), about 18% of new HIV cases are occurring among people aged 50 or older.

The research needs of older citizens

The effect of these two trends—living longer with HIV and new HIV infections occurring at an older age—will have implications for research. Among HIV-negative people, growing older is associated with an increased risk for complications affecting many organ-systems—such as cardiovascular disease, kidney dysfunction, type 2 diabetes, thinning bones and so on. Doctors and researchers call these other health conditions co-morbidities. Researchers need to study the twin impacts of long-term HIV infection and aging to assess their impact on overall health and well-being.

Due to these co-morbidities, it is likely that in addition to taking daily ART, other medicines will have to be taken. Taking multiple medicines for several conditions is called polypharmacy. This can be a problem for elderly people for at least the following reasons:

- potential drug interactions
- adverse reactions (and distinguishing whether adverse reactions are a side effect of medicines or related to the aging process, HIV or something else.)
- difficulty organizing pill-taking of different medicines every day

As another example, the kidneys of older people are not as efficient as those of younger people. Older people sometimes require adjustment to the doses of their medications to reduce the risk of toxicity. It is possible that as HIV-positive people age similar dose adjustments may be required.

The burden of coping with multiple conditions may be difficult for some people as they strive to remain high functioning and yet are constrained by the effects of aging. These and other issues related to aging may have an impact on the overall health and mental and emotional well-being of aging HIV-positive people.

Aging on the research agenda

Scientists are beginning to grapple with the complexity of aging and HIV. The U.S. Office of AIDS Research, part of that country’s National Institutes of Health (NIH), has commissioned a report that outlines topics relevant to HIV and aging that require study.

Canada’s premier agency that funds scientific research into health issues is the Canadian Institutes of Health Research (CIHR). A key part of CIHR is the Institute of Infection and Immunity. This institute has identified HIV and aging as a priority under its Comorbidity Research Agenda and is funding a number of grants to explore different aspects of the challenge of aging with HIV.

Health services

It is likely that as HIV-positive people grow older, healthcare providers will have to adapt knowledge gained from the field of geriatrics to help their patients. Aging patients generally need more visits to their family doctor, screening for conditions that are common in this population, more referrals to specialty care and more medicines. All of these will likely be true for HIV-positive people as they age. Ministries of health and policy planners will have to start estimating the costs of treating an aging HIV-positive population to ensure that sufficient money is given to community clinics and hospitals so they can continue to provide high-quality care.

Our next CATIE News bulletin explores a report from researchers in Alberta who are investigating the aging of the HIV epidemic and its implications for the cost of care.

Resources:
Report to the NIH about Aging and HIV

The CIHR Comorbidity Agenda

CIHR’s HIV Comorbidity Research Agenda: Relevant Research Areas

HIV and Aging – Healthy living tips for people 50 and over living with HIV

HIV and Aging – CATIE Webinar Series: Building Blocks

Factsheets on HIV and aging in Canada – Canadian AIDS Society

Evidence-informed recommendations for rehabilitation with older adults living with HIV: a knowledge synthesis

—Sean R. Hosein

REFERENCES:


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