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Emerging Advances in HIV Management

Announcer:

Welcome to Reach MD. This medical industry feature titled: Emerging Advances in HIV Management is brought to you by ViiV Healthcare. Here's your host, Dr. Matthew Birnholz.

DR. BIRNHOLZ: When the medical community first encountered HIV over 35 years ago, there was very little that could be done to help the individuals who were suffering from this epidemic. However, since the approval of the first antiretroviral in 1987, there have been major advancements in HIV medicine, and what was once a serious health issue can now be managed as a chronic disease. Welcome to Spotlight on HIV Management. I am Dr. Matt Birnholz. Joining me is Dr. Michael Gaisa, an infectious disease expert and Associate Professor of Medicine from the Icahn School of Medicine at Mount Sinai in New York City. Dr. Gaisa, thanks for being here today.

Dr. GAISA: Thanks, Dr. Birnholz, for having me.

DR. BIRNHOLZ: As I understand it, Dr. Gaisa, you have been involved in HIV care for the past 14 years. Tell us, what were the early days of the HIV crisis like before you began practicing?

DR. GAISA: I have been treating HIV since 2005 after I started taking care of some long-term survivors who got infected during the early days of the epidemic. I do recall a lot of their stories where they told me they lost their lovers and most of their friends and social networks to AIDS. They were lucky enough to survive until the mid 1990s when protease inhibitors became available, which basically revolutionized the treatment of HIV and revived patients from their death beds. While most of them have significant survivor's guilt, over time and with support, many went on to have productive lives, rejoin the work force, and had a new chance at love in some cases, and forged meaningful interpersonal connections. We have come a long way since the early days.

DR. BIRNHOLZ: We certainly have. I think the most natural question from there is how has HIV treatment evolved since those early days when the virus was first discovered?

DR. GAISA: From the early days, fewer than half of people living with the virus were expected to survive the first year after diagnosis. Nowadays, people are actually living with HIV and can expect to live longer lives. The first antiretroviral was approved in 1987, and since then we have advanced from a single treatment that was available to many antiretrovirals, which are used in various combinations and work to decrease a patient's viral load by targeting different pathways in the virus's replication cycle. Because of the efficacy of available drugs, three-drug regimens became the standard of care. Although there are instances where we have heard of people being cured of HIV like the famous Berlin patient and most recently the London patient. While these patients have received bone marrow transplants from a donor with natural genetic resistance mutation to HIV, these procedures are very risky and probably are not a feasible cure for most patients. By having strict adherence to antiretroviral therapy, many people can suppress their virus to undetectable levels and avoid passing the virus onto their sexual partners who are not HIV positive. Knowing what it was like in the beginning, it is amazing that people living with HIV can now live as long as the general population basically.

DR. BIRNHOLZ: That is an amazing point, a really important one. Let us backtrack to get a better sense of the scope and burden. How prevalent is the HIV virus today?

DR. GAISA: At the end of 2017, it was estimated that just under 37 million people worldwide are living with HIV with 1.8 million more acquiring HIV every year. Currently, 1.1 million people live with HIV in the United States alone and one new person contracts HIV every 14 minutes. The overall incidence rates have decreased from their historic highs, but there are demographic groups that are unfortunately not faring as well. For example, African-Americans account for only about 13% of the U.S. population, but they account for 44% of new HIV diagnoses. We see similar disparities in HIV incidence rates among Hispanics and Latinos. Latinos account for 25%

of new HIV diagnoses but only make up about 18% of the population. The youth of our society are also greatly impacted. In 2017, for example, the highest rate of HIV incidence was with people between the ages of 25 to 29. As younger members of our society continue to become exposed to HIV, we need to start thinking about what treatment means for people who will spend a lifetime taking drugs to suppress their virus. This is a concern that impacts all age groups. Let us look at middle age or older people who are living with HIV now, for example. They have seen their life expectancies increase and basically mirror those of the general population now. These individuals may have been on antiretrovirals for decades with many more years of therapy ahead of them in some cases.

DR. BIRNHOLZ: Dr. Gaisa, let us consider the impacts of this current treatment landscape compared to a few decades ago. Given that people with HIV can now live as long as the general population, what do clinicians need to consider when treating them?

DR. GAISA: The people living with HIV now face a new and evolving set of challenges, which include the normal effects of aging combined with the physical and emotional impact of being on antiretroviral therapy for life. For the last 15 or 20 years, the standard of care has revolved around a daily combination of three antiretroviral agents. These combination regimens have been very successful in suppressing HIV to undetectable levels in people who live with the disease. Although these drugs are successful in suppressing HIV to undetectable levels, HIV therapies may also bring side effects along with them, including increased risk of age-related ailments like chronic kidney disease, end-stage liver disease, or new-onset diabetes. In addition, common drugs can interact with HIV therapies, such as statin drugs, antifungal drugs, oral contraceptives, hormone replacement therapy, certain cardiac antiarrhythmic drugs, and benzodiazepines. If people are living longer with HIV, we need to start thinking holistically about the impact the medication regimen has on their bodies and minds. This is what scientific innovation has enabled us to do, the opportunity really to ask how can we improve these people's lives?

DR. BIRNHOLZ: Let us ask that then. How can physicians help people living with HIV address some of these challenges?

DR. GAISA: As we ask ourselves how can we improve these peoples' lives, it is important that we begin to untack what this lifetime of antiretroviral therapy means. The reality is that because we have potent and efficacious therapies, we can shift our focus now onto the tolerability and convenience of the medications that we are prescribing.

DR. BIRNHOLZ: For those just joining us, this is ReachMD, and I am Dr. Matt Birnholz. With me is Dr. Michael Gaisa to talk about HIV treatment options. Dr. Gaisa, earlier you spoke about the history of HIV and advances in treatment since the 1980s. Let us continue on that track and focus on treatment options today. Since three-drug regimens are now the standard of care, do you have concerns about the efficacy of treatments that do not utilize three drugs?

DR. GAISA: That is a good question. Three-drug regimens became the standard of care because of their combined efficacy. Scientific research has enabled us to identify core agents that can serve as the backbone in new regimens that require fewer drugs. As a physician, it is important for me to understand the profile of the compounds that make up a complete regimen. There is a wealth of peer-reviewed data on new combinations that I look at to understand the efficacy, safety, and resistance profile, and I suggest that my colleagues do the same.

DR. BIRNHOLZ: Dr. Gaisa, you talk about resistance as a concept. Let us stay on that theme because we know that part of the reason why three-drug regimens become the standard of care was out of an effort to curb resistance. Does it follow that reducing the number of medicines in a regimen will increase the risk of drug resistance?

DR. GAISA: What is important is to note that drug resistance has been documented in all medicines used to treat HIV. That is in part due to the rapidly mutating nature of the virus itself, the pressure that the medicines place on the virus to mutate, and poor medication care. As the scientific community develops new treatments, these new medications have unique profiles that make them less likely to develop resistance. These particular medications are potentially better suited for regimens that contain fewer drugs. The data with two-drug regimens so far has shown comparable resistance to three-drug regimens that contain similar treatments out to 96 weeks.

DR. BIRNHOLZ: That is an interesting point. Thanks for breaking that down for us. Then, Dr. Gaisa, my last question to you as we look ahead, what excites you the most about the future of HIV treatments?

DR. GAISA: First, let me say, every person living with HIV is one too many, and for that reason, we, as physicians, need to take a holistic approach to serving all people living with HIV, whoever they are, wherever they are, and in whatever disease stage they are. Despite the great progress that has been already made, there is a long way to go before an end to the HIV epidemic is a reality. Research is underway to cure HIV, and we are exploring many different pathways in an effort to target the virus, but we still have much more work to do before we will be successful in eradicating the virus completely. It is exciting to see the ongoing innovation in that space and to know that every day we are one step closer to making the goal of eradication a reality. Although HIV therapy has made significant strides, until we have a cure, we must continue to develop new medicines that can help all people living with HIV so no one is ignored. With that thinking in mind, as clinicians, we need to take a patient-centered approach and begin to employ treatment options that lessen

the lifetime burden of HIV therapy on people living with the disease.

DR. BIRNHOLZ: With that theme of holistic and patient-centered care in mind for us moving forward, I very much want to thank Dr. Michael Gaisa for helping us understand more about HIV and the advances made in treating it. Dr. Gaisa, it was great having you with us.

DR. GAISA: Thanks for having me. It has been my pleasure.

Announcer:

This episode was brought to you by VIIV Healthcare. If you missed any part of this discussion, or to find other episodes in this series, please visit ReachMD.com/HIVManagement. Thank you for joining us!