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CASE REPORT

Breastfeeding among women living with HIV: a clinical case

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Abstract

Introduction: The efficacy of antiretroviral therapy (ART) has changed HIV infection into a chronic illness. Nonetheless, despite mother-to-child transmission having drastically diminished since the beginning of the pandemic and the recognized benefits of maternal milk, many national guidelines continue to recommend against breastfeeding of infants born to women living with HIV (WLHIV). **Case report:** We present the case of a mother with HIV-1 diagnosis 4 years prior to pregnancy, undetectable viral loads since starting ART, and excellent adherence to both medical appointments and therapy. During the pregnancy of her first child, manifests the desire to breastfeed. We detail the process of decision and follow-up during the breastfeeding period until transmission was excluded. **Discussion:** To the best of our knowledge, this is one of the first documented cases in Portugal of supported and monitored breastfeeding by a WLHIV. We highlight the importance of a multidisciplinary, accessible, and personalized approach, especially in the absence of updated national guidelines.

Keywords: Breastfeeding. HIV. Prevention. Vertical transmission.

Amamentação por mulheres que vivem com VIH: um caso clínico

Resumo

Introdução: A eficácia da terapêutica anti retrovírica (TARv) tornou a infeção VIH numa doença crónica. No entanto, apesar das taxas de transmissão mãe-filho terem diminuído drasticamente desde o início da pandemia e dos benefícios reconhecidos do leite materno, muitas recomendações nacionais continuam a recusar a amamentação por parte de mulheres que vivem com VIH (MVVIH). **Relato de caso:** Apresentamos o caso de uma mulher com diagnóstico de infeção VIH-1 quatro anos antes da gravidez, com cargas virais indetetáveis desde o início de TARv e excelente adesão, tanto a consultas como a terapêutica. Durante a gestação do seu primeiro filho, manifestou o desejo de amamentar. Detalha-se o processo de decisão e acompanhamento durante o período de amamentação, até exclusão de transmissão. **Discussão:** Tanto quanto conhecemos, trata-se de um dos primeiros casos documentados em Portugal de amamentação, apoiada e acompanhada, por uma MVVIH. Destaca-se a importância de uma abordagem multidisciplinar, acessível e personalizada, especialmente na ausência de recomendações nacionais atualizadas.

Palavras chave: Amamentação. Prevenção. Transmissão vertical. VIH.

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Introduction

Breastfeeding is widely recognized as the best option for infant feeding. It is considered a critical element for public health[1] because of its benefits, not only for the infant (which includes protection from infectious diseases, obesity, and diabetes) but also for the mother (reduction of breast cancer and protection from ovarian cancer and diabetes).[2]

Breastfeeding of infants born to women living with HIV (WLHIV) has long been advocated by the World Health Organization in settings where diarrhea, pneumonia and undernutrition are common causes of infant and child mortality.[3] In countries where the risk of mortality from infectious diseases is lower and alternatives to mother's milk are easily found, avoidance of breastfeeding has been, until recently, a key component in preventing mother-to-child transmission (MTCT) of HIV. Without intervention, the risk of transmission through breastfeeding is considered to be 15 to 20% over the infant's first 2 years of age.[4] However, recent studies have demonstrated that, with access to effective antiretroviral therapy (ART), the risk of HIV transmission through breast milk is probably situated between 0.3 and 1%.[5,6] Several National Guidelines have already translated these recent findings into action. While not endorsing or recommending breastfeeding, these guidelines allow parents to receive advise and support regarding infant feeding.[7]

Case report

We present the case of a 33-year-old pregnant woman with an HIV-1 infection diagnosed four years before pregnancy. Heterosexual transmission. She was started on tenofovir disoproxil fumarate/emtricitabine and dolutegravir, achieving rapid and persistent undetectable viral load (VL). Since diagnosis, she has consistently demonstrated excellent adherence to therapy and follow-up.

While being followed during her first pregnancy, she disclosed the wish to breastfeed. Criteria for minimal risk of transmission were rapidly assessed and a prenatal appointment with a pediatrician was scheduled. The low yet real risk of transmission through breastfeeding was clearly explained, in opposition to the null risk of formula feeding. A follow-up plan was defined for both the mother and the newborn, and strategies to lower the risk (including breast care, strict adherence to ART and indications for immediate cessation of breastfeeding) were agreed. Breastfeeding was advised for the shortest possible duration, and without concomitant introduction of solid foods (given the previously reported higher risk of HIV transmission during mixed feeding,[8] possibly due to altered intestinal mucosal permeability).[9] With all the facts in hand, the parents opted for breastfeeding. The multidisciplinary team agreed to respect the parents' decision and support the process in an apparently low-risk situation. Emergency contact methods between the parents and the team were established.

The baby was born at 41 weeks via eutocic delivery with a weight of 3.710 kg (85th percentile). The neonatal team had been previously alerted to the specific situation, and general breastfeeding recommendations were put in place. The baby was breastfed within the first hour of life and formula milk substitutes were not introduced. An experienced lactation counselor performed an assessment at postpartum, helping to establish and monitor breastfeeding. Attention was given to breast care in order to prevent mastitis or nipple cracking and/or bleeding. The baby was started on zidovudine (AZT) within the first 4 hours of life.

Without national recommendations, we opted to follow the British HIV Association guidelines for follow-up of breastfed babies,[10] given the relative extensive experience of British healthcare facilities in breastfeeding by WLHIV, being monitored since 2012.[11]

The baby was examined on day 15 of life and then monthly during the breastfeeding period. Blood was drawn at birth and at each appointment to assess pro-viral HIV-1 DNA. AZT was administered for 28 days and then discontinued.

The mother also underwent monthly viral load assessments during the breastfeeding period. At all appointments, the need for strict adherence to ART was confirmed, as well as reviewing the indications for immediate discontinuation of breastfeeding.

The baby's growth followed the 85th percentile curve for weight and stature and achieved development milestones at the appropriate age.

At six months, before starting food diversification, transition to formula was made with good adaptation. Testing for pro-viral HIV-1 DNA was performed at 4 and 8 weeks after stopping breastfeeding. All tests done on the baby were negative. The mother maintained an undetectable VL throughout the breastfeeding period. Given the negative result at the 8th week after stopping breastfeeding, BCG vaccine was administered to the baby, according to Portuguese recommendations.[12]

The HIV serology performed at 22 months of age was negative.

Discussion

Formula feeding for newborns born to WLHIV continues to be the safest way to prevent HIV transmission. The statement "undetectable = untransmissible", while valid for sexual transmission, is not applicable to breastfeeding.[7] Although the risk is lower when the mother's viral load is not detectable, breastfeeding-associated transmissions have been reported in the setting of effective maternal ART.[13] While this is true, we need to consider that, HIV infection is becoming a normalized chronic condition globally.[14] As this occurs, campaigns in several European countries uphold the important benefits of breastfeeding for both newborns and their mothers.[1] WLHIV have to navigate conflicting messages about the risk of transmitting a chronic disease and the perceived importance of breastfeeding. Several factors may contribute to the desire to breastfeed. These include, but are not limited to, emotional factors such as an imposed decision that serves as a painful reminder of a chronic disease; practical difficulties associated with formula-feeding; and social factors, particularly in cultures where breastfeeding is associated with being a good woman and a good mother.[15] It is not surprising, therefore, that several European countries have reported an increase in breastfeeding by WLHIV.[7]

While the intensive follow-up described may not be easily reproducible in all centers, healthcare facilities following WLHIV must be prepared to tackle situations like the one presented. An accessible, personalized, multidisciplinary approach, with prenatal discussion about the benefits and risks of breastfeeding and a clear follow-up program are necessary in order to avoid preventable situations of MTCT of HIV. Not all WLHIV will be candidates for breastfeeding (e.g., history of poor adherence to ART or to medical follow-up), and this must be clearly assessed prenatally. With the inherent limitations of a single case report, we hope to have detailed our decision-making process and follow-up plan of a child born of a WLHIV who was breastfed. On a national level, new guidelines are urgently needed.

Author contributions

I. Hormigo: draft, review of literature, critical review. T. Milheiro Silva: conception, draft, review of literature, critical review. C. Guerreiro: conception, critical review, supervision of the project.

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Conflicts of interest

None.

Ethical considerations

Protection of human subjects and animals. The authors declare that no experiments on humans or animals were performed for this research.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols, obtained informed consent from all patients, and secured approval from the Ethics Committee. SAGER guidelines have been followed as applicable to the nature of the study.

Declaration on the use of artificial intelligence. The authors declare that no generative artificial intelligence was used in the writing or creation of the content of this manuscript.

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