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Medicinal plants and traditional treatment practices used in the management of HIV/AIDS clients in Mpigi District, Uganda

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ABSTRACT

HIV/AIDS is a relatively modern disease that has caused extensive morbidity, mortality and suffering worldwide. Although modern laboratory methods for diagnosis and effective allopathic treatments for HIV/AIDS are available there is limited documentation on practices and treatments used by traditional medicine practitioners (TMPs) in the context of HIV/AIDS. We conducted this study to determine how TMPs of Mpigi and Butambala districts in Uganda diagnose and treat HIV/AIDS and to describe the materials they use. We used an ethnobotanical approach to interview TMPs. TMPs diagnose HIV/AIDS from patients' own disclosure, history of death of spouse or on the basis of symptoms such as chronic fever. We found that the TMPs administer widely differing herbal medicine formulations with little overlap of plant species to treat HIV/AIDS. The species used are described in this paper. Herbal medicines are prepared in mixtures averaging 20 or more species, and are administered orally and intermittently. Some herbal medicines were reported to have adverse effects and/or contraindications and the TMPs provided advice concerning their safe use to their patients. Some patients are reported to use herbal medicines concomitantly with ARVs and the clinical consequences of this practice are poorly understood. We conclude that TMPs are experimenting with therapies for HIV/AIDS and that there is need to undertake rigorous efficacy and safety studies as well as controlled clinical studies to validate TMPs' therapeutic claims.

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1. Introduction

HIV/AIDS is a pandemic with devastating impact on human health and livelihoods. Globally, 35 million people were living with HIV at the end of 2013 (UNAIDS, 2014). Since the start of the epidemic, approximately 78 million people have become infected with HIV and 39 million people have died of AIDS-related illnesses. In the same report, Sub-Sahara Africa was identified as the most heavily affected region, accounting for over 69% of all people living with HIV in the world, and it is also the region with the most AIDS related deaths. In 2013, there were 24.7 million people living with HIV in sub-Saharan Africa.

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There is no cure for HIV/AIDS however laboratory diagnostics and allopathic treatments have been developed to manage the condition. Widely used diagnostic methods include rapid antibody tests and other immunologic tests such as the CD4 count and virologic tests such as viral loads (World Health Organization, 2013). For treatment, life-long antiretroviral therapy (ARV) containing a combination of at least three drugs is recommended as suppressive treatment for HIV/AIDS. However, other allopathic treatments such as antibiotics are also used to manage opportunistic infections that can occur as a result of a compromised immune system in HIV/AIDS patients.

In contrast, documentation of the methods used in the diagnosis and treatment of HIV/AIDS patients by TMPs, that were conducted in 4 districts in Uganda found that only 8/25 of TMPs used laboratory test results to diagnose HIV/AIDS in clients. The majority of TMPs used a wide range of diverse symptoms that suggests that some patients could be incorrectly assigned a HIV

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positive status (Lamorde et al., 2010). Also in that work, only 20% of TMPs excluded patients who were already receiving antiretroviral drugs suggesting that there is potential for co-treatment with herbal medicines and ARVs. These statistics are underpinned by the widespread popularity of herbal medicines worldwide, and in developing countries like Uganda where it is estimated that up to 60% of the population use traditional medicines for basic health needs (World Health Organization, 2002)

Although ARVs are the cornerstone for management of HIV/ AIDS, the efficacy of ARVs may be compromised by the emergence of resistant HIV strains and by the occurrence of treatmentlimiting drug toxicity (Mills et al., 2005). Co-treatment of ARVs and herbal medicines could result in herbal-drug interactions that could in theory affect efficacy of ARVs or lead to development of toxicities (Mills et al., 2005). In the absence of interactions, toxicities arising from herbal medicine use can be wrongly ascribed to ARVs further complicating clinical management of these patients. It is therefore necessary to document in the local setting the treatment practices of TMPs in order to facilitate appropriate care for patients.

Furthermore, efforts are in progress to discover new effective treatments for HIV/AIDS. One approach to drug discovery is to evaluate traditional knowledge and practices in order to identify phytochemicals with relevant biologic activity. Important allopathic medicines have been discovered using this approach. For example, the antimalarial drug artemisinin and its derivatives were discovered by evaluating Chinese traditional knowledge (Bilia et al., 2014). For these reasons efforts to evaluate local knowledge and practices are justified. This study was conducted to determine the treatments and practices of the TMPs in Mpigi and Butambala districts of Uganda.

2. Methods

This study was conducted among healers of Buyijja Traditional Healers Association (BUTHG), a traditional medicine practitioners' organisation. The BUTHGA is broadly affiliated to PROMETRA Uganda located at Buyijja village, approximately 60 km from Kampala the capital city of Uganda. The participating TMPs were residents of Mpigi and Butambala districts, which were part of the former greater Mpigi District (Fig. 1). These districts are some of the areas with the highest HIV/AIDS prevalence in Uganda (Ministry of Health, 2012).

We employed an ethnobotanical approach in this study. comprising of individual interviews with 60 traditional medicine practitioners (48 females and 12 males; at the time of the study this comprised 30% of the total TMPs), two key informant interviews (KIIs) and one focus group discussion (FGD) with five traditional medicine practitioners (TMPs). The TMPs were identified with the help of BK, a member of staff of PROMETRA-Uganda, and were interviewed in their homes using an open and close ended questionnaire. The main themes directing the interviews were to understand which medicinal plants were used to manage HIV/AIDS, which parts of the plants were used, how the traditional medicine is processed and administered, and which diseases associated with HIV were managed by TMPs. Socio-demographic information was also collected. During the KII and FGD we discussed issues of how diagnoses for HIV/AIDS are made and how clients are followed up to verify improvements. We also discussed known contraindications, adverse effects and toxicity effects of the preparations, and known clinical outcomes of the treatments. These interviews were facilitated by ML a physician and pharmacologist (questionnaire available on- line in Supplementary data).

Voucher specimens of plants mentioned during the interviews were collected, indexed as AN, and deposited at Makerere University Herbarium (MHU) for identification and archival. Plant species scientific nomenclature follows the international database Tropicos (www.tropicos.org/). A transect walk with TMPs was undertaken to validate species identity in the field with TMPs. Data from questionnaires was summarised into frequencies. We prioritised among the species mentioned in the survey based on



Fig. 1. Map of Uganda showing location of the greater Mpigi District.

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