

Traditional Medicine Offers Hope for Cancer Management

Abstract

Traditional medicine practices play a vital role in health care systems in countries with developing economies like China, India, USA and few African countries like Nigeria, Ghana, Zimbabwe etc. The aim of this scientific article was to enlighten the public of the use of traditional medicine within local Nigerian communities for cancer management. In this article, we examine the ethnobotanical uses of selected plant species from the Nigerian flora and attempt to correlate the activities of the isolated bioactive principles with known uses of the plant species in African traditional medicine. Hundreds of plant species have been identified and about 100 out of the compounds identified with these plants matched with the ethnobotanical uses of the plants.

Introduction

Cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020. The most common in 2020 in terms of new cases of cancer according to WHO were: Breast (2.26 million cases); Lung (2.21 million cases); Colon and rectum (1.93 million cases); Prostate (1.41 million cases); Skin (non-melanoma) (1.20 million cases); and Stomach (1.09 million cases). The most common causes of cancer death in 2020 were: Lung (1.80 million deaths); *Colon and Rectum (916 000 deaths); Liver (830 000 deaths); stomach (769 000 deaths); and Breast (685 000 deaths). Each year, approximately 400, 000 children develop cancer. The most common cancers vary between countries. Cervical cancer is the most common in 23 countries.

Causes

Cancer arises from the transformation of normal cells into tumour cells in a multi-stage process that generally progresses from a pre-cancerous lesion to a malignant

Research Article

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tumour. These changes are the result of the interaction between a person's genetic factors and three categories of external agents, including: Physical carcinogens, such as ultraviolet and ionizing radiation; chemical carcinogens, such as asbestos, components of tobacco smoke, alcohol, aflatoxin (a food contaminant), and arsenic (a drinking water contaminant); and biological carcinogens, such as infections from certain viruses, bacteria, or parasites. WHO, through its cancer research agency, the International Agency for Research on Cancer (IARC), maintains a classification of cancer-causing agents.

The incidence of cancer rises dramatically with age, most likely due to a build-up of risks for specific cancers that increase with age. The overall risk accumulation is combined with the tendency for cellular repair mechanisms to be less effective as a person grows older. Some chronic infections are risk factors for cancer; this is a particular issue in low- and middle-income countries. Approximately 13% of cancers diagnosed in 2018 globally were attributed

to carcinogenic infections, including *Helicobacter pylori*, human papillomavirus (HPV), hepatitis B virus, hepatitis C virus, and Epstein-Barr virus. Hepatitis B and C viruses and some types of HPV increase the risk for liver and cervical cancer, respectively. Infection with HIV increases the risk of developing cervical cancer six-fold and substantially increases the risk of developing select other cancers such as Kaposi sarcoma. Past history on the traditional uses of plants, parts of plants and isolated phytochemicals for the prevention, management and treatment of various health ailments is quite remarkable and not a secret.

Traditional medicine on the other hand is the total combination of knowledge and practice explainable or not, used in diagnosing, preventing and/or eliminating a physical, mental or social disease and which may rely exclusively on past experience and observation handed down from generation to generation verbally or in writing. From antiquity, humans have been developing a traditional medicinal practices, based on the knowledge of medicinal plants throughout the world. Africans, in particular, have used medicinal plants and animal-derived remedies in their struggle for survival and in their quest for religious experiences. This knowledge became enriched over numerous generations due to experimentation but also through observations of animal behaviors towards their survival in the jungle. Most often, knowledge of traditional medicine is only inherited orally, thereby facing the danger of being lost in favor of Western medicine (WM). Many Africans believe in the manifestation of life forces or spirits in every creation, and that these spirits constitute the heart of all life forms, natural events or non-living things. This gives herbal medicine a vital role in health care delivery systems especially in remote areas where clinics and hospitals are sparsely located.

Despite the advances in WM, African traditional medicine (ATM) has gained renewed interest in the health care services throughout the continent. This could probably be due to the rapidly increasing awareness of the potential and curative abilities of alternative medicines, especially from the use of medicinal plants, as well as the inadequate access to WM and physicians and the high cost for Western drugs. Since time immemorial, plant has been a source of food and medicine to people and animals. The use of plants by early man was established by trial and error. Since

plants were eaten by animals and this does not result to fatality, it was adopted by man as food and sometimes as medicine. Prior to the introduction of orthodox medicine, people have been depending on herbs for treatment of various diseases. However, the activities of man, such as agriculture, industrialization and urbanization lead to an increased loss of biodiversity, coupled with the apparent lack of interest by the younger generation in sustaining indigenous knowledge in herbal medicine.

Consequently, there is the fear that the knowledge of herbal medicine may die along with the aging generation of herbal medical practitioners. Furthermore, many medicinal plants (even those considered as weeds) have been verified through laboratory analysis. Some of the plants that have been claimed to be effective in the treatment of cancer include *Andrographis paniculata*, *Sophora interrupta*, *Nicotina tabacum*, *Securidaca longependunculata*, *Boerhavia diffusa* etc. Over the years, scientists have also developed synthetic drugs and plant lead drugs that target cancer cells, all these are due to the background work of Traditional medicine practitioners on identifying healing plants. For instance, several journals and articles have extensively mentioned vinca alkaloids, vinblastine and vincristine, which are useful in cancer treatment, isolated from *Catharanthus roseus*. However, due to increase in cancer morbidity and mortality rates worldwide, as well as side effects of the available conventional medicine methods, drugs call for quick intervention that requires looking into treatment of cancer from grassroot to unburden or support conventional medicine approaches since plants have been implicated as the storehouses and sources of safer and cheaper phytochemical, always freely available in the wild.

There have been several reported medicinal plants recipes for cancer management in Nigeria, some are documented in traditional medicine practitioners' inherited documents. I'm fortunate to inherit some of those documents. However, in most cases, no specific herbal recipe belonging to a particular person, most times, these herbalists in African communities visit each other and share ideas, so you can see similar herbal recipes with several practitioners documented in their books. Let's look at some of the local preparation of plant extracts used in the treatment of different cancer in Nigeria.

Herb Herbal recipe

Crotalaria pallida. The fresh leaves of *C. pallida* are thoroughly washed with salted water or stream water to rid them of dirt and dried under shade then grind into powder. One teaspoonful to be taken per day with yam flour meal (commonly called Amala in Yoruba language) This herbal preparation is suitable for all gender and age for Liver and Breast cancer management.

Uvaria chamae Cut the root of *U. chamae* into small sizes, wash thoroughly and boil with lemon fruit. It is taken orally (50ml twice daily) and used for washing, rubbing directly on breast for Breast cancer and oral consumption for cervical cancer.

Olax subscorpioidea and *Xylopia aethiopica*. Cut the root of *O. subscorpioidea* and wash thoroughly to rid it of dirt and contaminants. Wash the *X. aethiopica* and put it under the cooking pot, then place the root over it and pour fermented corn water and boil for 30 minutes. It is recommended to take 1 full wine glass orally twice per day. For Breast cancer and other female reproductive cancers.

Pistia stratiotes. The leaves and roots of *P. stratiotes* and *Nymphaea lotus* are rinse thoroughly in salted water or diluted water with ACV and then boiled with fermented corn water only. It is applied topically on breast or skin for two (2) weeks. Work for Breast and Skin cancer.

Calotropis procera, *Xylopia aethiopica* and *Citrus limon*. The root of *Calotropis procera* is cut into smaller sizes and wash thoroughly along with the leaf. The two are boiled together with *Xylopia aethiopica* and Citrus limon fruit in clean water for 20 minutes. 50 ml twice daily. Good for Liver, Lung and Breast.

Amaranthus spinosus, *Xylopia aethiopica* and *Allium sativum*. The whole plant of *A. spinosus* and *X. aethiopica* are washed thoroughly. The *X. aethiopica* is put first into

the pot first, followed by *A. sativum* and *A. Spinosus*. Then, pour fermented corn water and boil. It is to be taken orally with a wine glass very early in the morning and late at night. Good for Breast cancer.

Kigelia africana, *Bidens pilosa*, *Eugenia aromaticum*, *Croton lobatus*, *Boerhvia diffusa*, *Dacryodes edulis*, *Achillea millefolium*, *Aristolochia repens*, and *Citrus aurantiifolia*. All plants are boiled in *C. aurantiifolia* juice. Care must be taken so as not to make the concoction boil over, you don't cover the pot completely. After boiling, the pot used must not be allowed to touch the ground, place the pot on something, not directly on the ground.

Oral dosage, 50ml at least twice a day at no specific time. As for patients that don't take up to the recommended dosage, they get relief at a slower rate and longer time than patients who do. Treatment is for complete cure and not for managing the cancer. We still have more than 100 hundred herbal recipes for cancer management and total cure.

Conclusion

Our indigenous approach to cancer management is not only to be talked about in seminars, conferences and in journals and then, that's all. All the herbal preparations mentioned in this article have been used by the practitioners of traditional medicine with positive results. I will strongly recommend Scientific research should be carried out on these plants recipes to ascertain their anticancer potentials for the whole world to benefit from it. Millions are dying from cancer and it could be you or a close relative next. Also, toxicity study of these remedies is important especially the remedies with many plants because there may be antagonistic interactions among the plants, which may pose risk to the patients using them for long time or with other underlying conditions. Furthermore, cultivation, forest reserve and replacement of the plants should be encouraged to ensure conservation and avoid extinction.

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