

The Concept of Herb- Herb Combination over Single Herb

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ABSTRACT:

For Indian, Ayurveda is one of the traditional medicinal systems. The ideology behind Ayurveda is preventing suffering and living a long healthy life-style to management the recurrence of imbalance. Ayurveda involves the utilized of natural substances to reduce the cause of the various ailments. Traditional knowledge of plants is importance for most of the medicine. Herbs have been used throughout time as food in modern society and as a primary tool for maintaining health and aiding in the recovery of disease. About 80% of the world population use plant based medicines and about one third of the world countries depend on herbal medicines. In Ayurveda, multiple herbs are used for the treatment that is called polyherbal. The Ayurvedic literature Sarangdhar Samhita emphasized the concept of polyherbalism to achieve maximum therapeutic effect. When multiple herbs are combined in a particular proportion, it will give better therapeutic effect and reduce toxicity. Polyherbal formulations have been utilized all around the world due to its therapeutic purpose. In traditional medicine entire plants or combinations of plants are used rather than isolated compounds. Polyherbalism produces some benefits due to synergism which are not available in single herbal formulation. Polyherbal formulation proved high effectiveness in various disorders with safe high dose. Depending on the nature of the interaction, there are two mechanisms on how synergism works i.e., pharmacokinetics synergism, the capacity of herb to ease the ADME of the other herbs is focused and in pharmacodynamics synergism is the study of synergistic effects when active constituents with similar therapeutic activity are targeted through different mechanism of action. This review mainly focuses on important of the polyherbalism, significant features of polyherbal formulation and its clinical significance.

KEYWORDS: Polyherbal Formulation, Ayurveda, Therapeutic effect, Synergism.

I. INTRODUCTION :

The few decades have seen exponentially growth in the field of herbal medicines. The environment remains an exemplary instance of the remarkable phenomenon of hybridization. Today about 80% of people in growing countries still impart on traditional medicine found largely on the different species of plants for their primary health care. About 500 of plants with therapeutic benefits have been described in ancient literature, and 800 plants have been employed in indigenous medical systems.. The various indigenous systems such as Ayurveda, Siddha and Unani use several plant species to treat different ailments. Tyler defines herbal medicines as "raw drugs of vegetable origin used to treat disease states, often chronic in nature, or to achieve or maintain a state of improved health." Current demands for herbal medicines have resulted in an annual market of \$1.5 billion and increasingly widespread availability. The treatment of injury or disease by plants or plant material, either in the crude or processed state, is known as traditional herbal medicine. Plants of medicinal value having ethnomedicinal properties are currently being tested for therapeutic potential. Herbal product has been used abundantly over the years in curing several diseases because of the enormous range of functionally relevant secondary metabolites of microbial and plant species 5, natural products and related structures are critical sources of novel medications.. Herb-herb combinations (2 or more herbs) also known as polyherbal therapy. Polyherbal therapies have been used in Chinese medicine practice for thousands of years, yet scientific evidence of their therapeutic benefits is lacking. Drug combination often produces a promising effect in treatment of diseases over a single drug. ⁽¹⁻⁴⁾

The concept of herb- herb combination has been recognized in Western medicine and significant accomplishment has been achieved over the decades. The polyherbal formulation (PHF) is used by many herbs to treat different medical ailments. The notion may be observed in Ayurvedic and other ancient medical systems, in

which various plants can be utilized for treating disease in a certain ratio. It is utilized in various illnesses, especially diabetes, in these mechanisms. The Ayurvedic literature has stressed the concept of poly herbalist in the ancient school of medicine. The practice of poly herbal formulated medicine spread from Asia to Europe. As mentioned by Karole et al., plant formulations and mixed extracts are picked from each individual plant rather than from the conventional system or Ayurvedic medicines. The herb's ability to facilitate the digestion, diffusion, processing and removal of their herbs is concentrated in the terms pharmaceutical synergism. On the other hand, the

pharmacodynamics system examines the same synergistic impact if several action mechanisms are applied to active compounds with equal therapeutic efficiency. In turn, the Romans learned of it from the Greeks around 100 BC. The Islamic World learned of and began to practice this science around the time the Roman Empire fell, in the 5th century. The Anglo-Saxon World began practicing herbal science and writing about it by the 10th century. Throughout the middle ages, most herbalists were practiced under the authority of the church, which maintained the authority to develop medicinal herbs and to introduce new poly herbal formulated medicines.⁽⁵⁻⁹⁾



Figure 1: Poly-Herbal Anti-Dandruff Formulation

Ayurvedic and herbal therapeutic treatments contain a variety of botanicals, each of which contains a number of chemical components that, when combined, may provide the predicted activity. The increased popularity of plant-based formulations is fueling a rapidly expanding market for Ayurvedic products. Poly Herbal medicines are in widespread used and even though many believe poly herbal medicines are safe and effective to use and are drawn from plant sources with their own inconsistency in species, growing conditions, and biologically active constituents. A major imaginary advantage of botanicals over conventional particular component drugs is the presence of multiple active poly herbal compounds that together can give a potentiating effect that may not be possible by any particular compound. Polyherbal formulations have plant-based pharmacological agents which may exert synergistic, potentiative, agonistic antagonistic

actions by virtue of its associated diverse active principles themselves.⁽¹⁰⁻¹⁹⁾

These pharmacological principles work together in an active way to generate maximum curative effectiveness with least side effects. There are two methods through which synergism works, depending on the nature of the interaction (pharmacodynamics and pharmacokinetics). The ability of poly herbs to facilitate the absorption, distribution, metabolism and elimination of the other herbs is focused in terms of pharmacokinetic synergism. Pharmacodynamics synergism, on the other hand, investigates the synergistic impact that occurs when active ingredients with equivalent therapeutic efficacy are directed at the same receptor or physiological system. Aside from that, it is considered that most diseases are caused by a combination of variables and consequences, resulting in both apparent and unseen symptoms.

Therefore, combination of herb-herb may act on various targets at the same time to provide a systematic relief. Due to synergism, polyherbalism offers some great benefits which lacks in single herbal formulation. It is obvious that a single multi-constituent formulation can achieve a superior therapeutic impact. To achieve the desired pharmacological action, a lesser dose of the herbal product would be required, lowering the chance of adverse side effects. Furthermore, PHFs promote patient convenience by reducing the need to take more than one different single herbal formulation at a time, which leads to improved compliance and therapeutic impact. When compared to a single herbal formulation, all of these advantages have resulted in the success of PHF in the market. Polyherbal formulation also having multiple types of molecules against a disease complication so different molecules cure a disease by different mechanism so provide a complete therapy against a disease condition. ⁽²⁰⁻²⁵⁾

When combinations of plants with these constituents are combined together it may show better activity when compared to the individual extract. But at the same time presence of many constituents may lead to chemical incompatibility which may result in instability. Despite the formation of the Drugs and Cosmetic Act to govern the manufacture and quality control, the regulation of Ayurvedic herbal preparation manufacturing in India is somewhat less stringent, despite the fact that the majority of Ayurvedic PHFs are manufactured and exported. According to the good clinical practices, toxicity studies of herbal formulations and clinical trials on herbal formulations are not mandatory for application of patents and grant of manufacturing licenses to the Ayurvedic herbal formulation manufacturer. ^(26, 27)

Although polyherbal formulation is commonly used in many parts of the world, but the scientific evidence is still lacking. Many herbal therapies are still under in-vivo evaluation and have not been evaluated by clinically.



Figure 2: Advantages of herbal formulation

When combinations of 2 or more herbs with their ingredients are combined together it may show better therapeutic effect when compared to the individual active compounds. But at the same time presence of combinations of ingredients may lead to chemical incompatibility which may affect in insecurity. In India, whereas utmost of the Ayurvedic Poly Herbal Formulations are manufactured and exported, the regulation of Ayurvedic herbal medication manufacturing is kindly less strict, despite the establishment of

medicines and Cosmetic Act to control the manufacture and quality control. According to the good clinical practices, toxicity studies and clinical trials on herbal aren't required for process of patents and right of manufacturing licenses to the Ayurvedic herbal formulation manufacturer. ⁽²⁷⁻²⁹⁾

II. DISCUSSION

Presently scientist are trying to explore development of new Polyherbal remedy or using old traditional polyherbal fraction that have been

used for numerous decades similar as Ayurveda, whose history goes back to 5000BC., is one of the ancient health care systems, Korean traditional drug similar as Mahwangyounpaetang (MT), conforming of 22 types of herbal excerpts in treatment of respiratory complaint, African Herbal Formula (AHF) consists of a combination of factory accoutrements firstly developed by a family in southern part of Nigeria and passed on to generations. Over the times, AHF has been applied by members of the family and close- associates for all kinds of health problems and it's veritably popular among the low socio- profitable class, Haya people of Kagera region in north western Tanzania are endowed with a culture rich in traditional drug practice owed to an expansive intercultural exchange among the different ethnical lines of the Lake Victoria Basin and Traditional Unani drug in Pakistan and India where it's popularly practiced among the large member of its population. It began in Greece, innovated by old ancient Greek proponents, and was proved by Muslims during the noble period of Islamic civilization. It was brought to the Indo- Pak key by Muslim scholars and practiced then for centuries.

III. CONCLUSION

In the well developing countries increased cost of drug as well as their adverse effect has come a great task when the public health is concerned. Although polyherbal fraction is generally used in numerous country of the world, but scientifically it has not been explored. Polyherbal formulations have been utilized all around the world due to its therapeutic purpose. In traditional medicine entire plants or combinations of plants are used rather than isolated compounds. Polyherbalism produces some benefits due to synergism which are not available in single herbal formulation. Polyherbal formulation proved high effectiveness in various disorders with safe high dose. Depending on the nature of the interaction, there are two mechanisms on how synergism works i.e., pharmacokinetics synergism, the capacity of herb to ease the ADME of the other herbs is focused and in pharmacodynamics synergism is the study of synergistic effects when active constituents with similar therapeutic activity are targeted through different mechanism of action. This review mainly focuses on important of the polyherbalism, significant features of polyherbal formulation and its clinical significance. There's need of time to estimate poly herbal fraction combinations using scientific approaches similar as clinical trial,

possible bioactive components. Only with correct, effective and rational use, poly herbal fraction combinations can produce the desirable effect in human health. This review reveals the diversity of poly herbal fraction combinations which have been using for long time traditionally as well as indifferent pharmaceutical dosage form.

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