



**EFFECTIVE MANAGEMENT OF HEMOPHILIA PATIENTS WITH A COMBINED
THERAPY TO REDUCE COST: A NEW APPROACH**

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ABSTRACT

Management of hemophilia through the WHO recommended conventional or Western methods involves much greater cost than what can be afforded by the majority of economically weaker section of the population with this disease, particularly in the developing countries like India. In recent years, a group of homeopathic practitioners in India have regularly been conducting periodic medical camps at different cities to treat hemophilia patients with homeopathic remedies, and their efforts have met with remarkable success in reducing the clotting time, gap between hospital visits for transfusion of factor concentrates, causing improvement in general health, feeling of well-being and bringing down considerable cost of overall management of haemophilia, bringing a ray of hope to the poor patients.

KEYWORDS: Hemophilia; factor concentrates; homeopathic intervention; cost reduction.

INTRODUCTION

Hemophilia, also spelled as haemophilia, is an X-linked inherited genetic disorder that impairs the body's ability to make blood clots, a process needed to stop bleeding. This is known to be a recessive mutation-based life-long disorder that is found to be expressed much more frequently in the males and rarely in females. It has a great impact on physical, emotional, economic and social problems for the patients. The disease is recorded since 2nd Century A.D. as a hemorrhagic bleeding disorder primarily affecting men (termed "Bleeders")^[1]. Because of a hemorrhagic disposition existing in certain royal families of England, Germany, Russia and Spain in the 19th and 20th centuries, hemophilia is also called "the royal disease"^[2]. Queen Victoria of England, who ruled from 1837-1901, is believed to have been the carrier of hemophilia B, or factor IX deficiency gene. She passed on the trait to three of her nine children. Her son Leopold died of bleeding after a fall when he was 30. Her daughters Alice and Beatrice passed the gene on to several of their children. Alice's daughter Alix married Tsar Nicholas of Russia, whose son Alexei also had hemophilia. Thus hemophilia was carried through various royal family members for three generations after Victoria, and then disappeared^[2].

According to Ingram^[3], Factor I deficiency was first discovered in 1920. Factors II and V deficiency were

identified subsequently in the 1940s. The 1950s witnessed a flourish in the study of some rare factor deficiencies, and deficiencies of FVII, X, XI and XII were recognized followed by the discovery of FXIII deficiency in 1960. However, the clotting impairment in the majority of hemophiliacs in India is due to the deficiency of clotting factor VIII (hemophilia A) or factor IX (hemophilia B). Bleeding episodes may start from superficial cut, epistaxis, gum bleed from fall of deciduous teeth, deeper mucosal bleed from genitourinary tract or gastrointestinal bleed, acute joint bleed, and so on^[4]. The frequency of hemophilia is reported to be approximately 1 in 10,000 births for factor VIII deficiency and 1 in 40,000 births for factor IX deficiency in male births, and is fairly constant in different parts of the world^[5]. India bears second highest number of haemophilia patients (estimated total cases of 11 580 reported in 2013)^[6].

Treatment breakthroughs and current strategy

As per the recorded history of the American Hemophilia Foundation^[2], physicians already learnt before 1926 that patients responded readily to infusions of whole plasma when given promptly after they sustained spontaneous joint and muscle bleeding^[3] of patients missing any coagulating factors. Harvard physicians Patek and Taylor^[7] discovered an antihaemophilia globulin found in plasma to have ability to decrease clotting time in

patients with haemophilia. Fresh frozen plasma was first transfused in patients in the hospital in the late 1950s and 1960s. The clotting process was described in detail by Macfarlane^[8]. The interaction of the different factors in blood clotting was termed the "coagulation cascade," now called the clotting cascade. Dr. Judith Graham Pool and her colleague [9], made a major breakthrough in hemophilia research when they discovered that cryoprecipitate left from thawing plasma was rich in factor VIII. Because cryoprecipitate contained a substantial amount of the factor in a smaller volume, it could be infused to control serious bleeding by making an emergency surgery, helping hemophilia patients much more manageable during crisis.

Then appeared the freeze-dried powdered concentrates containing factor VIII and IX in the 1970s. The advent of the factor concentrates provided a major boon to the hemophilia care. The concentrates could be stored at home, and patients could even "self-infuse" the specific factor products, as and when required. They could now avoid going each time to the hospital for treatment.

In the second decade of this century, some ultra-highly diluted remedies of the rather unconventional and somewhat controversial system of medicine-homeopathy - based on a holistic model and used in micro doses, started being used with great economy and success^[4]. Homeopathy was used either as a supportive medicine along with the conventional medicines, or even without the conventional medicines, but only with occasional infusion of factor concentrates, as and when expressly needed.

The recommended conventional treatment and scope for supportive therapy

The World Health Organization (WHO) and the World Federation of Hemophilia recommend infusion of anti-haemophilic factor periodically as and when required as a standard and conventional orthodox/western method of treatment for hemophiliacs. However, management of hemophilia patients by modern medicines is considered to be quite expensive for patients in a developing country like India. Almost 90% of the treatment expenditure is covered as cost of purchasing clotting factor concentrates^[6]. Therefore in many developing countries the patients cannot afford to go for such expensive modern system of medicine if the cost cannot be considerably reduced by some other means; so they seek some alternative medical practices like CAM (Complementary and Alternative Medicines) for treatment and management of the disease. CAM is practiced across many continents such as Asia, Africa, and Latin America and is even considered part of classical documented heritage and ancient civilization.

Among CAM practices, homeopathy is a very popular holistic method of treatment, particularly in India. It is also recognized as a legal system of medicine and patronized by the Government of India by way of giving

all the benefits of a legitimate system of medicine. In fact, there is now a separate health ministry for CAM called AYUSH under Government of India, the abbreviation denoting Ayurveda, Yoga, Unani, Siddha and Homeopathy, respectively. This ministry provides quite generous funding for regulating and improving education, and research activities. It is also involved in propagation of these ancient systems of medicines that once catered to the need of the people in India and in some other countries. Further, current awareness of the toxic side-effects of many orthodox medicines and resistance reported quite often for some commonly used anti-biotics make people rather hesitant to always use the orthodox medicines unless expressly called for.

Homeopathy and hemophilia: A new development

Recent research activities involving use of homeopathic remedies on large scale human trials in India^[10-12], and also in controlled set ups in animals^[13] demonstrated efficacy of some homeopathic remedies bringing excellent responses to ameliorate various disease conditions; besides, there are also some great outcome achieved particularly in treating haemophilia patients, belonging to both haemophilia A and B groups^[4, 14] exclusively with the use of certain homeopathic remedies. These research articles very convincingly demonstrated the efficacy of certain homeopathic remedies in successfully controlling bleeding of the hemophiliacs, sometimes even showing greater capability than that of some modern orthodox medicines in respect of clotting time, gap between blood transfusion requirement, and in overall cost and efficiency of management. The homeopathic medicines which showed most promising results included: Arnica montana, Hamamelis, Phosphorus, Calcarea fluorica, Magnesium phosphoricum, Ferrum metallicum, Ledum palustre, Causticum, Sulphur, and Hypericum. Sometimes the patients also needed one constitutional remedy alongside any one of the symptomatic medicines like Arnica, Hamamelis, Ledum palustre, Hypericum and Magnesium phosphoricum, depending on the severity, site, nature of bleeding and pain^[4] to achieve the best results.

The concerns versus the benefits

However, since micro doses of ultra-highly diluted medicines are often used in homeopathy with great benefits, the rationalists and many scientists question and challenge the efficacy of such ultra-highly diluted remedies on the ground that the apparent effects may be only due to "placebo effects"^[15]. They argue that in these diluted homeopathic medicines, theoretically speaking, not even a single molecule of the original drug substance can be expected to be physically present. However, in many controlled well designed scientific experiments, their biological action has been proven and confirmed beyond any doubt and the possible molecular mechanism of biological action has also been elucidated on scientific ground^[16- 22].

Therefore, in view of their proven abilities with evidence-based results to ameliorate sufferings of the patients, and relatively much less cost involved in the management of a large number of haemophiliacs in India, it may be recommended for adoption by more and more hemophilia patients under the supervision of qualified and experienced homeopathic practitioners; homeopathy may be found affordable for even those belonging to the poorer section of the society. Further, in a developing country like India, 80% of population reside in rural areas devoid of modern medical amenities in many places; among them more than 80% of hemophiliacs belong to lower socio-economic strata having per capita income between INR 15,000 and INR 40 000/year^[4]. This meagre income is not sufficient for being able to afford the exorbitant expenses of modern treatment with quite frequent need for transfusions of factor concentrates. The homeopathic remedies have no or insignificant side-effects, and have considerable beneficial effects demonstrated by certain homeopathic remedies already obtained in various human trials including with haemophiliacs. Therefore, the use of homeopathic remedies may be recommended in the treatment and management of haemophilia, at least as a supportive medicine to reduce treatment and management expenses; however, more in-depth research on various other aspects of hemophilia patients undergoing homeopathic management is warranted in order to reduce the complete dependence on the use of orthodox medicines and also to reduce the overall cost of treatment as well as to give a better way of life to the patients.

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