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१॥ विश्वकर्मो एमाहूयपुरीहाटकनि
 र्मेना॥ तत्रयोडशसाहस्रस्त्रीरुग्णैश्चब्रह्मधिकम्॥११॥ भवमानिमनोज्ञानि
 योमध्यकल्पयन्॥ परिजातनरं चैवतासंभोगायकल्पयन्॥१२॥ या
 तानां गृहास्तनयदृपेचाशतकोटयः॥ अल्पिवहोलाकावसेतिविगत
 राः॥१३॥ यन्किं विविषुलोकेषु सुंदरं न च दृश्यते॥ सवाजिनप्रज्ञेनाप्यो पु
 त्रयुग्यस्यविक्रुते॥१४॥ अमोघनीरमासाद्यतन्मनस्कतयावसः॥ सनाडि
 स्तपस्तेपस्वर्यं बुद्धिश्च बुद्धिमात्रा॥१५॥ अतनिरसनेमहस्यस्यैवदुल्लेख
 नेः प्रसन्नो भगवान्मज्जितपुरिष्यता॥१६॥ सत्रात्रितोषितुष्टावदृष्टादिबेदि
 तकरश्रुतिज्ञोराशानमस्तिरुक्त्तमस्ति सर्वतोमुखः॥१७॥ विश्वव्यापिनमस्तिरु
 मस्तिनिष्करोपणं॥ कल्पयेयममस्तिरुक्त्त हरिदश्वनमोक्तते॥१८॥ गृहराजन्म
 त्कनुमस्तिबेहरोचिव्यो॥ वेदत्रयन्मस्तिरुक्त्त सर्वदेवमोक्तते॥१९॥ पृथ्वीद
 िद्वेवा सुदृष्ट्यामादिवाकरः॥ अथैकपमानोसादबदेवादिवाकरः॥२०॥
 तिस्यमोभीरमभर्यसकजिनमवावे॥ चरं वदित्यस्योपिपिप्येयनेति



A Review Article On Wonder Formulation Kushmand Ghrith

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Abstract

Kushmanda Ghrita is a wonderful and simple Ayurvedic formulation. It finds its mention in various Ayurvedic texts like Ashtanga Hridaya, Bhaishajya Ratnavali and even in Yogratnakar. Due to its Medhya effect, it has been found useful in various manas rogas. In this review article, various important pharmacological researches and other actions have been summarized especially its Medhya effect. This study will help in understanding various aspects of Kushmand ghrita.

Keywords: Medhya, Ghrita, Rasayana.

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INTRODUCTION

Kushmanda Ghritais an efficient and simple Ayurvedic formulation. It is mentioned in various Ayurvedic texts like Ashtanga Hridaya [1], Bhaishajya Ratnavali [2] and even in Yogratnakar. It is highly recommended in various texts for its Medhya properties and is found useful for various psychological disorders.

In Astanga Hridaya, Kushmanda Ghrita has been indicated for 'Apsmara Pratisedha'. It is clearly described as Dhi-vak-Swara pradam i.e (it improves intellect, word, and voice) [3].

As per Bhaishajya Ratnavali, this wonder formulation contains Kushmanda Swarasa and Yashtimadhu Kalka along with Go-Ghrita [4].

Kushmanda (*Benincasa hispida*) has Medhya effect and has been mentioned as excellent Medhya drug in the

Ayurvedic literature [5]. It has been highly appreciated for its use as 'chetovikaranasanam' [6] due to its prabhava as Medhya.

Yashtimadhu is one of the four Medhyarasayanans (nootropic drugs) explained by Acharya Charaka often used for psychological disorders [7].

Ghrita is known as *uttama Sneha* the best "snehadravya" as it promotes good memory, longlife, and good digestion [8].

Ghrita is well known *yoga vahirasayana* i.e *Samskarsyaanu-vartanam* [9] means it possess the property or quality of drug in which it is processed without any change in its own properties [10].

Table 1: Composition of Kushmanda Ghrita [11]

Sr. No.	Dravyas Ingredients	Latin Name	Ratio (Anupata Quantity)	Drug Part Used	Kalpna Used (Swaroopa Process)
1	Kushmanda	<i>Benincasa hispida</i>	18 Part	Fruit	Swarasa
2	Yastimadhu	<i>Glycyrrhiza glabra</i>	1/4 th Part	Roots	Kalka
3	Go-ghrita		1 Part		Ghrita

Aim & Objectives:

To study multiple aspects of Kushmand ghrit and various clinical studies conducted on it.

Materials and methods:

The information was gathered from a variety of sources including papers, textbooks, Samhitas, the internet, and legitimate online sources.

Brief about all ingredients:

Kushmand:

Latin name is Benincasa hispida and it belongs to the Cucurbitaceae family. Brhat Trayi has mentioned Kushmanda under “Saka varga” [12]. According to Acharya Vagbhatait is the best among Valli phala (creepers) [13]. Various Classical textbooks has indicated the use of Kushmanda for multiple ailments like Dahaprashmana, Trishnanigrahana, Amlapitta, Nidrajanana, Mutrakriccha, manas roga like Apasmara, Unmada, Bastishodhak [14], Rasayana, Krimighan, Balya, Shonitasthapana, Kshayahara, Brihana and even in Visha conditions etc [15]. According to Bhava Misra it is included under Medhya Rasayana [16].

Pharmacodynamics [17] of Kushmanda:

Kushman da	Un-Ripe	Ripe
Rasa	Madhura	
Guna	Guru, Snigdha	Laghu, Kshara
Virya	Sheeta	Alpasheeta
Vipaka	Katu	Madhura
Effect on Doshas	Vata - Pitta Shamaka	Sarvadoshahara
Prabhava	Medhya	

Yastimadhu:

Its Latin name is Glycyrrhiza glabra. The root of Yastimadhu is usually preferred for therapeutic purpose, but Acharya Charak has included this wonder herb in eleven groups out of fifty mahakashya which clearly indicates the prime importance of Yashtimadhu [18].

Yastimadhu In Various Mahakashaya of Charaka

Table 3 [18]:

Yastimadhu In Charak Mahakashaya
Jivaneeya
Sandhaneeya
Varnya
Kanthya
Kandughna
Snehopag
Vamanopag
Chhardinigrahan
Mutravirajniya
Angamardaprasaman
Sonitsthapana

Other therapeutic indications:

It is well known as Chakshushya (eye sight promoter), Ropana (healing), Keshya (Hair growth promoter), Varnya (Complexion promoter), dahashamaka (pacifies burning sensation), Vrishya (Aphrodisiac), Mridurechana (mild laxative), Jwarashamaka (pacifies fever), Rasayana (rejuvenative) and Kanthya (good for soothing throat and voice production) etc.

Properties of Yastimadhu [19]:

Karma: Vatapittahara, Vranaropana, Shothahara, vedanasthapana, Balavarnakara, Chakshushyam, Trishnanigraha, Chardinigraha.

Pharmacodynamics [19] of Yastimadhu:

Yastimadhu	
Rasa	Madhura
Guna	Guru, Snigdha
Virya	Sheeta
Vipaka	Madhura
Effect on Doshas	Vata - Pitta Shamaka
Prabhava	MedhyaRasayana

Ghrita:

In Ayurveda we find description of chaturvidh Sneha that is four types of Sneha viz ghrita, taila, Vasa and Majja. Out of these four, ghrita is extensively used. In Charaka Samhitaghrita is mentioned as rasayana [20] and it is said to promote longevity if used daily. Ghrita is excellent Yogavahi Rasayana as per Bhavaprakasha means it possess the property or quality of drug in which it is processed without any change in its own properties [21, 22].

Pharmacodynamics of Ghrita [23]

Ghrita	
Rasa	Madhura
Guna	Snigdha, mridu, guru

Virya	Sheeta
Vipaka	Madhura
Effect on Doshas	Tridoshashamaka
Prabhava	Medhya, yogvahi

Therapeutic uses as per Ayurveda:

Ghrita is one of the best Agnideepana (promotes digestive fire), ojavardhaka (boosts immune system), vayaasthapana (promoting longevity), medhya Rasayana cakshushya, hridya, snehana, balya etc. In Kushmand ghrita, Go - Ghrita is use as good medium for absorption, transport, and delivery of drug. Ghrita is chemically a lipid in nature, it can easily cross the blood brain barrier, so it is rapidly accessible to brain. It also enhances the properties and potency of herbs in which it is processed. It easily carries away the active component of any drug with which it is used. Moreover, ghee-based formulations have more efficiency as compared to usage of powder or other form of medicines [24].

Pharmacological activities of Kushmanda-Ghrita**Apasmara:**

In Ayurvedic texts, it has already been mentioned in context of Apasmara. Main cause of Apasmarais Smriti-Naasha. As all three ingredients of drug Kushmanda Ghrita are Medhya by their Prabhava. Attempt conducted to rationalize its use for Apasmara [25]

states that being a Medhya Rasayana, it improves the status of Manas doshas, Raja and Tama eliminating Srotorodha. It also helps in normalizing Avalambaka and Tarpaka kapha, along with attaining prakrit status of Prana Vayu and Sadhaka pitta.

Management of generalized tonic-clonic seizures:

As per Ayurveda, Apasmara lakshanai, esmriti naash, bibhitisachetsa etc have correlation with that of generalized tonic-clonic seizures. Due to affliction of Dhi and Satva body enters into tamas stage and with smriti naash, thus distorted movement of body occurs. As per one of the review study [26] conducted on Kushmandghrit, it is clearly stated that it can be used for tonic clonic seizures. Ghee being yogavahi acquires the active principles of both processed drugs Kushmand and yashtimadhu. Ghee has excellent ability to cross the blood-brain barrier. Both these herbs along with ghrit acts on mastishkamajjadhara kala subsiding vata and promoting Dhee, Dhriti and smriti and eventually controlling episodes of seizures. This trio combo in which ghee i.e fat have Ketone bodies as one of the metabolites which study says have anticonvulsant activity [27]. Some studies conducted on Kushmandastates that its swarasa (fruit extract) has remarkable antioxidant activity [28]. Kushmanda seeds are also rich source of GABA which eventually helps in seizure control. Yashtimadhu has active ingredient glycyrrhizin, a triterpenoid

compound. Study conducted on this herb proves that it can change ion transport processes by inhibiting Na⁺ - K⁺ -ATPase [29] and controls multiple neuronal firing. So, this unique combo perfectly helps in management of generalized tonic-clonic seizure.

Depression:

Study [30] conducted on clinically diagnosed cases of depression by Kushmand ghrit shows remarkable improvement. In this study, the depressive patients were diagnosed by using DSM-IV diagnostic criteria. These depressive patients were given Kushmanda Ghrita twice with dosage of 20 ml once in morning and 2nd dose in evening for a month duration along with anupaan of 40 ml lukewarm water. After 1 month of its use, it was found that various clinical symptoms of depression showed remarkable improvement. It was found that patient's Suicidal tendency, Anxiety, Sad mood, Lack of confidence had reduced in intensity. Also, during study, it was noticed that Hamilton depression rating scale (HDRS), Immediate Memory Span Direct and Indirect test showed statistically highly significant results. These results were found due to Medhya Rasayana effect of this trio unique formulation. It is mentioned in Ayurvedic texts too that Rasayana therapy rejuvenates person at both physical and mental level [31]. Rasayana drugs enhance micro-circulation and improves metabolism [32]. Medhya Rasayanash as uniqueness

in improving the memory, intellect etc. by promoting healthy mental functions [33]. Thus, Kushmand ghrith is unique formulation to be used for depressive illness.

Cognitive decline in ageing [34]:

In this study of cognitive decline in ageing, Addenbrooke's Cognitive Examination (ACE III) test was chosen to clinically diagnose the cases of Cognitive decline. For this study, elderly patient above the age of sixty were selected. For duration of two months, Kushmanda Ghrita in dosage of 20 ml was given twice during Rasayana kala as well as second time during Udana kala. Ghrit was given with simple lukewarm water around 40 ml. It was found that both the parameters of assessment i.e. Wellbeing Index score (WBI score: WHO's) [35] and ACE III Scale Hindi Version (Addenbrooke's cognitive examination) (Hodges, J.R. and Larner A.J.2017) [36] has shown remarkable results statistically too. This Ghrita intake not only improved fluency domain, but also showed noticeable changes in orientation, memory and attention.

Anti-convulsant activity on Albino Mice [37]:

In this study, anti-convulsant assessment of Kushmanda Ghrita was done on Albino mice who were induced seizures by Maximal electro shock (MES). It was found that with

administration of Kushmanda Ghrita seizures were controlled. Its results are almost comparable to Standard drug used in seizures i.e phenytoin.

As a memory booster [38]:

This study was Comparative clinical study of two separated ghrit for thirty days each. In this pratimarshanasya, 2 drops per nostril was done by both Kushmandaghrita and Yashtighrita separately for 30 days. For this study, young volunteers between 20 -40 years were selected.

Assessment was done by PGI memory scale which has 10 sub tests. Results conclude that both ghrithas are helpful and equally effective to be used as memory booster. It was also found that Kushmanda ghrita has good verbal retention too in addition to other memory aspects like Visual retention, Remote memory, Recent memory, Mental balance, Immediate recall etc.

Attention-deficit/hyperactivity disorder [39]:

This research study is comparative clinical study of Kushmandghrit and Naladadighrit on Attention-Deficit/Hyperactivity Disorder (ADHD). Children aged between 5 to 12 years of age were selected. Twenty kids were selected on the basis of DSM-IV TR diagnostic criteria [40]. In each group there were 10 children. One group was given 5 ml of Naladadi Ghrita and another group was

given 5 ml of Kushmanda Ghrita twice a day for 1 month. Assessment criteria was based on 14 items (Questions), as per ADHD rating scale [41]. This scale is a good measure for hyperactivity and impulsivity along with attention deficit in ADHD. Results concluded that both ghrita gave promising effect in managing ADHD. This ADHD is psychiatric disorder. This is commonly diagnosed during childhood with symptoms such as lack of attention, lower IQ, cognitive defects, and unhealthy social interaction.

Specific Learning Disorders in School Children [42]:

Study was conducted on children with Specific learning disorder. Children with this disorder have specific deficits due to which they are unable to process information efficiently and this neuro developmental disorder is persistent. In this clinical study twenty children who met DSM 5 criteria were selected [43]. For a period of 3 months selected children were given Kushmanda Ghrita in dose of 12 ml and this ghrita was given with milk before food in morning time. Assessment was done using NIMHANS SLD battery and Jadata Rating scale. Results showed that Kushmanda Ghrita helped a lot in improving intensity and frequency of Verbal Communication, Academic performance, altered orientation, Erratic memory, and mood. It also showed significant improvement in Attention, visual and auditory memory, Frequency of

Drowsiness, in academics (reading, spelling and arithmetic).

Discussion:

Kushmanda Ghrita is excellent combination of three drugs i.e Kushmanda, Yashtimadhu and Go-Ghrita. Each individual ingredient of this formulation has been approved as Medhya rasayana in various Ayurvedic texts. It has Kushmanda which is clearly indicated as Medhya rasayana in various Ayurvedic texts [44, 45, 46, 47]. Go-Ghrita has excellent property of crossing the blood brain barrier as it is lipid in nature. In Ayurveda too, it is considered as yogvahi and it possess Madhura rasa, its Sheeta in virya and post digestive effect i.e. vipaka is also Madhura. It pacifies all Tridoshas. For centuries, ghrita has been used for its Medhya Prabhava. Yashtimadhu has also been mentioned as one of the Medhya rasayana. So overall this Rasayana formulation promotes healthy metabolism, improves micro-circulation, and pacifies all three doshas. They act on derangement of Raja and Tama by promoting Buddhi and Smiriti. This formulation is dominant in Madhura rasa so it nourishes Indriyas [Sadindriyaprasadaniya]. Although Tridoshashamak, but basically pacifies pitta dosha which is eventually seat of medha thus, promoting intellect.

Conclusion:

This is really a wonderful formulation and is frequently used in various

psychological issues. With this review study, it can be clearly concluded that Kushmanda Ghrita has been used since centuries for Manas rogas and it is a time-tested formulation. Furthermore, detailed clinical studies must be done to explore and prove the other uses of this wonder formulation. With more researches, it will be easy to understand deeply its effect on other diseases too. All three drugs used in Kushmand ghrit are excellent antioxidants too. So, various other aspects of all ingredients should be thoroughly and clinically studied to promote this trio formulation.

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