



## ROLE OF DIOSMIN WITH HESPERIDIN IN TREATMENT OF VARICOSE VEINS AND HAEMORRHOIDS

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### ABSTRACT

**Aims And Objectives :** To evaluate the efficacy of diosmin plus hesperidin for the conservative management of hemorrhoids and varicose veins. **Introduction:** The great and small saphenous veins, as well as their tributaries that run between the fascia and the skin, are involved in varicose veins in the lower extremities. Age and family history are key risk factors for varicose veins, which are defined as subcutaneous dilated, convoluted veins bigger than or equal to three millimeters. One of the most prevalent anorectal conditions is hemorrhoids. split up into four grade levels. First and second grades are typically treated conservatively. **Methodology:** Retrospective study involving patients coming to tertiary care hospital for 2 years. Following factors were considered in the statistical analysis: demographic data, including sex, age, outcomes of disease and complications. Haemorrhoidal symptoms (pain, heaviness, bleeding, pruritus and anal discharge) and in the proctoscopic appearance of the haemorrhoids comparing baseline visit. Varicose veins assessed by Venous clinical severity score (VCSS) **Results :** 52 cases of varicose veins and 66 cases of hemorrhoids were monitored for two years at a tertiary care hospital. The . Out of the 66 patients, 41 had improved symptoms (62%), and 24 (36.4%) needed surgery in the end. In one instance, rectal prolapse occurred as shown in chart 3,4,5. Of the 52 patients with varicose veins, 42 (80.7%) had improved symptoms, while 9 (17.3%) needed surgery in the end. One (1.9%) developed necrotizing fasciitis. **Conclusion :** Hemorrhoidal symptoms, such as pain, heaviness, bleeding, pruritus, and anal discharge, as well as changes in the hemorrhoids' proctoscopic appearance when comparing the results of the initial visit to the last appointment eight weeks following diosmin hesperidin treatment. After receiving treatment for two months, venous symptoms decreased. Diosmin plus hesperidin for the conservative management of hemorrhoids and varicose veins has great efficacy. **Aims -** To assess effectiveness of diosmin in combination hesperidin in conservative treatment of varicose vein and haemorrhoids

### KEYWORDS :

#### INTRODUCTION

varicose veins in the lower extremities involve the great and small saphenous veins and their tributaries between the fascia and the skin. Varicose veins are characterized by subcutaneous dilated, tortuous veins greater than or equal to three millimeters, involving the saphenous veins, saphenous tributaries, or non-saphenous superficial leg veins with age and family history considered important risk factors. Hemorrhoids is one of the most common anorectal disorders. Divided in to four grades. Grade one and two treated conservatively. Diosmin in combination with hesperidin has been found more effective than Diosmin alone on venous symptoms [1,2]. It has been found to be quite useful in the treatment of chronic venous insufficiency and hemorrhoids when combined with other flavonoids, particularly hesperidin. Its combination with hesperidin has been proven to be extremely helpful in the treatment of CVI and hemorrhoids, making it a good example of drug synergism. The most common symptoms of CVI include leg ache, sensation of heaviness or tension, nocturnal cramps, sensation of swelling, restless legs, and itching.. It also enhances the skin microcirculation's blood velocity. Daflon is not considered a cure for CVI because it does not address the underlying cause of the condition, it is used to alleviate the symptoms of the disease. Diosmin and Micronized Purified Flavonoid Fraction (MPFF) have been found to affect venous tone, lymphatic drainage, and microcirculation in CVI patients. They improve venous tone by blocking COMT (catechol-O-methyltransferase) from breaking down norepinephrine (noradrenaline) and so prolonging noradrenergic action. They enhance the number of functional lymphatics, lymphatic flow, capillary hematocrit, and red cell velocity while decreasing lymphatic channel width and intra-lymphatic pressure. They also prevent leukocyte adherence, intra-tissue movement, and the release of leukocyte (L-selectin) and endothelial (ICAM-1, VCAM-1) adhesion molecules, which protect microvascular permeability (Inflammatory mediators) [3,4]. Daflon treatment for four weeks has also shown improvement in the symptoms associated with hemorrhoids (pain, heaviness, bleeding, pruritus and anal discharge) [5,6,7]. Purified Diosmin has also been shown to reduce pain and bleeding. Diosmin hesperidin has also been reported to exhibit anti-oxidative property. Phlebotonics are known as vasoactive drugs, their mechanism of action is not scientifically well established despite the lack of studies examining their pharmacological and clinical properties. These drugs have been found to impact macrocirculation, such as enhancing venous tone [8], as well

as microcirculatory parameters such as capillary hyper-permeability [9]. Conservative treatment options are required to improve symptoms and prevent progression to higher degrees and complications. An operation is indicated when non-operative approaches have failed or complications have occurred [10, 11]. Topical agents like creams, lotions, and suppositories, which contain various ingredients (local anesthetics, corticosteroids, antibiotics, and anti-inflammatory drugs) have been employed for hemorrhoids management [11]. Although these agents help in improving symptoms, strong evidences supporting their true efficacy are lacking [10, 12].

#### MATERIALS AND METHODS

A single institute retrospective observational study was conducted where the varicose vein and haemorrhoids patients treated with Diosmin in combination with hesperidin were reviewed from January 2022 to December 2023. Institutional Ethical Committee (IEC) approval was obtained.

**Inclusion criteria:** varicose vein and haemorrhoids patients which were conservatively treated.

**Exclusion criteria:** complicated cases which are managed with surgery.

The parameters assessed Haemorrhoidal symptoms (pain, heaviness, bleeding, pruritus and anal discharge) and in the proctoscopic appearance of the haemorrhoids. Varicose vein assessed by Venous clinical severity score (VCSS). Following factors were considered in the statistical analysis: demographic data, including sex, age, outcomes of disease. Haemorrhoidal symptoms (pain, heaviness, bleeding, pruritus and anal discharge) and in the proctoscopic appearance of the haemorrhoids comparing baseline visit.

#### Statistical Analysis

Results were analysed using chi-square test, Bar chart, Paired T test

#### RESULTS

52 cases of varicose veins and 66 cases of hemorrhoids were monitored for two years at a tertiary care hospital. The age and sex distribution of hemorrhoids and varicose veins are displayed in charts 1, 2, 6, and 7 respectively. Out of the 66 patients, 41 had improved symptoms

(62%), and 24 (36.4%) needed surgery in the end. In one instance, rectal prolapse occurred as shown in chart 3,4,5. Of the 52 patients with varicose veins, 42 (80.7%) had improved symptoms, while 9 (17.3%) needed surgery in the end. One (1.9%) developed necrotizing fasciitis as shown in chart 8 and 9.

**DISCUSSION**

General practitioners frequently treat diseases including varicose veins and hemorrhoids. The doctor can select from a variety of therapy options for both problems. Mechanical compression stockings are used as a treatment for varicose veins. For hemorrhoids, there are numerous over-the-counter topical treatments available. Dietary modifications, lifestyle adjustments, and hydrotherapy are examples of conservative treatments for both illnesses that depend heavily on patient compliance to be successful.

**CONCLUSION**

When comparing the results of the initial visit and the last appointment, which took place eight weeks after starting diosmin hesperidin treatment, the symptoms of hemorrhoids pain, heaviness, bleeding, pruritus, and anal discharge as well as their proctoscopic appearance have decreased for early grades of hemorrhoids. Following two months of treatment with diosmin and hesperidin, venous symptoms decreased. Diosmin plus hesperidin for the conservative management of hemorrhoids and varicose veins has great efficacy

**Age Distribution (hemorrhoids Cases): chart 1**

AGE DISTRIBUTION	NO. OF CASES	PERCENTAGE (%)
21-30	11	16.7%
31-40	10	15.2%
41-50	15	22.7%
51-60	12	18.2%
61-70	12	18.2%
71-80	6	9.1%
TOTAL	66	100%

**Sex Distribution (hemorrhoids Cases) Chart 2**

SEX DISTRIBUTION	NO. OF CASES	PERCENTAGE (%)
MALE	45	68.2%
FEMALE	21	31.8%
TOTAL	66	100%

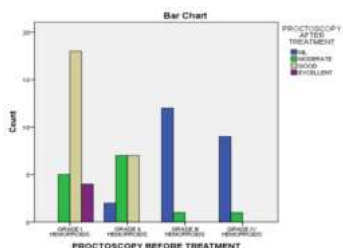
**Follow up chart 3**

FOLLOW UP	NO. OF CASES	PERCENTAGE (%)
SYMPTOMATICALLY BETTER	41	62.1%
SURGICAL INTERVENTION	24	36.4%
RECTAL PROLAPSE	1	1.5%
TOTAL	66	100%

**Chart 4**

PROCTOSCOPY BEFORE TREATMENT * PROCTOSCOPY AFTER TREATMENT		PROCTOSCOPY AFTER TREATMENT				Total
		NIL	MODE RATE	GOOD	EXCELLENT	
PROCTOSCOPY BEFORE TREATMENT	GRADE I HEMORROID	0	5	18	4	27
	GRADE II HEMORROID	2	7	7	0	16
	GRADE III HEMORROID	12	1	0	0	13
	GRADE IV HEMORROID	9	1	0	0	10
Total		23	14	25	4	66

Chi-Square = 58.926 P = <0.05



**Chart 5**

**Age Distribution (varicose Veins) Chart 6**

AGE DISTRIBUTION	Count	Percent
21-30	2	3.8%
31-40	6	11.5%
41-50	9	17.3%
51-60	13	25.0%
61-70	15	28.8%
71-80	3	5.8%
81-90	4	7.7%
TOTAL	52	100%

**Sex Distribution (varicose Veins) Chart 7**

SEX DISTRIBUTION	NO. OF CASES	PERCENTAGE (%)
MALE	33	63.5%
FEMALE	19	36.5%
TOTAL	52	100%

**Follow Up: chart 8**

FOLLOW UP	NO. OF CASES	PERCENTAGE (%)
SYMPTOMATICALLY BETTER	42	80.7%
SURGICAL INTERVENTION	9	17.3%
NECROTIZING FASCITIS	1	1.9%
TOTAL	52	100%

**Paired T Test: Chart 9**

	MEAN	N	STD. DEVIATION	t VALUE	p VALUE
VCSS BEFORE TREATMENT	12.3269	52	1.18357	7.945	<0.05
VCSS AFTER TREATMENT	10.8077	52	1.89983		

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