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Original Research Paper

Pharma

A PROSPECTIVE STUDY ON EFFECTIVENESS OF CALCIUM DOBESILATE IN CHRONIC VENOUS INSUFFICIENCY

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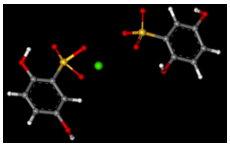
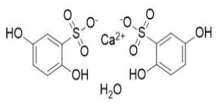
ABSTRACT The veins in the legs carry blood back to heart through one-way valve. chronic venous insufficiency occurs when the valve gets damaged and veins in the leg does not allow the blood to flow back to heart and causing the blood to pool in legs. The purpose of the study was to evaluate the effectiveness of Calcium Dobesilate in chronic venous insufficiency. The prospective observational study was conducted in Government cuddalore medical college and hospital for a period of 4 months (November 2023 – February 2024). VCSS (venous clinical severity score) is used to assess the severity of disease and venous doppler ultrasound is used to check the blood flow in the veins of legs. In our study, varicose vein with venous ulcer is majorly seen in chronic venous insufficiency. Patient condition were noted at time of admission and followed after the administration of drug (calcium dobesilate). Venous ulcer size was recorded before and after the therapy. Thus, calcium dobesilate reduces the symptoms of chronic venous insufficiency mainly in varicose vein with venous ulcer (by decreasing the platelet aggregation & viscosity of blood) and improve the quality of life.

KEYWORDS : Calcium dobesilate, Chronic venous insufficiency, Varicose vein with venous ulcer.

INTRODUCTION

CALCIUM DOBESILATE (calcium salt of dobesilic acid) belongs to the group of medicines known as venoprotective which improves blood flow in veins (a type of blood vessel) by decreasing the thickness of blood and also relaxes the muscles of affected part of the body (legs & feet) by reducing the leakage and fragility of blood vessels.[1]





Chronic venous insufficiency (CVI) is a form of venous disease occurs when vein in legs are damaged[6]. It includes

1. **Deep Veins:** Large veins deep in body that run through muscle.
2. **Superficial Veins:** Veins which are close to skin surface
3. **Perforating Veins:** Connects deep and superficial veins.

Symptoms of chronic venous insufficiency includes 1. Achy or tired legs 2. Burning, tingling or pins and needle sensation in legs 3. Cramping of legs at night 4. Discoloured skin 5. Oedema 6. Itching skin 7. Heavy feeling of legs 8. Ulcers usually near ankles 9. Varicose vein.[7]

Diagnosis of cvi

Physical examination: Check for swelling, skin changes, varicose veins, or ulcers on the leg.

Duplex Ultrasound: A duplex ultrasound combines Doppler and conventional ultrasound to produce two-dimensional, moving images of blood vessels in the legs.[2]

Magnetic Resonance Venogram: A magnetic resonance venogram is a type of MRI scan that uses radio waves to provide images of veins in the legs. It can detect blood flow and obstructions deep in the legs.

Venogram: A venogram uses X-rays and a contrast dye to create images of leg veins to check for blood clots or pooling, which can occur when valves in the veins stop working properly.

Medical Procedures

Sclerotherapy: Inject a solution into the problem vein. It scars the vein, forcing blood to flow through healthier veins.

Endovenous Thermal Ablation: This newer method uses high-frequency radio waves or a laser to heat and close the problem vein.[7]

Surgery For Cvi

Ligation: The vein is cut and tied off so blood can't flow through and remove a vein that is very damaged.

Microincision/ambulatory Phlebectomy: This technique uses much smaller cuts, punctures, and small hooks to remove damaged veins.

Vein Repair: It fixes the vein or the valves. This can be done through an open cut on your leg or through a smaller opening by using a long, hollow catheter or tube.

Vein Transplant: The problem vein is replaced with a healthy vein from somewhere else in the body.

Vein Bypass: This is done on veins in the upper thigh and only in the most severe cases. Healthy vein from another part of the body used to reroute blood around the affected vein.

Methodology

Study site was hospital based and involves patients in the department of surgery ward at government cuddalore medical college and hospital (RMMCH), a 1250 bedded tertiary care teaching located in rural south India, Chidambaram. Study period involves 4 months (November 2023 – February 2024) with a prospective observational study design. Proforma (Data collection form) was developed for the data collection purpose from the patient in the surgery ward. Details of patients like demographic data, chief complaints, past history, past medication history, clinical manifestations,

local examination, laboratory investigation (VENOUS DOPLER), and dose of calcium dobesilate and duration of hospital stay were collected.

Inclusion Criteria

- Patients with symptoms of chronic venous insufficiency in surgery ward.
- Patient with age above 30 years.

Exclusion Criteria

- Diseases of the gastrointestinal tract.
- Female patients who were pregnant and lactating.
- Patients on compression stockings.

RESULTS AND DISCUSSION

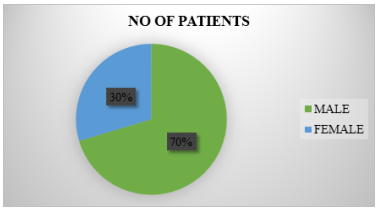
A total of 27 patient's data were recorded, analysed and discussed.

Age

AGE (in years)	NO. OF PATIENTS	PERCENTAGE (%)
30-40	3	11.2
40 – 50	6	22.2
50 - 60	7	25.9
Above 60	11	40.7

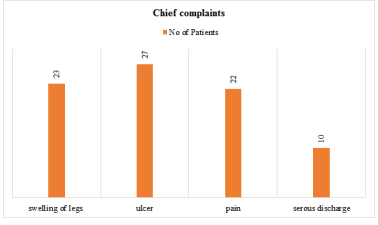
In our study 40.7% of patients were under the age group of above 60 years, 25.9% were in the range of 50 to 60 years, 22.2% of patients were in range of 40 to 50 years and 11.2% were in the range of 30 to 40 years.

Gender



Our study shows that male was more affected than females.

Chief Complaints

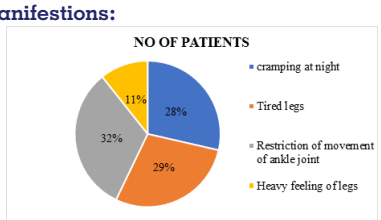


Out of 27 patients, 23 came with complaints of swelling of legs, 27 had ulcer formation, 22 had pain in the leg and 10 had serous discharge.

Past History

PAST HISTORY	NO OF PATIENTS
With comorbidities	17
Without comorbidities	5
Previous surgery	5

Clinical Manifestions:



In our study, majority of patients came with cramping at night (28%), tired legs (29%), Restriction of movement of ankle joint (32%) and heavy feeling of legs (11%).

Local Examination

All the patients were observed with Tortuosity of veins, black discolouration and tenderness.

Venous ulcer size was noted at time of admission and size of ulcer were reduced after the drug administration was observed.

Doppler Examination

Before Treatment

GSV (Great saphenous vein) and SSV (Small saphenous vein) dilation are noted. Perforator incompetence (multiple superficial varicosities) are noted in all patients.

After Treatment

GSV (Great saphenous vein) and SSV (small saphenous vein) dilation were decreased. Vcss Scale Assesment (venous Clinical Severity Score)

Before Treatment

VCSS SCALE	NO. OF PATIENTS
ZERO (ABSENT)	-
ONE (MILD)	6
TWO (MODERATE)	12
THREE (SEVERE)	9

After Treatment:

VCSS SCALE	NO OF PATIENTS
ZERO (ABSENT)	2
ONE (MILD)	13
TWO (MODERATE)	8
THREE (SEVERE)	4

Treatment Given

Tab calcium dobesilate 500mg is given for all 27 patients. (OD for mild patients and BD for moderate and severe patients).

Duration Of Hospital Stay

SEVERITY OF DISEASE	DURATION OF STAY
MILD	LESS THAN 1 WEEK
MODERATE	2 WEEKS
SEVERE	MORE THAN 2 WEEKS

CONCLUSION

A study was conducted among 27 patients in surgery ward. Varicose with venous ulcer is seen majorly in chronic venous insufficiency. Calcium dobesilate (dose 500 mg per oral OD & BD) had significantly reduces the symptoms of CVI which is assessed by VCSS scale. It also reduces the leg oedema, ulcer size, GSV (Great saphenous vein), SSV (Small saphenous vein) dilation (evaluated by venous doppler scan) and improves the quality of life in severe patients. our study results show that calcium dobesilate (venoprotective drug) is effective in patient with CVI mainly in varicose vein with venous ulcer.

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