Executive Summary: A Consensus Statement – Part I: Recommendations for the Management of Chronic Venous Disease (CVD) in India and Key Role of Primary Care Doctors

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What does the Term “Chronic Venous Disease (CVD)” Cover?

The term “Chronic Venous Disease” covers a full spectrum of venous conditions of lower limbs ranging from patients with early symptoms like telangiectasia or reticular veins, leg pain or oedema of the foot to complications like venous leg ulcers.

In the early stages usually only symptoms appear, then as the disease progresses it is accompanied with signs.

Venous symptoms are defined as tingling, aching, burning sensation, pain, muscle cramps, swelling, sensations of throbbing or heaviness, itching skin, restless legs, leg tiredness and/or fatigue. These may be exacerbated during the course of the day by prolonged standing or by heat and relieved with leg rest, elevation or both.¹

Venous signs are visible manifestations of chronic venous disease, which include:¹

- Oedema of the dorsum of foot, entire foot and may extend to the leg
- Frank varicose veins: This may or may not be associated with telangiectasia or reticular veins.
- Skin changes: Dryness, frank eczema, darkened, thickened, hard, scarred and ulcers.

Burden of Chronic Venous Disease

On a global perspective 1 out of 5 people in the world suffer from CVD.²

This can be mainly attributed to occupation, lifestyle changes, some environmental factors, a familial tendency and post-partum.²

In India a patient seeks treatment only when it affects his/her quality of life and begins to limit the functioning of the lower limb, thus indicating that CVD remains an iceberg phenomenon in the country.²

In developed nations, often CVD is additionally a cosmetic concern.²

In a large Indian study distributed in 11 major cities of India, it was found that CVD is more prevalent at the average age of 43 years and it affects women more than men.³

The high prevalence of CVD, cost of treatment and loss of working days implies that CVD has a considerable socio-economic impact.⁴

Need for a Common Language in Understanding and Managing Chronic Venous Disease in India

In a consensus, it is important to have a common language while describing the disease.

A leap forward was recently made thanks to a common terminology on venous anatomy, the Clinical, Etiological, Anatomical, Pathophysiological (CEAP) classification (Table 1, Figure 1) proposed by the adhoc committee of the American Venous Forum in 1994 and revised in 2004, which was subsequently adopted worldwide including India, as a basis for improved patient description.

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Table 1: Clinical classification system for CVD

<table>
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<tr>
<th>CEAP clinical classification of CVD</th>
<th>Clinical classification of CVD</th>
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<tbody>
<tr>
<td>C₀ No visible or palpable signs of venous disease</td>
<td>C₁ Telangiectasia or reticular veins</td>
</tr>
<tr>
<td>C₁ Telangiectasia or reticular veins</td>
<td>C₂ Varicose veins</td>
</tr>
<tr>
<td>C₂ Varicose veins</td>
<td>C₃ Oedema</td>
</tr>
<tr>
<td>C₃ Oedema</td>
<td>C₄a Pigmentation or eczema</td>
</tr>
<tr>
<td>C₄a Pigmentation or eczema</td>
<td>C₄b Lipodermatosclerosis or atrophie blanche</td>
</tr>
<tr>
<td>C₄b Lipodermatosclerosis or atrophie blanche</td>
<td>C₅ Healed venous ulcer</td>
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<tr>
<td>C₅ Healed venous ulcer</td>
<td>C₆ Active venous ulcer</td>
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<tr>
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<td>S Symptomatic - pain, tightness, skin irritation, heaviness, and muscle cramps</td>
</tr>
<tr>
<td>S Symptomatic - pain, tightness, skin irritation, heaviness, and muscle cramps</td>
<td>A Asymptomatic</td>
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</table>

- The CEAP classification includes a Clinical assessment (C),
- An Etiological assessment of the patient’s disease (E),
- An Anatomical assessment of location of the pathology (A),
- And the Pathophysiological basis for the underlying disease (P).

It provides a broad-based, objective, anatomic and physiologic basis for classification of venous disease. CEAP has improved standardization, communication, decision making and reporting of venous disease.

In most of the centres in India a practical route is taken and a dominant use of the ‘C’ component of the CEAP is used. The ‘E’ part is used, but sporadically.¹

**Recommended Process for Diagnosis of CVD by a Primary Care Doctor**

A simple method prior to selecting an appropriate test is to grade the diagnostic investigations into 2 levels:²

A past history of Deep Vein Thrombosis (DVT) does not always rule out treatment option of varicose veins (Table 2). Often these veins are not the collateral channels and they could be those varicose veins where various surgical treatments can be offered.⁷

**Treatment Options Proposed by Indian Experts in Chronic Venous Disease**

**Lifestyle Management**
- **Exercise programme:**
  - Outpatient exercise programmes commenced at an early stage can avoid the first symptoms such as pain, swelling and oedema.⁸
- **Leg elevation:**
  - Leg elevation ameliorates venous stasis, provides symptomatic relief, reduces leg oedema, and promotes healing of ulcers in patients with CVD.⁹
  - **Leg massage (gentle):** Reduces tissue oedema around the ulcer area.⁹

**Pharmacological Treatments Available in India**
- **MPFF:** Micronized Purified Flavonoid Fraction:
  - Route: Oral administration
  - Formulation: 1000 mg tablet; 500 mg tablet
  - Dose: 1000 mg/day for a minimum of 2 months
  - MPFF is a natural origin drug obtained from sun dried oranges. MPFF has
Table 2: History and physical examination in CVD

History
A positive family history of varicose veins is seen in over one third of patients.
Symptoms of venous insufficiency include pain, tightness, skin irritation, pruritus, heaviness, tingling, muscle cramps and cosmetically unsatisfying varicose veins.
Specific features of the pain that should be noted include the degree to which the pain interferes with the patient’s occupation or lifestyle as well as the amount of time that the patient can stand before the onset of pain or swelling.

Physical examination
Examine the limbs of the patient in the standing position from the groin to the toes for any visible signs.
Initial examination begins with a careful inspection and palpation of the legs.
Varicosities in the main saphenous trunk and spider veins should be noted.
Palpation of the legs should also be performed to detect temperature differences between the legs.

Its unique composition of diosmin with flavonoids. Clinical data exists for its benefits right from the early stage (C0) to venous leg ulcers (C6).
- MPFF acts by reducing inflammation at microcirculatory level, increasing venous tone and improving lymphatic drainage.
- MPFF has been a preferred choice even in long standing ulcers.
- MPFF is commonly used with procedures such as endovenous laser ablation, radio frequency ablation, hook phlebectomy, crossectomy and sclerotherapy.
- MPFF is the most studied veno-active drug and is strongly recommended in all stages of chronic venous disease.
- Importantly, due to its veno-protective action we recommend MPFF even in patients with only symptoms (absence of signs) or cases of suspicion of CVD (pre-diagnostic confirmation).10
- Calcium dobesilate
  Route: Oral administration
  Formulation: 500 mg tablet
  Dose: 1000 mg/day for 2 months
  - A calcium salt of dobesilic acid (2,5-dihydroxybenzene sulfonate), is a synthetic veno-active drug with presumed effects on endothelial integrity, capillary permeability and blood viscosity. It is used in the treatment of chronic venous disease which helps in reducing cramps and restless legs.11
    - Calcium dobesilate has been associated with risk of agranulocytosis.12
- Horse chestnut seed extract (HCSE)
  Route: Oral administration
  Formulation: Equivalent to 50mg escin tablet
  Dose: 100mg / day for 3 months
  - HCSE is obtained from seeds of horse chestnut and is used for its veno-tonic property. Evidence suggests that HCSE is efficacious and safe in short-term treatment for chronic venous disease but definitive randomized controlled trials are required to confirm efficacy.13

Compression Therapy
- Intermittent pneumatic compression (IPC) for improves venous flow in patients in all the stages.
  - Rapid IPC heals 86% of venous ulcers compared with 61% with slow IPC at 6 months.
  - IPC is linked with greater leg volume reduction in patients with chronic venous oedema.9
- Four layer compression bandage result in faster healing of ulcers. A pressure of 30–40 mmHg at the ankle is recommended for ulcer healing.
- If used daily, compression stockings should be replaced after 3–6 months.
- Regular daily use of compression stockings for at least two years after DVT can reduce the incidence and severity of the post-thrombotic syndrome.

Procedural Treatment for CVD

Endoablation9
a. Thermal ablations
  - Endovenous laser ablation (EVLA)
    - It is used for treatment of insufficient Great Saphenous Vein (GSV) and Small Saphenous Vein (SSV).
    - EVLA has the highest success rate of 93%.
  - Endovenous radiofrequency ablation (RFA)
    - It is used to treat saphenous varicose veins.
    - Its success rate is known to be 90%.

b. Chemical ablation
  - Foam sclerotherapy
    - To obliterate the varicose veins, injection sclerotherapy is used for superficial varicose veins, residual or recurring varicose veins.
    - Glue sclerotherapy is also used in some cases.

c. Combination
  - Sometimes a combination of the 2 is also used.
Surgery
a. Phlebectomy
   - It is a minimally invasive procedure that uses a small scalpel or needle to remove varicose veins on the surface of the leg.
Trendelenberg operation of stripping the varicose veins and excision of thrombosed localised venous bunches are some latest options.

Indian Experts’ Proposal of Another Way of Understanding the Disease

In spite of various methods of reporting/classifying the disease it becomes inadequate to understand the disease pattern.

The Indian experts propose another way of understanding the disease as congenital and acquired CVD.

Acquired could be either primary acquired CVD or secondary (Post Thrombotic Syndrome) acquired CVD.

This consensus intentionally focuses only on the acquired CVD. One of the biggest risk factors for CVD is prolonged standing. Certain occupations that require people to stand for a long time (like nurses, teachers, traffic police, office-workers, housewives etc.) increases the risk of acquired CVD.

In the female gender there is an increased risk of post-partum CVD.

Based on this we will conduct a nationwide study from various centres in India: North to South and East to West and analysis of the information based on conclusion.

Consensus Part II

A nationwide study from various centres in India: North to South and East to West and analysis of the information based on conclusion.

Conclusion

In India, awareness of the warning symptoms of CVD among the general population is far from satisfactory.

This lack of awareness leads to a delay in receiving medical advice from primary care doctors and a delay in adequate treatment.

A high prevalence of CVD has been documented in India and hence studies need to be conducted in different parts of India to develop an understanding at national level of chronic venous disease pattern and our Indian observation.

This will help us search in our country a better way to understand and treat the disease.

This is because India is a multi-ethnic, multi-cultural country with vast geographic variance, which could influence the patients’ lifestyle and its impact on CVD. There is now an urgent need for undertaking health education measures about the awareness of risk factors and early warning signs of CVD in the community, so that people in general and affected subjects specifically, can receive early and effective therapy through modern means.

References