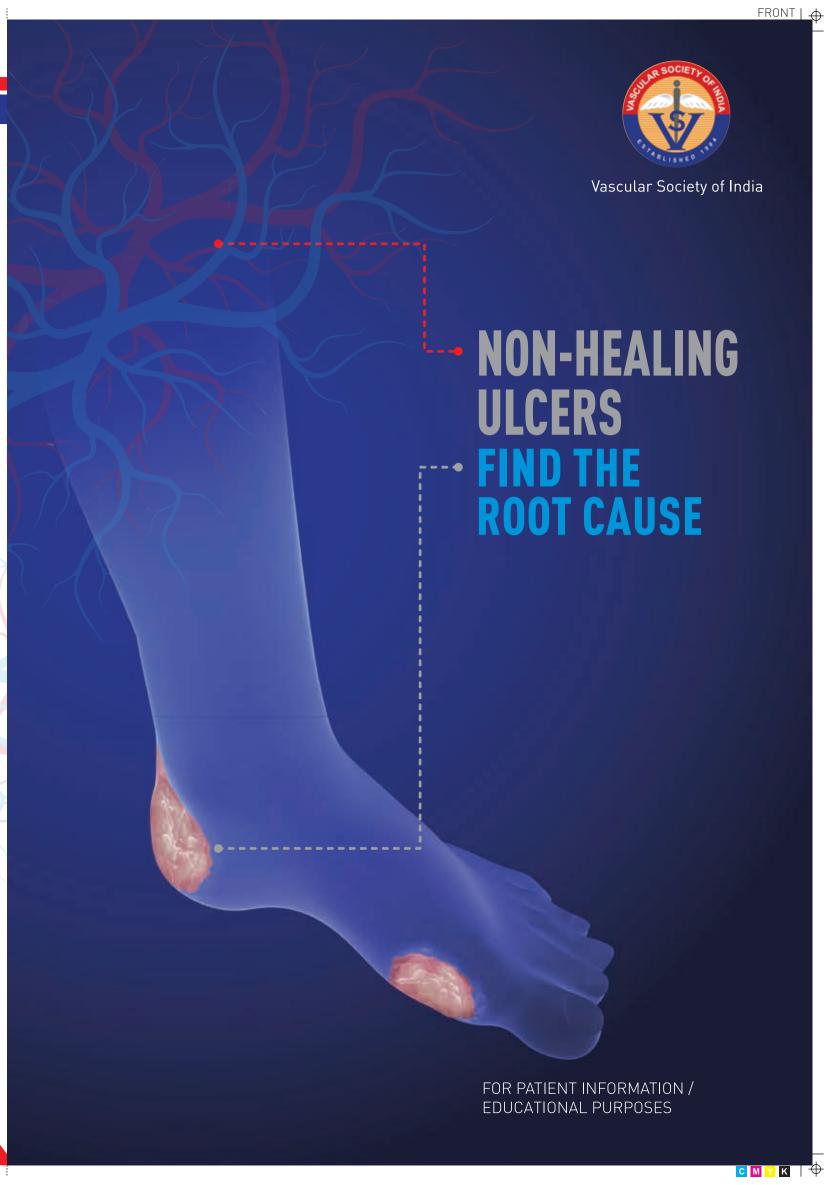
# SUMMARY

- A vascular surgeon must be consulted for non-healing ulcers
- Definite treatment of non-healing ulcers involves identifying the cause and appropriate treatment
- Some ulcers may need further treatment with skin grafting to cover the ulcer (after addressing the primary cause of the ulcer)



Disclaimer: This material is for informational and educational purposes only. It does not replace the advice or consultation of a doctor or health care professional. VSI makes every effort to provide information that is accurate and timely, but makes no guarantee in this regard. If you think you may be suffering from any of these medical conditions you should seek immediate medical attention. You should never delay seeking medical advice, disregard medical advice, or discontinue medical treatment because of information on this website/ leaflet.



# **NON-HEALING ULCERS**



Vascular Society of India

#### INTRODUCTION

A raw area that develops when the skin is broken that gets infected by bacteria, leading to an ulcer. In case such wounds do not heal on their own for some time, it can lead to non-healing ulcers.

#### **CAUSES**

- Venous ulcers
- Arterial/ischemic ulcers
- Pressure ulcers
- Diabetic foot ulcers
- Other causes like infection, arthritis, Systemic lupus erythematosus, vasculitis, etc.

#### **VENOUS ULCERS**

Varicose veins is the leading cause for non-healing venous ulcers. These ulcers are found on medial or lateral aspect of ankle & lower leg.

#### **ARTERIAL/ISCHEMIC ULCERS**

- Atherosclerosis i.e narrowing of the arteries or reduced blood supply to the limbs can cause arterial ulcers.
- Arterial ulcers usually affect the distal extremities characterized by severe burning pain, pus discharge & surrounding coldness.

#### **PRESSURE ULCERS**

- Pressure ulcers are formed when skin & tissues are compressed leading to decreased oxygenation & reduced blood supply to the area. Due to the compression of skin and tissues, there is tissue damage, resulting in ulcers.
- They are commonly found over buttocks and heels in people who are bed-ridden, with an inability to change positions.

#### **DIABETIC ULCERS**

- These ulcers are commonly found in diabetic patients.
- These ulcers usually occur over the foot & sole with pus discharge & occasionally with deformed bones. If not treated properly, these can lead to leg amputation.

## **NEWER ADVANCES IN TREATMENT OF NON-HEALING ULCERS \*VACUUM-ASSISTED CLOSURE (VAC)**

- Vacuum-assisted closure or negative pressure therapy (NPT) is a newer technique which promotes wound healing & aids healthy granulation.
- It is done by applying a foam-like sponge which adheres onto the ulcer & is connected to the machine via tubing which creates negative pressure aiding early & easy healing.



Figure 1: Vacuum-assisted closure

### \*HYPERBARIC OXYGEN THERAPY (HBOT)

- This is a newer technique which helps early healing by increasing oxygen levels in the body. In this treatment the patient is asked to lie in a chamber filled with 100% oxygen and breathe normally.
- The therapy lasts for about 60 minutes, with sessions depending on the severity of the disease. HBOT is very effective for diabetic foot ulcers, non-healing wounds, crush injuries etc.



Figure 2: Hyperbaric oxygen therapy (HBOT)