HKCET Newsletter

Hong Kong Council of Enterostomal Therapists

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Special Topic - Vascular Leg Ulcer and its Management

Vascular Leg Ulcer and its Management (Part I)

Introduction

Vascular leg ulcers include venous and arterial type that originate from chronic venous insufficiency and arterial diseases respectively. It has been reported that venous ulcers are the most common type of leg ulcers which accounts for 70-75%. 10% belongs to arterial ulcers and the remaining 20-30% are due to a combination of arterial and venous disease. (Cameron, 1996; O' Hare et al., 1996).

Vascular leg ulcers is a costly problem in terms of health care cost and personal suffering. The cost of treating venous ulcers has been estimated as $750 million to $1 billion a year and two million missed workdays in USA (Harris et al., 1996). Besides, vascular ulcers is a chronic condition that takes months to heal and recurrence rate is up to 90% in venous type (O'Hare et al., 1996).

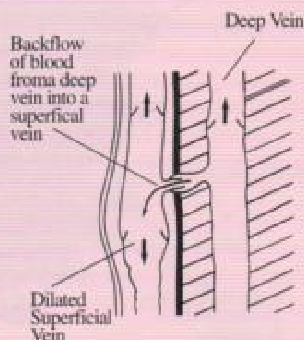
In terms of personal suffering, it means pain, open odorous wound, unemployment, change in self- concept and even ends up with lower extremities amputations. This article aims at improving nurses' understanding on the underlying causes and pathophysiology of vascular leg ulcers.

Pathophysiology

Venous ulcers

Venous ulcers result from chronic venous insufficiency, with or without direct trauma.

With incompetent valves in superficial, deep or connecting perforator veins, there is accumulation of venous blood that leads to venous hypertension. Fluid, fibrinogen and haemosiderin (an iron- containing pigment released after the break down of red blood cells) are forced out of the circulation and accumulated in surrounding tissue. It leads to edema, hyperpigmentation, and finally tissue breakdown and ulceration occur.



Common risk factors includes deep vein thrombosis, surgery, leg injuries, phlebitis, varicose veins and immobility.

Arterial ulcers

Arterial ulcers are caused directly from trauma to lower limbs with arterial insufficiency. Complete or partial arterial blockage will deprive tissue from oxygen and nutrients, as a result, tissue necrosis and / or ulceration occur. Atherosclerosis is the most common cause that leads to arterial ulcers. Besides, embolism will lead to infarction and tissue ischemia. Arterial ulcers are associated with cerebrovascular accident, transient ischaemia attacks, myocardial infarction, angina, congestive heart failure. Risk factors like smoking, alcohol consumption, diet, mobility and exercise should never be overlooked.

Differentiating characteristics of arterial and venous insufficiency

Venous insufficiency

Client will complain aching or cramping in legs that relieved by elevation. There is brown staining above medial malleolus caused by deposition of haemosiderin. Eczema and induration (hardening of skin in the lower limbs) are common with venous insufficiency. Edema is present and reduced by elevation. Foot pulses are palpable unless edema is present.

Venous ulcers usually appear on the medial or lateral malleolus or around the ankle. The ulcers are pale looking, shallow with flat, irregular borders and copious serious discharge. Venous ulcers are generally not excessively painful unless edema is uncontrolled or cellulitis is present.

Arterial insufficiency

Client may complain of intermittent claudication and rest pain which are typical to arterial insufficiency and signal the extent of disease. Intermittent claudication is predictable muscle pain usually in calves associated with exercise and relieved by rest. Rest pain is a sign of severe arterial insufficiency with pain occur at rest. Rest pain is typically nocturnal and awakes client at night time.

Common features in lower limbs include dry, shiny and thin skin. There are thickened nails and little hair growth due to ischemia.The skin is cool or cold to touch with dependent rubor and elevational pallor of foot. Femoral, popliteal, dorsalis pedis and posterior tibial arteries should be palpated for diminished or absence of pulse. Delayed capillary return

time (briefly push on the end of the toe and release, normal color should return to the toe in 3 seconds or less) also reflects compromised vascular condition.

Arterial ulcer can be anywhere but is frequently seen on the tips of toe, toe webs, dorsum of the foot and lateral malleolus. The ulcers are usually small, circumscribed (that are usually described as "punched out"), deep with extensive tissue loss.

It is often dry with necrotic tissue and the wound base is pale. The ulcers are extremely painful and would be relieved a bit with dependent position.

to be continued....

By: Lalisa Cho

Nurse Educator, E.T. PMH

Reference:

Cameron J. (1996) Venous and arterial leg ulcers, Primary Health Care, March Vol.6 No.3, 1996

Harris A.H., Brown-Etris M, and Troyer-Caudle J, (1996). Managing Vascular Leg, American Journal of Nursing 1996, Vol. 96, No., p38-34.

O'Hare L.J. and Moffat C. (1996) Doppler ultrasound and compression bandaging, Primary Health Care, December Vol.6, No.11, 1996

Report on 7th European Conference on Advances in Wound Management

Effective wound management can improve clinical outcome and making care more cost effective.

Now-a-day, wound management is a hot topic in health care all over the world. A statistic had shown that information on wound care had been published in 2 million biomedical articles: 20000 biomedical journals; 400 nursing journals during the last year. In 1995, more than 1000 dressings were available in the market and 350 million pounds had spend in wound care.

With the sponsorship of HKCET, I have a chance to attend a symposium Evidence Based Wound Care and the 7 th European Conference on Advances in Wound Management in 1997.

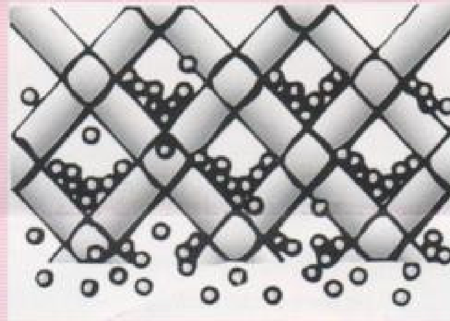
The Evidence Based Wound Care symposium was a two day symposium with intensive lectures on the recent advance in wound management and researches. History of dressing development and the recent trend of wound management in different countries had been presented in the symposium by various speakers from various disciplines. It was not just review of the past, in these lectures, dressing in the future had also been disscused. With the advance in tissue engineering and knowledge in the community. Buying tissue readily available for replacement over the counter of drug store may become truth in a few years later. Tissue glue, chemo-attractants, dermis, keratinocytes, bone, cartilage or even nerve can be available and purchased by the user who need it.

After the above symposium, I had joined the 7th European Conference on Advances in Wound Management in Harrogate U.K.. The main theme of the conference was ' Improving Clinical Outcomes Through

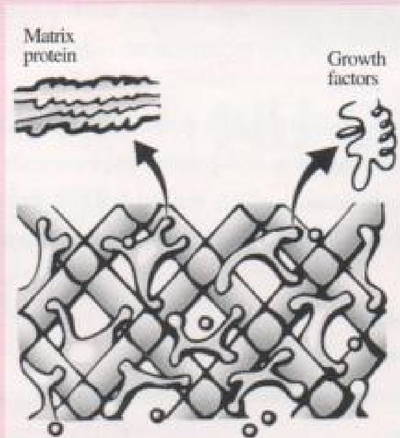
TISSUE ENGINEERING PROCESS

Human fibroblast cells are used to create comprehensive, safty-tested Master Cell Banks

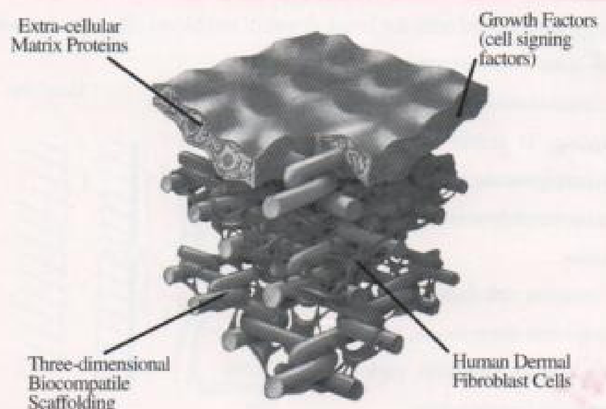
Cells are expanded and then seeded onto a bioabsorbable scaffold under aseptic conditions



Cells attach to the scaffold and continue to divide and grow, secreting human dermal collange plus the extracellar matrix proteins and growth factors found in healthy human dermis



THE RESULT IS A LIVING, METABOLICALLY ACTIVE, HUMAN DERMAL REPLACEMENT



Education'. Clinical and biological research, audit and evidence-based practice sessions are devoted to education, and many respected and experienced educators have been invited to pass on their view.

More than wound care issues, scholars from both sides of Atlantic had also met together to discuss on the role and practice of clinical nurse specialist. Nurse specialist had been challenged as being too narrow in focus and being a reductionistic approach. On the other hand, with increasing depth of knowledge and skills, in many country , the development of CNS in nursing has been linked to university education. In USA., Canada and Australia, CNS were conceptulized as advance practitioner, who must be prepared at a minmium of graduate level; experience, research based practice (UKCC1993) & Specialist Nursing Practitioner (UKCC 1994), role of CNS had not been fully conceptualized, but still specialist exposure and research based practice were expected. Most speaker agreed that university education can help the candidate in developing their critical thinking skill, and improve confident.

After the conference, I think it would be a sensible way to use education as a starting if we wanted to disseminate the facts and advances in wound management and to make wound healing process more cost effective.

Reported by
Pang Chak Hau,
Nurse Specialist (Stoma Care)
Yan Chai Hospital

'Enterostomal Therapy - Reflection and Reality ' : 12 th Biennial Congress of WCET

The 12 th Biennial Congress of WCET will be held on 7-12 June 1998 in Brighton, UK. The theme of the coming congress will be 'Enterostomal Therapy - Reflection and Reality '. The aim of the congress is to encourage health care professionals to challenge their assumptions and become more critical about nursing practice and developments in the provision and delivery of health care.

Interesting and up-to-date programme of oral, poster, workshop and video sessions as well as state-of-the-art lectures will be presented by eminent speakers.

The provisional programme will include the following topics :

* *Stoma Care Nursing : Challenges Around The World*
* *Preparation For Continuing Education And Practice*
* *Evidence Based Practice : Fistulae Management And Aspects Of Care*
* *Management Of Urinary Continence And Future Developments*
* *Urology - Future Trends*
* *Trends In The Management Of Faecal Incontinence*
* *Paediatric Stoma Care : From Neonate To Adolescence*
* *Dermatological Issues Arising In Stoma Care*
* *Quality Of Life : Delivering Quality Care*
* *Demensions And Diversity Of Stoma Care*

Advance registration for the congress is now open to all members, non-members or accompanying persons. For futher information about the congress, you can contact ET nurse in your hospital or by mailing to Kowloon P.O. Box 72186.

Seminars

The Challenge of Enterostomal Therapists: Continence Care

Date: 16th April, 1998
Time: 9:00 am - 5:00 pm
Speakers: Ms. Paula Erwin-Toth
Director, ET Nursing Education
The Cleveland Clinic Foundation, USA
Dr. Chan Cheung Wah
SMO, Queen Mary Hospital
Dr. Kwok Tin Fook
Vice-Chairman,Hong Kong Continence Society
Dr. Maisie Wong
Physiotherapist, Kwong Wah Hospital
Venue: Regal HK Hotel, Causeway Bay
B/1 Regal Ballroom
Enquiries: Miss Rosalie Lee
Tel: 2516 9182

Wound Care Seminar For Nurses

Date: 17th April, 1998
Time: 8:30 am - 12:20 pm
Speakers: Ms. Paula Erwin-Toth
Director, ET Nursing Education
The Cleveland Clinic Foundation,USA
Dr. Lam Lai Kun
Consulant Surgeon
Queen Mary Hospital
Venue: Underground Lecture Theatre II
New Clinical Building, Queen Mary Hospital
Coordinator: Ms. Lee Wai Kuen
Tel: 2855 4987