Management of lower limb lymphovenous oedema in a patient with paraspinal arteriovenous malformation (AVM)

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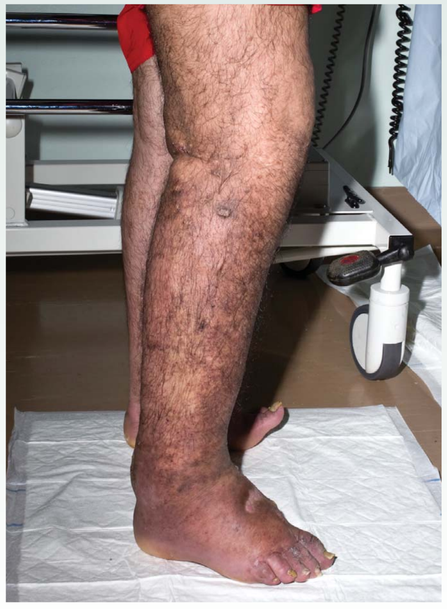
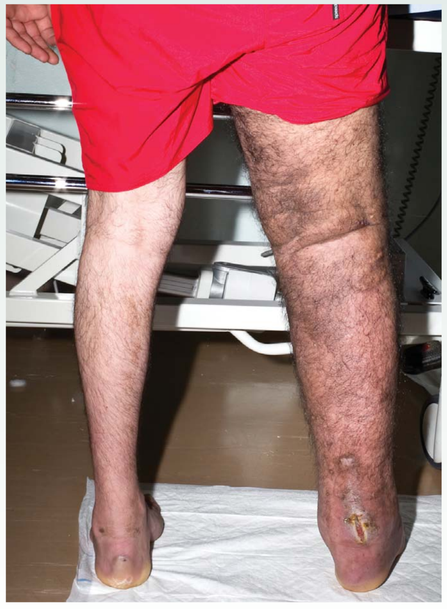


Picture 1



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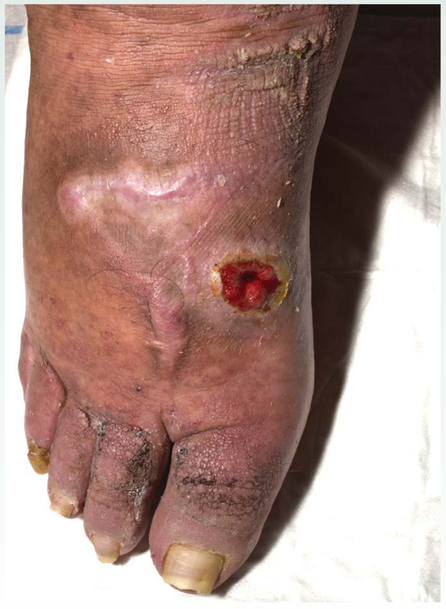
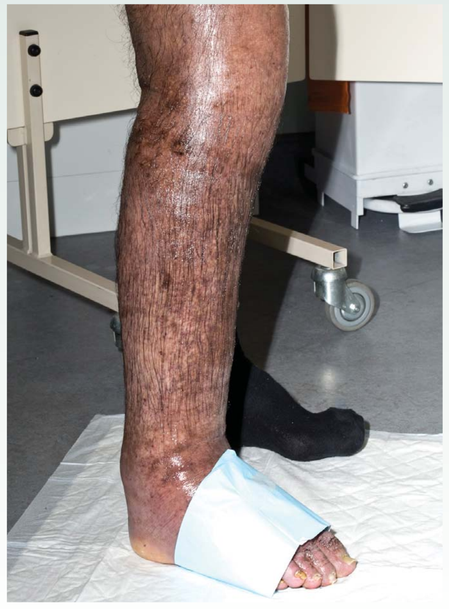
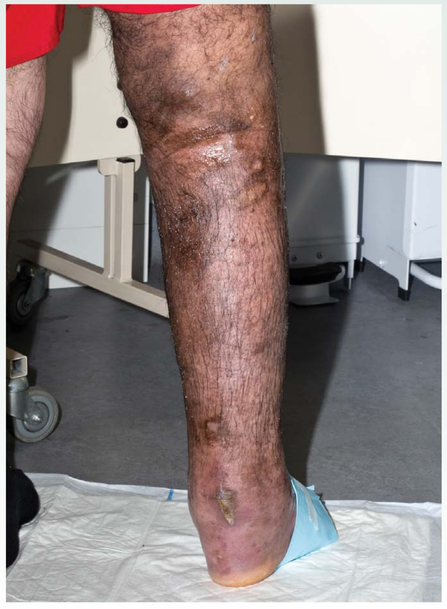


Picture 3



Picture 4



Picture 5

Abstract

Arteriovenous Malformation (AVM) is an abnormal connection that can affect each part of the vasculature (capillaries, arteries, veins or a combination of these) which usually are congenital. This vascular anomaly is widely known because of its occurrence in the central nervous system. Typically, patients with this condition seek help from a number of physicians only to experience disappointing outcomes, complications, and recurrence or deterioration of their presenting symptoms *(Yakes, Rossi & Odink, 1996)*. Vascular malformations constitute some of the most difficult diagnostic and therapeutic enigmas that can be encountered in medicine. These challenges are compounded by the extreme rarity of these vascular lesions and the vascular intervention required in treatment *(Yakes, 1999)*.

Introduction

The management of AVM patients in terms of complexities such as lower limb lymph and/or venous oedema that originate from birth, or develop later as a result of, or independent of an intervention, remain challenging to both the vascular team, specialist nurse, patient and the health service. Although lymphovenous oedema may be greatly improved by appropriate management, many patients still remain unaware that treatment is available or do not know where to access services *(Lymphoedema Framework, 2006)*.

The purpose of this poster is to present the continued journey of a 23 year old male with lower leg lymphovenous oedema as a consequence of paraspinal AVM.
The management of his care was led from a hospital outpatient leg ulcer clinic.
The patient was jointly cared for by Tissue Viability Nurses, Vascular Consultants and Specialist Interventional Radiologists. Referral to specialist services for assessment for Manual Lymphatic Drainage (MLD) was made. However, there were no local providers available on the NHS and the waiting list for the nearest specialist hospital was considerable.

Method

Although the aetiology of this particular lymphovenous oedema differs to that which constitutes primary lymphoedema, the clinical features which are evident in Pictures 1, 2 and 3 are similar to that of typical lymphoedema. These include:

- pitting oedema in the initial stages progressing to non-pitting induration as the condition progresses.
- skin changes, including hyperkeratosis, papillomatosis and fibrosis
- skin folds
- distorted and/or misshapen limb
- recurrent cellulitis

In order to safely and effectively treat the patient a referral was made to the local Vascular Services to first establish a baseline of the complexity of the AVM and indeed if compression bandaging was safe, given the location. A standard Doppler, venous - arterial duplex and Lymph angiogram was also carried out. Working closely with the vascular team it was agreed to carefully treat and monitor the 23 year old male with continuous high compression bandaging, using a cohesive short stretch system* of varied sizes on the limb, from and including the toes to thigh level. Appropriate skin and wound care was also provided at each treatment, together with advice and support regarding diet, exercise, elevation and general lifestyle and well-being.

Results

Almost immediate improvement of skin texture and integrity, ulcer healing, reduction in dimensions and the psychosocial recovery of the patient was seen *(Pictures 4 and 5)*. This patient is still undergoing treatment.

Discussion

The treatment of AVM patients with lymphovenous oedema is a complex process and, although they may present clinically as a standard lymphoedema, caution must be taken when treating each individual, as each AVM differs in location, size and previous vascular intervention. Therefore, careful monitoring is needed. Detailed and continuous follow up of these patients is required in order to provide safe and effective compression bandaging and must be led by a Vascular Specialist to establish first if compression is indicated, given the AVM location and possible risk.

Conclusion

Managing lymphovenous oedema of the AVM patient remains a complex continuous cycle. As specialist nurses we must continue to push through boundaries where services are not available for this clientele and work with our vascular teams to support individualised high quality care for our patients. There is no cure for lymphoedema, regardless of aetiology, and from the first instance patients must be involved in their programme of care - which ultimately involves maintenance and support of their long term condition.

References

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Yakes, W. F., Rossi, P. & Odink, H. (1996). Arteriovenous Malformation Management. Cardio Vascular and Interventional Radiology, 19, 65-71.

* Actico® Cohesive Inelastic Bandage by Activa Healthcare Ltd.

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