

SELECTED ABSTRACTS FROM THE BLS ANNUAL CONFERENCE 2009

The British Lymphology Society Research Advisory Board (BLS RAB) is pleased that the *Journal of Lymphoedema* has agreed to publish the following selected abstracts from last year's conference in Sheffield. We would like to encourage members and other healthcare professionals to submit abstracts for this year's conference to be held in Manchester. *Jacquelyne Todd, Chair of the BLS Research Advisory Board*

The use of liposuction in the management of lymphoedema

A Munnoch

Following an initial visit to Malmo, a surgical service for lymphoedema has been developed in Dundee, Scotland. At present this only offers liposuction, but other techniques may be performed in the future.

Methods

The clinical indications, liposuction technique and postoperative care protocols used in the clinic have previously been described by Dr Brorson (Brorson and Svensson, 1997; Brorson et al, 2006; 2008).

Results

In the first four years, 43 patients have been assessed, with 20 patients undergoing liposuction for chronic lymphoedema. Twelve of the patients had arm lymphoedema (11 secondary to breast cancer treatment; one following thyroidectomy), with the duration of swelling ranging from 1–11 years. A further eight patients had leg lymphoedema (seven primary; one secondary to hysterectomy), with a duration of swelling ranging from 6–20 years.

The mean difference in preoperative arm volume was 1391mls (a range of 637–2428mls), with a mean of 1712mls (925–2600mls) of fat being removed. The mean difference in preoperative leg volume was 4766mls (2699–9366mls), with a mean of 4612mls (2700–9250mls) of fat being removed. Legs are far more difficult to operate on due to increased fibrosis.

The upper limb post-liposuction percentage reductions were 84% at two weeks (n=12); 86% at one month (n=12); 92% at six months (n=12), 103% at one year (n=11); and 125% at four years (n=2). The lower limb percentage reductions were 38% at two weeks (n=8); 58% at one month (n=8); 63% at three months (n=8); 71% at six months (n=7); and 93% at one year (n=2).

All of the patients have been delighted with the treatment results, although four were not entirely compliant. There was no skin loss, although one patient did experience a foot drop, which has slowly recovered. Hospital Anxiety and Depression scores have reduced from 14.7 pre-operatively to 7.32. Visual analogue well-being scores have increased from 65.12 to 82.46.

Conclusions

These results are comparable to the Swedish group and demonstrate that liposuction is an effective treatment in chronic lymphoedema using the protocol developed by Dr Brorson. The service will continue to offer this treatment and further develop an integrated lymphoedema service in Scotland.

References

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A study to assess the quality of online lymphoedema information

ZA Sheikh, DA Munnoch

The advent of the internet has increased public access to health information through online resources such as websites and discussion groups. However, the growth of the internet and its use as a medical delivery tool should be viewed with caution. One of the key concerns is that although the volume of information available online is huge, its quality and accuracy can be questionable.

The aim of this study was to investigate the quality of lymphoedema information available on the internet. The questions explored the extent and type of lymphoedema information available, the coverage and accuracy of that information, and whether individual sites fulfilled the European Commission quality criteria for health-related websites. This measures a core set of quality criteria specifically designed for health-related websites and falling into six categories: transparency and honesty, authority, privacy and data protection, updating of information, and accountability and accessibility.

Methods

Google.com was used to find websites containing medical information on lymphoedema. Thirty-seven relevant websites were evaluated and 28 of these were judged suitable for lymphoedema patients.

Results

The coverage and accuracy of medical information varied considerably. Only three of the websites fulfilled all of the European Commission quality criteria,

satisfying all six categories. One of the sites is hosted by a charity support group, the other by a government body and the last by an independent non-profit, non-governmental organisation. All three sites used language deemed suitable for consumer-orientated health information.

Conclusions

Patients need to be better informed about the difficulty in obtaining accurate, valid information on the internet. By directing patients to validated websites, clinicians can ease this problem. However, considerable effort will be required before the internet can serve as a valuable and up-to-date source of information on lymphoedema for both healthcare professionals and laypersons.

The short time effect of radiation therapy on newly-formed lymph vessels

P Lievens, F Pastouret

Aim

This study attempted to increase understanding of the influence of radiotherapy on the regeneration of lymphatic vessels.

Method and results

Three groups of mice were selected: one normal group; one group where individuals' main abdominal lymph vessel was cut; and one group where the lymph vessel was cut and then irradiated. Each group contained 20 mice.

At intervals (4–9 weeks) the lymph flow (from the inguinal to the axillar lymph node) was evaluated using two complementary techniques. The first was to perform a lymphoscintigraphy on the mice in order to compare the lymphatic flow among the three groups. The authors noted that even in the third group, where there was an incision together with an irradiation of the lymph vessels, the flow between the inguinal and axillary lymph appeared to be completely restored.

The second technique used was dissection, which allowed the authors to observe how the lymphatic flow became restored. The transillumination technique made it possible to see that

many complementary lymph vessels, which were mainly newly-formed, restored the lymph flow but not in the original pattern.

The authors also observed collateral and lympho-lymphatic anastomosis.

Conclusion

After irradiation, the authors did not observe any inhibition in the ability of the lymphatics to regenerate. There was an increase in the lymphatic flow, perhaps due to the ongoing lymphangiogenesis. The authors also observed the appearance of supplementary lymph vessels, which are of great importance to physical therapy.

This was a short-term study, however the authors will continue to observe the effects of radiotherapy, especially on the skin, over time.

The prevalence of lymphoedema in primary care

JL Blackburn, JR Blackburn, SK Blackburn

Aim

To estimate the prevalence of lymphoedema in primary care.

Method

This study utilised a cross-sectional survey of primary care computerised medical records, which were searched for conditions known to be associated with lymphoedema or the management of lymphoedema. The study population was drawn from 17,660 patients registered with the health centre for NHS Personal Medical Services in South Bristol. The main outcome measure was the number of cases of lymphoedema, expressed as prevalences.

Ethical approval

The Bristol Primary Care Trust Audit Department advised that ethical approval for this study was not required since it was only a review of existing records of patients registered at the health centre. No patients were contacted during the survey and no new information was elicited from any source other than the existing medical records. No patient identifiable data was removed from the health centre.

Results

Of the participants, 169 were found to have definitive descriptions of lymphoedema ($169/17,660 = 0.96\%$ prevalence). Another 46 had unilateral or bilateral oedema with features that could be consistent with a diagnosis of lymphoedema. This represents a maximum prevalence of $215/17,660$ (1.22%).

Only 21 patients ($21/169 = 12.4\%$) were recorded as receiving treatment from a lymphoedema specialist nurse.

Cancer and its treatment was responsible for around one-fifth of cases ($39/169 = 23.1\%$). Other common causes included deep venous thrombosis, orthopaedic surgery, varicose vein surgery and recurrent cellulitis.

Discussion

This is the first study of the prevalence of lymphoedema in primary care. Previous studies in the UK have been based predominately on patients attending specialist services and have an estimated prevalence of 0.13%.

Raising GPs' awareness of the features of lymphoedema can increase the recognised prevalence as doctors become better at identifying less severe examples.

Conclusions

Previous estimates of the prevalence of lymphoedema have significantly underestimated the frequency of this diagnosis in the UK. Most patients with definite lymphoedema were receiving sub-optimal treatment or no treatment at all.

Patients who may have lymphoedema should be reviewed to confirm the diagnosis with a view to arranging appropriate therapy.

Lymphoedema specialist services are often targeted at patients who have been treated for cancer; however, the majority of patients in this study developed lymphoedema following venous thrombosis, injuries, or surgical procedures. JL