

Venous leg ulcers in the UK: the local burden of illness and the allocation of resources

KEY WORDS

- ▶ Commissioning
- ▶ Compression
- ▶ Cost
- ▶ Prevalence
- ▶ Venous leg ulcer

The precise UK prevalence of venous leg ulcers (VLU) is currently unclear. Prevalence data is essential in order to calculate the costs and, to measure the impact of any therapeutic intervention. A review of the literature was undertaken to assess the prevalence and costs of VLU in order to collate available data for baseline, or comparative purposes. Thereafter, information on compression bandaging products obtained from the QuintilesIMS database, prescribed for one large city was collected and calculations made to estimate known prevalence in that geographic locality. Results from the literature search showed the prevalence to vary from 0.1% to 1.1% in the studies identified. The prevalence of leg ulcers (LUs) in compression in the city reviewed was calculated to be 0.1% in 2015. There is a lack of reliable information on the prevalence and cost of LUs. The estimated prevalence reported is in keeping with those calculated by SIGN (2010) but less than those reported by Guest et al (2016). The annual cost of treating patients with LUs in the UK has recently been reported to be £1,938 million (Guest et al, 2016). Traditionally, regional clinical commissioning groups (CCGs) and local health authorities have not requested prevalence and outcome data on LUs and, therefore, there is a gap in understanding the extent of the problem. Consequently, the budgeting of services by CCGs is based more on estimates than on prevalence data. Without more accurate prevalence data it is impossible to truly understand the scale of the problem and develop a plan on how best to move forward with improving LU care.

It is generally accepted that LUs (of venous, arterial and mixed aetiologies) have a significant impact on costs to the NHS, to society and to patients themselves. Prevalence data is essential in order to calculate those costs and repeated prevalence calculations can assist in calculating the impact of any interventions. The care of a patient with a VLU has been described as 'palliative' in many cases (White et al, 2016), meaning that little or no clinical improvement is achieved due to inadequate compression application in many cases and mere 'management' of exudate. This assertion was based upon healing rates obtained from community care as reported by Guest et al (2012) as well as anecdotal reports from clinicians. This data showed healing rates to

be of the order of 6–9% in routine clinical practice whilst preliminary data from specialist clinics were considerably higher at approximately 70% (White et al, 2016). The obvious conclusion is that far too few patients are being unsuccessfully managed in routine community care (e.g. by district and practice nurses) instead of referral for more competent care, support and education from specialist nurses. The system of clinical commissioning groups (CCGs) allocating resources locally depends upon prevalence data to a large extent (NHS England, 2012). Given that prevalence of all diseases varies according to geographical location, and demographically indicates a requirement for local data when assessing local need. In the current climate

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Figure 1. VLUs are often shallow and irregular in shape with ill-defined edges

of improving the economics of healthcare and thus saving money in the NHS, all LUs must become higher priority. This is reflected in the work being undertaken by NHS England to improve LU care and ensure coordinated pathways across the country (NHS RightCare, 2017).

METHOD

A review of the literature was undertaken on the prevalence of VLUs in order to serve as a comparison to local data. Using the Medical Subject Headings (MeSH) terms “leg ulcer” and “prevalence” and the databases OVID, CINAHL, PubMed, Medline, Cochrane, Google Science, a search was conducted. It was not intended that this be exhaustive, merely sufficient to gather a range of values for the UK. All hits were manually scanned to select those specific to the UK. Prevalence data reported within the last ten years (2007–2016 inclusive) were included.

In the second part of the audit, information on compression bandaging products prescribed for one large South West UK city (Plymouth, Devon; population 258,400 in 2015) was collected. This was based upon those postcodes for the area of greater Plymouth, i.e. PL1-PL10. The data obtained was considered and calculations made to estimate prevalence in that locality. For this exercise several assumptions were made:

- ▶▶ All compression systems were prescribed on FP10 to patients who were accurately diagnosed with venous ulceration
- ▶▶ Patients correctly diagnosed but not prescribed a compression product were not included as unidentified
- ▶▶ Patients incorrectly diagnosed and prescribed compression were not identified
- ▶▶ Patients who received compression without a prescription were also not identified
- ▶▶ Patients prescribed a ‘light’ compression for arterial ulceration were not identified.

RESULTS

In 2010, the Healthcare Improvement Scotland commissioned a new guideline on LUs to address the estimated prevalence of 0.1 to 0.3% in the UK and standardise care across the community and specialist clinics (SIGN, 2010). This prevalence information was taken from a few studies with the earliest data from 1981–1982 in Lothian and Forth Valley (prevalence 0.15%) (Callam et al, 1985) and the most recent being data from a Swedish study carried out in 1988 (prevalence 0.16%) (Nelzén et al, 1994). The Scottish Intercollegiate Guidelines Network (SIGN, 2010) do not discuss how applicable the Swedish data might be to the UK nor how the Scottish population compares to that in England, Wales or Northern Ireland.

An audit of wound prevalence in the community for a borough of London was undertaken in 2012 and found a prevalence of 0.32 per 1000 residents for ulcers on the lower leg (Hopkins and Worboys, 2014); a prevalence of 0.03%. Of these, 13% had bilateral LUs. The audit looked at prevalence across all nursing services within that location using a tried and tested tool for data collection over a period of one week. Self-caring patients were also included. Where patients had more than one wound, details were taken for the worst or most significant ulcer.

More recently, Guest et al (2016) analysed data from 1000 patients on The Health Improvement Network (THIN) database and found the following figures for annual number of wounds in 2012/2013;

- ▶▶ Arterial LU — 8,888
- ▶▶ Mixed LU — 24,442
- ▶▶ Unspecified LU — 419,956
- ▶▶ Venous LU — 277,749.

The total number of LUs was 731,000 — a prevalence of 1.1% in a UK population of 63.7 million.

Although a very basic report that doesn't detail its methodology, Heffer (2016) reported a prevalence of 0.23% in an area of Wiltshire with 21,300 patients; this information led to the introduction of a weekly leg club (Heffer, 2016). This recognition of the need for, and value of, a Leg Club indicates how those involved in Primary Care can, resources permitting, address the clinical problem of venous LUs. Unfortunately, without more detail the audit cannot be replicated by others in different geographical locations.

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The annual cost of treating patients with LUs in the UK was estimated to be at least £168–198 million based on a prevalence of 1.2–3.2 per 1,000 people (Posnett and Franks, 2008). However, this is a lower figure than that reported by Guest et al (2016), which was £1,938 million based on a population at least 12 years later and a higher prevalence. Guest et al (2016) also calculated that mean cost was around 2.5 times more for an unhealed wound than for a healed wound in the period reviewed. With twelve-month recurrence rates reported to vary between 26–69% (Nelson et al, 2000) ongoing costs will remain high without interventions to maintain ‘well legs’ for those who heal.

Other European countries have similar issues calculating the incidence of LUs with the overall estimated incident rate of venous LUs of all insured persons in Germany to be 0.34% from 2010 to 2012 (Heyer et al, 2017). The mean cost-of-illness of venous LUs in 23 specialised wound centres in Germany in 2007 was calculated to be €9569 per year per patient (Purwins et al, 2010).

Using a population of 258,400 and information on compression bandaging prescribed in one large South West city, the prevalence of LUs in compression was calculated to be 0.1% in 2015.

DISCUSSION

Historically, there has been a lack of reliable information on the prevalence and cost of wounds with this aetiology. Prevalence data can vary depending from where the figures were sourced and for different geographical regions. The recent data published by Guest et al (2016) is testimony to this major shortcoming and provides a national measure against which local prevalence calculations can be compared. The prevalence estimated for the South West city is in keeping with those calculated by SIGN. However, this is a crude calculation considering only patients receiving compression bandaging and excluding those in hosiery or not receiving any form of compression and those with bilateral ulcers. Therefore, it remains an underestimation.

The data referred to by SIGN (2010) is at least nineteen years old. Many practises have changed since that period and pressures on nurses have increased with many taking on a

more extensive role. The increase in prevalence could be a reflection on the change of focus and responsibilities for practice and district nurses.

Although Hopkins and Worboys (2014) report findings from a relatively deprived inner city area, their findings are in keeping with, or are indeed better than others reported here. If local teams and commissioning groups want to improve outcomes for LUs in their area, the care packages and systems provided in the area reviewed by Hopkins and Worboys (2014) could be considered for introduction and assessed for their regional impact.

Guest et al (2016) appear to provide the most accurate national prevalence data and with a figure of 1.1% their results should make these patients a focus for community nurses and wound specialists throughout the country, and for resource allocation. Awareness of the severity and need for appropriate care needs to be improved. With appropriate intervention LUs can be healed in a timely manner with reduced complications and overall cost (Day, 2015). Indeed, since this publication, a new best practice statement on the management of venous leg ulceration has been launched to address some of the issues surrounding the high prevalence published by Guest et al (2016) (Wounds UK, 2016). LUs are reportedly relatively straightforward to manage. However, the high prevalence suggests that they are an ongoing issue for many and must be a significant cost burden to the NHS and to society due to issues including reduced mobility, inability to work, poor quality of life and the cost of the care itself. The incidence of LUs increases with age, therefore prevalence might be expected to increase with our aging population (Franks et al, 2016; White et al, 2016) and the issue needs addressing sooner than later.

Heffer (2016) does not explain how the prevalence data in their article was calculated. Issues with high recurrence rates and non-compliance are reported as key problems in this particular area. The results fall in between the other prevalence reports and more details could be useful to other teams.

Costs are difficult to calculate accurately. The data presented by Posnett and Franks (2008) are now old and were an estimation. Guest et al (2016) have used more recent information, derived from

'real world', i.e. NHS sources to calculate costs and found them to be significantly higher.

That other western countries have similar issues with venous LU care might seem almost reassuring. However, there should be concern that such a relatively straightforward to treat condition that can be significantly detrimental to quality of life and have such large costs is not being addressed either locally, or nationally. In fact, the evidence suggests the problem is increasing and while this could be due to increasing comorbidities and increasing average age, the lack of basic care provided to patients with LUs as highlighted by Guest et al (2016) cannot be overlooked.

Traditionally, regional commissioning groups and health authorities have not asked for prevalence and outcome data on LUs and, therefore, there is a gap in understanding the extent of the problem. If patient care and services are to be improved, this information needs to be collected to ensure care can be targeted where it is most needed and can be evaluated at a later date. Such information would arm teams with direction, especially when negotiating with managers and commissioners. The NHS has issued its own guidelines targeted at CCG Clinical Leaders, CCG Accountable Officers, CSU Managing Directors, Care Trust CEs amongst others, and is designed to offer "guidance to support commissioners and providers to effectively manage demand for NHS services" (NHS England, 2016).

CONCLUSION

It is reasonable to expect that, in a sophisticated healthcare system such as the NHS, resources would be allocated on the basis of local needs, and outcomes provide the best indicator of quality of care. Yet this is not happening for many patients groups, in particular those with venous LUs. Without more accurate prevalence data, particularly on a regional level, it is impossible to truly understand the scale of the problem and develop a plan on how best to move forward and improve LU care. Knowledge of the current prevalence of LUs would guide clinicians and commissioners in assessing whether implemented care is effective and has an economic benefit. Local knowledge could allow care systems to be targeted to localities where they are most needed.

As healthcare professionals with an interest in wound healing, the issue of whether to wait to be instructed on the need to collect this data or whether to look for the information ourselves in order to work towards providing the best care for our patients needs to be considered. **WUK**

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