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Cite this as: *BMJ* 2024;384:e-078321 http://dxdoi.org/10.1136/bmj-2023-078321 Published: 12 January 2024

Silent crisis of venous care in UK

Better access to cost effective treatments would improve many lives

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High quality evidence clearly supports the treatment of common venous diseases. Treatment of symptomatic varicose veins improves quality of life and is highly cost effective, 1-4 while early treatment of venous leg ulcers speeds healing, reduces recurrence, and potentially reduces costs. 5-8 Despite this strong evidence, and National Institute for Health and Care Excellence (NICE) guidance recommending referral of people with symptomatic primary or recurrent varicose veins, 2 access to treatment for symptomatic varicose veins is restricted in much of the UK, and people who develop leg ulcers experience delay in getting the treatment they need for underlying venous disease. 9 10

Preventing and treating leg ulceration is perhaps the most pressing issue. The importance of early referral and specialist treatment was highlighted in the 2019 report of the All Party Parliamentary Committee on Vascular and Venous Disease, Venous Leg Ulcers: a Silent Crisis. 10 Community treatment of venous leg ulcers costs the NHS £1bn-£2bn annually, much of which could be saved by correcting the causative venous hypertension in underlying varicose veins.8 Recognising venous skin damage—eczema, lipodermatosclerosis, pigmentation—and treating the veins before ulcers develop is recognised as particularly important, 11 and guidance from the venous forum of the Royal Society of Medicine recommends that anyone who develops a leg ulcer should be seen by a vascular specialist within two weeks.12

Unfortunately, no meaningful progress has been made on meeting the parliamentary committee's 2019 recommendations, or those in its 2023 report, *Future of Venous Disease: Growing Problems, Shrinking Workforce.* ¹³ The recommendations include developing an appropriate vascular workforce plan, with more vascular trainees; delivering education programmes in primary and community care; and ensuring that local NHS providers prioritise staff and resources to diagnose and treat venous disease.

Similar problems exist for symptomatic varicose veins. An estimated 40 000 people a year in England were unable to access NICE recommended treatment for symptomatic varicose veins during 2017-19, with an estimated net cost to the health economy of £164-174m. Access to treatment varied widely across England. Restrictions and delays in treatment have been worsened by the covid-19 pandemic.

Once referred to a vascular service, patients have clinical assessment and imaging of their veins by duplex ultrasonography. Treatment is almost always "minimally invasive," sealing off incompetent truncal veins using thermal energy (radiofrequency, laser); foam sclerotherapy; or bioadhesive glue. All are

possible under local anaesthetic, as is concomitant removal of varicose veins (phlebectomies). These treatments are all supported by high quality randomised controlled trials.²⁻⁵ ¹⁴ ¹⁵

Improving access

In a health service beset by financial difficulties and delays, providing clinically and cost effective treatments should be a priority. This is especially true for venous ulcer disease, for which treatment is highly cost effective over one year and cost saving beyond this. ¹⁶ ¹⁷ Uncomplicated but symptomatic varicose veins are more of a dilemma, because they are so common: difficulty balancing cost effectiveness against the affordability of treating large numbers of people is the key reason for current restrictions in referral and treatment. ⁹ ¹⁸ Vascular services are commonly overstretched, with life and limb threatening arterial disease taking priority over venous disease.

One possibility is to train more specialist nurses to treat superficial symptomatic varicose veins, and a recent report from the Society for Vascular Nurses¹⁹ details the training and governance required. Controversy continues about the benefits and risks of this option, however, especially in accountability for adverse events, and the potential adverse effect on vascular surgical training. Published evidence about the outcomes of vein treatment by non-medical practitioners is currently lacking.

Alternatively, greater capacity for managing the whole spectrum of venous disease, including an increased focus on deep veins (such as stenting of iliac veins, ²⁰⁻²² and endovenous thrombectomy or thrombolysis for deep vein thrombosis²³⁻²⁴) could be achieved by appointing more vascular specialists, encouraging more to develop a "special interest" in venous disease, and requiring all vascular surgeons to devote part of their job plans to venous disease. Finally, a new discipline devoted to venous disease ("phlebology") could also be considered, as in many other countries such as Germany and France.

The burden of venous disease and the challenges in tackling it are considerable. Over one third of adults have varicose veins; treatment of venous ulcers currently costs the NHS at least £1bn annually; and many people with occlusive disease in their deep veins do not have access to treatment. All these conditions reduce patients' quality of life and could be avoided or successfully treated by improvements in the delivery of venous services.

Policy makers, healthcare commissioners, and clinical leaders should urgently review and implement the recommendations in both all party parliamentary reports. Increased awareness in

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community settings about when to refer and improved service design in secondary care are needed, supported by the required funding, to tackle the serious, longstanding, and well documented deficiencies in the care of people with venous disease and widespread variations in their access to treatment.

Competing interests: *The BMJ* has judged that there are no disqualifying financial ties to commercial companies. The authors declare the following other interests: DC has received unconditional financial support for educational and research initiatives, from Medtronic. Further details of The BMJ policy on financial interests are here: https://www.bmj.com/sites/default/files/attachments/resources/2016/03/16-current-bmj-education-coi-form.pdf.

Provenance and peer review: Not commissioned; externally peer reviewed.

- Michaels JA, Campbell WB, Brazier JE, etal. Randomised clinical trial, observational study and assessment of cost-effectiveness of the treatment of varicose veins (REACTIV trial). Health Technol Assess 2006;10:-196, iii-iv. doi: 10.3310/hta10130 pmid: 16707070
- National Institute of Health and Care Excellence. Varicose veins in the legs: the diagnosis and management of varicose veins. NICE Clinical Guideline 168. 2013. guidance.nice.org.uk/cg168
- Tassie E, Scotland G, Brittenden J, etalCLASS study team. Cost-effectiveness of ultrasound-guided foam sclerotherapy, endovenous laser ablation or surgery as treatment for primary varicose veins from the randomized CLASS trial. *Br J Surg* 2014;101:-40. doi: 10.1002/bjs.9595. pmid: 25274220
- 4 Brittenden J, Cooper D, Dimitrova M, etal. Five-year outcomes of a randomised trial of treatments for varicose yeins. N Engl J Med 2019:381:-22. doi: 10.1056/NEIMoa1805186 pmid: 31483962
- 5 Cai PL, Hitchman LH, Mohamed AH, Smith GE, Chetter I, Carradice D. Endovenous ablation for venous leg ulcers. *Cochrane Database Syst Rev* 2023;7:CD009494. doi: 10.1002/14651858.CD009494.pub3. pmid: 37497816
- 6 Gohel MS, Barwell JR, Taylor M, etal. Long term results of compression therapy alone versus compression plus surgery in chronic venous ulceration (ESCHAR): randomised controlled trial. BMJ 2007;335.: doi: 10.1136/bmj.39216.542442.BE pmid: 17545185
- Gohel MS, Heatley F, Liu X, etalEVRA Trial Investigators. A randomized trial of early endovenous ablation in venous ulceration. N Engl J Med 2018;378:-14. doi: 10.1056/NEIMoa1801214 pmid: 29688123
- Phillips CJ, Humphreys I, Thayer D, etal. Cost of managing patients with venous leg ulcers. Int Wound J 2020;17:-82. doi: 10.1111/iwj.13366 pmid: 32383324
- 9 Hitchman LH, Mohamed A, Smith GE, etal. Provision of NICE-recommended varicose vein treatment in the NHS. Br J Surg 2023;110:-32. doi: 10.1093/bjs/znac392 pmid: 36448204
- All-Party Parliamentary Group on Vascular and Venous Disease. Venous leg ulcers: a silent crisis. 2019. https://static1.squarespace.com/static/5981cfcfe4fcb50783c82c8b/t/5da742db4b4d0146eb8b8b9e/1571242723193/Venous+leg+ulceration+2019+web.pdf
- 11 BMJ Best Practice. Varicose veins. 2023. https://bestpractice.bmj.com/topics/en-gb/630
- 12 Royal Society of Medicine. Management of patients with leg ulcers. 2018. https://www.rsm.ac.uk/media/5472579/management-of-patients-with-leg-ulcers.pdf
- All-Party Parliamentary Group on Vascular and Venous Disease. Future of venous disease: growing problems, shrinking workforce.2023.https://static1.squarespace.com/static/5981cfcfe4fcb50783c82c8b/t/649a991e88bc70512e9fec02/1687853343699/Future+of+Venous+Disease.pdf
- 14 Lane TR, Kelleher D, Shepherd AC, Franklin IJ, Davies AH. Ambulatory varicosity avulsion later or synchronized (AVULS): a randomized clinical trial. *Ann Surg* 2015;261:-61. doi: 10.1097/SLA.000000000000099 pmid: 24950277
- Guo J, Zhang F, Guo J, Guo L, Gu Y, Huang Y. A systematic review and meta-analysis comparing the efficacy of cyanoacrylate ablation over endovenous thermal ablation for treating incompetent saphenous veins. *Phlebology* 2021;36:-608. doi:10.1177/02683555211008762. pmid: 33870789
- 16 Epstein DM, Gohel MS, Heatley F, etalEVRA trial investigators. Cost-effectiveness analysis of a randomized clinical trial of early versus deferred endovenous ablation of superficial venous reflux in patients with venous ulceration. Br J Surg 2019;106:-62. doi: 10.1002/bjs.11082. pmid: 30741425
- 17 Zheng H, Magee GA, Tan TW, Armstrong DG, Padula WV. Cost-effectiveness of compression therapy with early endovenous ablation in venous ulceration for a medicare population. JAMA Netw Open 2022;5:e2248152. doi: 10.1001/jamanetworkopen.2022.48152. pmid: 36542379
- Evans CJ, Fowkes FG, Ruckley CV, Lee AJ. Prevalence of varicose veins and chronic venous insufficiency in men and women in the general population: Edinburgh Vein Study. J Epidemiol Community Health 1999;53:-53. doi: 10.1136/jech.53.3.149 pmid: 10396491
- 19 Society of Vascular Nurses. A guide for establishing a nurse-delivered venous intervention service. 2023.https://assets.radcliffecardiology.com/s3fs-public/webinar/2023-04/SVN%20Guide%20WEB%20Singles.pdf
- Rossi FH, Kambara AM, Izukawa NM, etal. Randomized double-blinded study comparing medical treatment versus iliac vein stenting in chronic venous disease. J Vasc Surg Venous Lymphat Disord 2018;6:-91. doi: 10.1016/j.jvsv.2017.11.003 pmid: 29292114
- Williams ZF, Dillavou ED. A systematic review of venous stents for iliac and venacaval occlusive disease. J Vasc Surg Venous Lymphat Disord 2020;8:-53. doi: 10.1016/j.jvsv.2019.08.015 pmid: 31699668

- Black SA, Alvi A, Baker SJ, etal. Management of acute and chronic iliofemoral venous outflow obstruction: a multidisciplinary team consensus. *Int Angiol* 2020;39:-16. doi: 10.23736/S0392-9590.19.04278-0 pmid: 31814378
- Watson L, Broderick C, Armon MP. Thrombolysis for acute deep vein thrombosis. Cochrane Database Syst Rev 2016;11:CD002783. doi: 10.1002/14651858.CD002783.pub4. pmid: 27830895
- 24 Lichtenberg MKW, Stahlhoff S, Młyńczak K, etal. Endovascular mechanical thrombectomy versus thrombolysis in patients with iliofemoral deep vein thrombosis—a systematic review and meta-analysis. Vasa 2021;50:-67. doi: 10.1024/0301-1526/a000875 pmid: 32449481