Prior studies on other inflammatory diseases such as rheumatoid arthritis and systemic lupus erythematosus have shown that the disease influences rates of preterm birth and pregnancy loss.[2] No statistically significant differences were detected when comparing our study cohort with the general population of women in the US in terms of the rates of miscarriage,[3] C-section,[4] premature baby,[4] stillbirth[5] and perinatal mortality.[5] In addition, baseline HS disease severity was not significantly associated with poorer pregnancy or neonatal outcomes. Thus, our findings on pregnancy outcomes can help providers counsel and reassure concerned pregnant patients with HS regarding pregnancy outcomes. In contrast, compared with rates of gestational diabetes mellitus,[6] gestational hypertension[7] and pre-eclampsia[8] in the US general population, our study cohort had a higher than average rate for each condition, with statistical significance detected for gestational hypertension ($P = 0{\cdot}022$) and pre-eclampsia ($P = 0{\cdot}017$). Therefore, screening for these conditions among pregnant patients with HS is essential.

Study limitations include: that it took place at a single academic centre, was retrospective and contained missing data. Lack of systematic follow-up of neonatal charts could have resulted in underestimation of the perinatal mortality rate. Only univariate analysis was conducted; thus, potential confounders have not been controlled for.

In summary, our study suggests that HS does not portend an increased risk of poor pregnancy or neonatal outcomes. Large, prospective pregnancy registries are needed to collect data on maternal and neonatal outcomes in patients with HS.

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Longer duration of lower-limb symptoms makes cellulitis diagnosis less likely in secondary care

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Dear Editor, There is no evidence to support using an antibiotic for longer than 5 days in cellulitis.[1] The National Institute for Health and Care Excellence recommends specialist review if cellulitis has not improved after 14 days despite antibiotics.[2] The 2017 Cellulitis Priority Setting Partnership prioritized research into diagnosis and treatment of cellulitis.[3] Cellulitis diagnosis is based on history, examination and inflammatory markers. No validated diagnostic criteria or tools exist,[4] and up to 68% of people with suspected lower-limb cellulitis (LLC) may not have the condition,[5] leading to unnecessary hospital admission and antibiotic treatment.[6] Painful red legs may also be caused by chronic conditions such as venous eczema and lymphoedema, which are unresponsive to antibiotics.[5] This study investigated whether (i) a shorter duration of symptoms and (ii) a shorter duration of antibiotic treatment predicted whether referred patients had LLC. Diagnosis was defined clinically by experienced dermatologists.

This was a retrospective cohort study at a UK teaching hospital with an outpatient-based service for suspected LLC. Referral guidelines to the service included patients with severe and/or nonresponsive suspected LLC. In total 106 consecutive patients were assessed who were referred mostly from primary care, and also from other hospital departments, between 3 January 2018 and 11 March 2019. The proportion with a final diagnosis of LLC and other diagnoses was compared (χ^2-test)

in (i) those with symptoms lasting 2 weeks or less at presentation and (ii) those who had received antibiotics for less than 2 weeks at presentation.

Of the 106 referred patients; 36 (34%) had LLC, 31 (29%) had venous eczema, 26 (25%) had lymphoedema and 13 (12%) had another diagnosis. Of those with LLC, 16 of 36 (44%) had concurrent lymphoedema and 10 of 36 (28%) had concurrent venous eczema. In total 88 of 106 were eligible for analysis on the duration of their symptoms, and 77 of 106 (73%) on the duration of antibiotics. Patients were excluded if there was absence of data. Most of those excluded from analysis (13 of 18 for duration of symptoms and 27 of 29 for duration of antibiotics) did not have LLC. It is not thought that this affected the findings.

The proportion with symptoms for < 14 days was significantly greater in those with LLC than in those with other diagnoses (Figure 1), $\chi^2 = 45{\cdot}9$, $P < 0{\cdot}001$. The proportion who took antibiotics for < 14 days was not significantly greater in patients with LLC than in patients with other diagnoses (Figure 1), $\chi^2 = 0{\cdot}001$, $P = 0{\cdot}97$.

This analysis shows that patients with LLC were more likely to present acutely (within 14 days of symptom onset) compared with patients with differential diagnoses causing red legs. There is a recognized need to develop diagnostic criteria in LLC.[4] This study supports the duration of symptoms being incorporated into future LLC diagnostic algorithms. By contrast, the duration of antibiotics in people with red legs prior to being seen by a specialist did not prove a useful predictor of LLC.

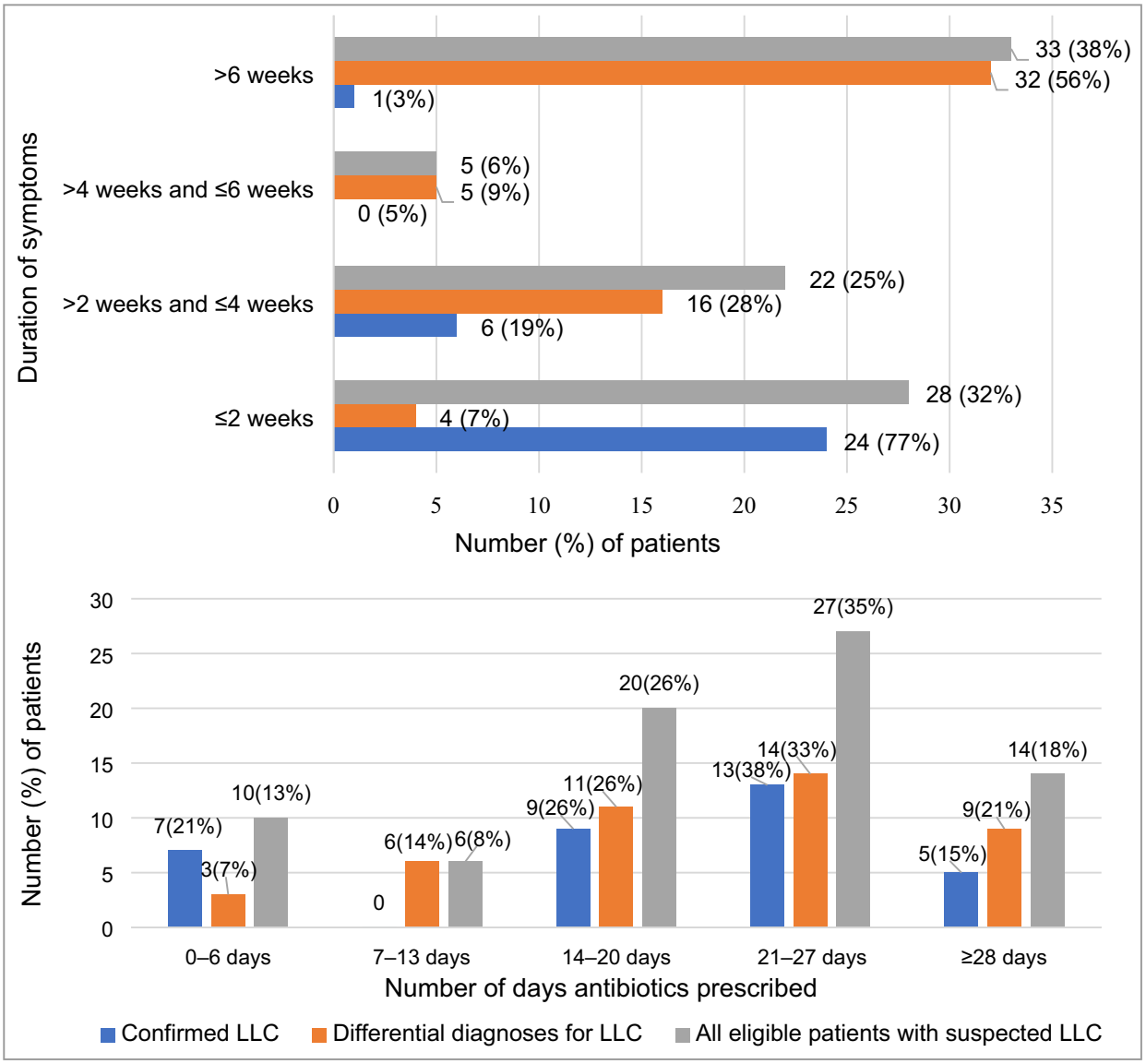

Figure 1 Durations of symptoms (top) and antibiotics (bottom) prior to assessment in patients with suspected lower-limb cellulitis (LLC) (grey), patients with other diagnoses (orange) and patients with a confirmed diagnosis of LLC (blue).

Late presentation was a marker that patients either did not have cellulitis or also had lymphoedema or eczema as a comorbidity to LLC. Patients with LLC may be categorized into two broad clinical groups: firstly, patients with straightforward LLC that responds to antibiotics, and secondly, a complex group of patients with comorbid lymphoedema and eczema in whom the diagnosis and treatment of LLC are more challenging. This latter group may benefit from early specialist input. It has been shown that a shared-care approach between primary and secondary care improved early and accurate diagnosis and the avoidance of prolonged antibiotics.[7]

The participants represented a population from a specialist service who were likely to have more complex disease. Therefore the results may have reflected the referral pattern to secondary care. The proportion of all patients in primary care being treated for cellulitis and eventually found not to have cellulitis remains unclear, so these findings are applicable to secondary care. It would be useful to validate this study in a prospective primary care cohort, where patients may present more acutely. However, this analysis is clinically useful because this subset presents a common diagnostic and management challenge. This analysis assumed a correct diagnosis from the service. Experienced dermatologists may have used the duration of symptoms to help reach a diagnosis of LLC or other diagnoses. If validated diagnostic criteria are developed for LLC these could be utilized in future studies.

In conclusion, patients with a shorter history of symptoms were more likely to have LLC rather than other diagnoses. The duration of symptoms may help predict a diagnosis of LLC. Patients with complex LLC with comorbid lymphoedema or eczema could be referred to specialist services earlier to reduce prolonged courses of antibiotics with no clinical improvement.

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Detection of genetic tumour predisposition syndromes using electronic health records

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Dear Editor, The restricted tumour repertoire of certain genetic skin tumour syndromes, such as CYLD cutaneous syndrome (CCS), is well recognized.[1] Patients with CCS develop multiple benign cylindromas and spiradenomas, a presentation of skin appendageal tumours recognized to be exclusively associated with loss of *CYLD* function.[2] Consequently, pathology coding records, which capture tumour-level data, can be interrogated to detect patients who may have undiagnosed CCS based on the presentation of multiple CCS-specific tumours over time. We explored the feasibility of this approach in a tertiary hospital serving a population of 3 million people, where a national genetic testing centre for CCS was also based.

We interrogated the hospital pathology coding system, using SNOMED codes and free-text searches to identify patients with cutaneous cylindromas and spiradenomas presenting over a 3-year period during which *CYLD* gene testing data was available (2012–2015). Trichoepithelioma, seen in some patients with CCS, was excluded, as the presentation of multiple trichoepitheliomas may be associated with other tumour syndromes such as naevoid basal cell carcinoma syndrome. During this period, 62 803 skin cases were identified, of which 951 were appendageal tumours. Ninety-three cylindromas, spiradenomas or tumours with histological features of both were detected from 52 patients. We excluded patients who presented with one tumour only (44 tumour specimens) as these were more likely to be sporadic cases. We included data for patients who had more than one tumour, or a combination of any of these lesions. This identified 14 patients with 49 tumour specimens. Electronic case note review was then performed to determine whether these patients had undergone *CYLD* testing according to the UK Gene Testing Network criteria,[3] or had been diagnosed on clinical grounds. The majority (12 of 14 patients) had undergone dermatogenetic review and gene testing and were confirmed to have CCS; however, two did not appear to have a clinical diagnosis of CCS.