
Prevalence of chronic urticaria and healthcare usage of patients with the condition in primary care: a population-based study in the Netherlands

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Dear Editor, The epidemiology and natural course of chronic urticaria (CU) have been extensively investigated in specialized care settings in patients with moderate-to-severe CU. Studies of CU in the general population have shown heterogeneous results as people are likely to experience recall or selection bias.^{1–4} Population-based primary care studies may provide more representative data. In the Netherlands, all inhabitants are registered with a general practitioner (GP). Thus, all patients with CU are initially managed by their GP,⁵ resulting in a complete reflection of the general CU population in Dutch primary care. We investigated the prevalence and follow-up duration of CU in the general population by

analysing healthcare usage data from the Julius General Practitioner Network database, covering data from 200 GPs (407 445 patients) in the central Netherlands, representative of the Dutch population with regard to demographics and geographical distribution.⁶

A retrospective cohort of all patients registered with urticaria (International Classification of Primary Care S89) between 1 January 2010 and 31 December 2019 was selected from the database. CU is defined as recurring wheals and/or angioedema of >6 weeks' duration.⁷ As a specific diagnostic code for CU in primary care is lacking, we defined criteria to limit the inclusion of patients with acute urticaria (AU). Only patients with ≥ 2 contacts for urticaria and/or angioedema were included. Patients were excluded if the first and last contacts were <4 weeks apart, and in the case of only two contacts >6 months apart, as both situations were considered very likely to be AU. The lower limit of 4 instead of 6 weeks was chosen to minimize the risk of excluding patients with CU, because in the experience of GPs, patients with persisting symptoms after the first visit may return before 6 weeks.

In total, 4347 patients [65.9% female; mean (SD) age 32.8 (21.4) years] met the predefined CU criteria, resulting in an annual point prevalence ranging from 0.48% in 2010 to 0.30% in 2018 (Table 1). Interestingly, the decline in point prevalence corresponds to the introduction of omalizumab as therapy for CU in specialized care, possibly explaining, in part, the decrease. Based on questionnaires and insurance claims, the prevalence of CU was previously estimated to be 0.08–3.4%,^{1,3} while the only other two studies to investigate primary care data reported comparable prevalence rates of 0.38% and 0.53%,^{2,4} indicating that roughly 1 in 200–300 patients in primary care have CU. Owing to the lack of a diagnostic code for CU in primary care, the prevalence rate found in these studies was also based on predefined CU criteria. Distinguishing (recurring) AU from CU is challenging, because too strict criteria may result in the exclusion of actual CU (e.g. patients immediately referred at first visit) and less strict criteria would falsely include AU.

The median duration of CU follow-up duration at the GP, calculated as the time between the first and last CU contacts, was 19 months (range 1–370) with a median of 4 (range 2–307) CU contacts. Ten per cent of patients with CU contacted their GP more than once a month. However, the median number of contacts was not substantially higher

in patients with a long duration of follow-up vs. those with a short follow-up (5.5 in >10 years vs. 3.0 in <6 months), suggesting modest healthcare usage over long-term follow-up. During follow-up and within 1 year after the last CU contact, 86.8% ($n=3772$) and 55.9% ($n=2431$), respectively, received antihistamines (mainly once daily). The median follow-up duration of 19 months may cautiously be translated into a median disease duration of approximately 1.5 years in primary care, in which patients needed counselling. Actual disease duration might be longer, assuming that antihistamine use in >50% of patients 1 year after the last contact is related to active urticaria. However, it is known from clinical experience that antihistamines are used for a longer period while being symptom-free, owing to a fear of symptom relapse. Only one questionnaire-based study focused on CU duration in the general population and reported that 50% and 80% of patients with CU are symptom-free after 3 months and 1 year, respectively,⁸ suggesting a shorter disease duration than was found in our study. Our approach to disease duration has limitations; information after the last visit is missing, making it unclear whether patients were symptom-free, referred to a specialist or were handling their disease independently. Also, patients with a visit at the end of the study period had a short follow-up, possibly leading to underestimation of disease duration in 10% of patients in this cohort.

We have presented a large population-based study focusing on the prevalence and healthcare usage of patients with CU in primary care. The observed point prevalence of 0.48–0.30% and a median follow-up duration of 1.5 years provides new, reliable insight into the vastness, relatively modest healthcare usage and estimated disease duration of CU in the general population, which is useful knowledge when counselling new patients with CU in both primary and specialist care settings.

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Table 1 Annual point prevalence of chronic urticaria (CU) in the Netherlands

Year of observation	Patients with active CU (n) ^a	Active patient years ^b (n)	Point prevalence (%)
2010	1291	269 536	0.48
2011	1382	278 196	0.50
2012	1430	283 014	0.51
2013	1520	307 430	0.49
2014	1569	328 814	0.48
2015	1575	358 723	0.44
2016	1548	372 951	0.42
2017	1388	384 729	0.36
2018	1125	370 843	0.30

^aDefined as the number of patients that were still under follow-up for CU in that specific year of observation (i.e. first and last contact moment included the year of observation or was equal to year of observation). ^bCumulative sum of active patient years in general practitioner offices. The annual point prevalence was calculated for each year of observation by dividing the number of patients with active CU (numerator) by the cumulative sum of active patient years (denominator).

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Data availability: the data underlying this article will be shared upon reasonable request to the corresponding author.

Ethics statement: no informed consent was obtained as: (i) this research could not have been performed without this data; (ii) the results of this study would not have consequences for the individual patient and would serve the public interest; (iii) asking for informed consent of all patients would have taken disproportional effort ($n > 400\,000$) and the patient data were coded before analysis, whereby the patients remained pseudonymized within the database; (iv) for all patients it was checked whether they objected to having their data used for research. Patients who objected were removed from the dataset. This study was approved by the Ethical Committee Utrecht, the Netherlands (21/420).

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