



Fig 1. Linear regression analysis of the mortality rate over time (1997–2017) for patients with epidermal necrolysis.

decrease in the yearly mortality rate during the study period: coefficient per quarter, $SE = -0.0081 \pm 0.0033$ (95% CI -0.015 to -0.0011), $P = 0.025$ (Fig. 1). Multivariate analyses confirmed this decrease: coefficient per quarter, $SE = -0.0089 \pm 0.0032$ (95% CI -0.016 to -0.0017), $P = 0.020$.

In this cohort study, we found a significant decrease in mortality over 20 years in both univariate and multivariate analysis that was not explained by a modification in patients' profiles, including their severity, except for those receiving ciclosporin. Indeed, 118 patients (33%) received ciclosporin, mainly from 2005. A prospective short trial performed from 2005 to 2007 in our dermatology department suggested a mild benefit of ciclosporin on mortality and healing.⁶ However, in a larger study using a propensity score methodology, including retrospectively all ciclosporin-treated patients at the same dermatology department from 2005 to 2016, the usefulness of ciclosporin could not be confirmed.⁷ Thus, we hypothesize that the decrease in mortality in our centre is due to improved supportive care rather than ciclosporin treatment.^{1,8} All of these measures were optimized by the creation of our reference centre in 2005 in the context of a national health policy for rare diseases, with implementation of a dedicated medical and paramedical team, a multidisciplinary approach to the acute phase and sequelae, teaching, and recently updated French guidelines.⁸ We included in the multivariate analysis most of the variables associated with mortality, including ciclosporin treatment. However, a limitation of the study is the retrospective design, including the failure to take into account some other confounding factors.

Mortality due to SJS, overlap syndrome and TEN has decreased over time in our centre. This could have resulted from a progressive improvement of supportive care.

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Funding sources: none.

Conflicts of interest: none to declare.

Years lost due to disability from skin diseases in China 1990–2017: findings from the Global Burden of Disease Study 2017

DOI: 10.1111/bjd.18329

DEAR EDITOR, Skin and subcutaneous disease (skin disease) is one of the most common human illnesses.¹ Although skin disease is nonfatal, it significantly affects the number of years lived with disability (YLDs), which, compared with years of life lost, receives relatively little attention in national or global health discussions.² Previous epidemiological studies of skin disease in China used limited localities and only some particular skin diseases.^{3,4} This study aimed to measure the burden of skin diseases in China.

Table 1 The number of YLDs and age-standardized YLD rate for skin diseases in China, 1990–2017

Cause	Number of YLDs (millions)			Age-standardized YLD rate, per 100 000		
	1990	2017	Change (%)	1990	2017	Change (%)
Skin diseases ^a	6.16	7.05	14.50	515.89	528.43	2.43
Scabies	1.44	1.39	-3.49	115.64	105.28	-8.96
Dermatitis	1.32	1.39	5.05	110.38	110.46	0.07
Viral skin diseases	0.95	0.83	-12.65	78.20	78.11	-0.11
Urticaria	0.80	0.81	1.10	65.77	65.87	0.15
Psoriasis	0.39	0.75	92.68	34.51	43.87	27.14
Fungal skin diseases	0.53	0.66	26.05	49.03	42.16	-14.02
Other skin diseases	0.31	0.62	100.58	28.80	37.21	29.16
Acne vulgaris	0.22	0.31	40.91	15.83	27.29	72.42
Pruritus	0.11	0.16	53.61	9.50	10.22	7.60
Alopecia areata	0.08	0.10	28.21	6.10	6.12	0.23
Decubitus ulcer	0.01	0.02	112.88	1.23	1.12	-9.13
Cellulitis	0.008	0.007	-10.88	0.65	0.50	-24.04
Pyoderma	0.0028	0.0034	20.04	0.25	0.25	-1.74

YLDs, years lived with disability. ^aSkin and subcutaneous diseases.

The Global Burden of Diseases, Injuries, and Risk Factors Study 2017 (GBD 2017) provided a comprehensive assessment of prevalence, incidence, and YLDs for 354 causes in 195 countries and territories from 1990 to 2017. Skin disease prevalence metrics were combined with disability weights to yield a skin disease morbidity metric, which was expressed as YLDs for each age–sex–country–year group.^{5,6} This study focused on the YLDs of skin disease and on 13 skin conditions in China from 1990 to 2017: dermatitis, psoriasis, cellulitis, pyoderma, scabies, fungal skin diseases, viral skin diseases, acne vulgaris, alopecia areata, pruritus, urticaria, decubitus ulcer, and other skin and subcutaneous diseases. The main outcome measures were number of YLDs, standardized YLD rate associated with skin disease and percentage of skin disease YLDs in all diseases. Age-standardized rate for YLDs was computed with an average world population age structure for the period 2000–2025 constructed by the World Health Organization.

The GBD study found that in China, there were 7.05 million [95% uncertainty interval (UI) 4.59–0.60 million] YLDs due to skin disease in 2017 and 6.16 million (95% UI 3.98–9.31 million) in 1990, and the number of YLDs increased by 14.50% (95% UI 11.19–17.80) from 1990 to 2017. Although the percentage of YLDs due to skin disease decreased by 19.99% (95% UI 17.37–22.71) from 1990 to 2017 [5.76% (95% UI 4.45–7.52) vs. 4.61% (95% UI 3.52–6.09)], there was much less variation in the age-standardized YLD rate for skin disease [515.89/1000 (333.54–778.23) vs. 528.43/100 000 (343.50–791.24)]. Percentage change in age-standardized YLD rate was 2.43% (95% UI 1.14–4.08).

Scabies and dermatitis were the top two YLDs and the most prevalent skin conditions in China in 2017, followed by viral skin diseases, urticaria and psoriasis. Compared with 1990, the number of YLDs from decubitus ulcer increased by the highest rate (112.88%), followed by other skin and subcutaneous diseases (100.58%), and psoriasis (92.68%). (Table 1)

Our findings indicated that the YLDs due to skin diseases in China account for 16.94% of the worldwide total in 2017 (41.62 million). Owing to population growth and ageing, the absolute total number of YLDs due to skin disease has increased over the past 27 years. Skin disease was the ninth leading cause of YLDs in 22 disease cause groups in China as well as in the world in 2017.

The burden of skin disease was dominated by scabies and dermatitis, accounting for approximately 4 in 10 YLDs for skin diseases in China in 2017 [39.43%, (1.39 + 1.39)/7.05 × 100%]. These two skin disease conditions remain a significant challenge in China.

Scabies is a highly contagious disease caused by the *Sarcoptes scabiei* mite. With social improvements and economic development, living conditions and personal hygiene have been improving, and the rate of scabies should decrease. Prevention of scabies infection must be given more attention in China, given that it is extremely preventable and treatable.

We also found that the burden due to decubitus ulcer also increased greatly from 1990 to 2017, largely due to the increasing elderly population in China, as older people are more prone to decubitus ulcer.⁷ Another important reason is the high rates of obesity and diabetes in China.⁸ Obesity and diabetes alone are likely contributors to the greater burden observed from decubitus ulcer.²

In conclusion, skin diseases are a considerable disease burden in China, and are likely to increase with population growth and ageing. Considering the burden of skin diseases will be important when developing health policies and allocating resources.

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Funding sources: the funding for writing this article was granted from the work funds of the National Center for Chronic and Non-Communicable Disease Control and Prevention, National Key Research and Development Plan (2018YFC1315304), a joint Sino-German Research project (No.GZ901) and the Youth Clinical Research Project of Peking University First Hospital (2017CR02).

Conflicts of interest: none declared.