Table 2 Association of age and gender with the microbiological profiles of microbial keratitis

	Gram-positive ($N = 309$)	Gram-negative ($N = 126$)	Fungi ($N = 20$)	Acanthamoeba ($N = 23$)	P-value
Age, years	56.3 (21.1)	57.6 (20.4)	55.3 (21.8)	34.4 (12.9)	<u><0.001</u>
Gender, N (%)					0.404
Female	151 (48.9)	60 (47.6)	7 (35.0)	14 (60.9)	
Male	158 (51.1)	66 (52.4)	13 (65.0)	9 (39.1)	

Age is presented in mean (SD). One-way ANOVA test was used to analyse the mean differences and χ^2 test was used to analyse the categorical variables between the four groups. Significant P-value (<0.05) is underlined

microbial keratitis in different regions, including the UK [5]. This highlights the importance of up-to-date examination of microbial keratitis in a particular region.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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Response to: A 10-year analysis of microbiological profiles of microbial keratitis: the North East England study

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Many thanks for alerting us to the microbiological profiles of microbial keratitis from our colleagues in the North East of England study. As our article had urged other authors to analyse their own local microbial data, we are delighted to see this work being undertaken in other areas of the UK.

This data highlights the need for individual local analysis in order to tailor appropriate antibiotic therapy. Similar rates of bacteria, fungi, and acanthamoeba are seen across the two centres. Indeed the increasing trend in gram positive pathogens, less than 150 miles from our centre is interesting. A similar but not statistically significant trend was seen

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in Moraxella keratitis infections, which chimes with our findings.

It would be interesting to know if our colleagues intend on analysing antimicrobial sensitivities for this data, and what specific statistical analysis was performed to produce these findings. It is possible that if shorter time intervals are used for the data, subtler trends may be detected.

Our colleagues report a higher ratio of positive scrape results than our series; 44.6% from over the 10 year period. It would be interesting to know under which conditions our colleagues perform corneal scraping in the context of suspected microbial keratitis.

We commend our colleagues in the North-East for their hard work, and hope that other centres are able to find the time to join in!

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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Letter to the Editor

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We read with interest the article by Cui et al. [1]. In the article, the efficacy and safety of conbercept and ranibizumab for neovascular age-related macular degeneration were compared in a retrospective case-controlled non-inferiority study. However, the authors made some mistakes in describing the study design.

First, a case-control study is often used to identify potential risk factors for a disease by comparing the frequencies of the risk factors of an illness group to one or more control groups [2]. The researchers first group the participants in a case-control study according to their outcome status and then looks backward to compare the levels of exposure between groups. In Cui's study, however, 180 patients were divided by the status of intervention/exposure and then were followed longitudinally for the outcomes, which was essentially a forward-looking study instead of a backward-looking case-control study.

Second, the retrospective design mentioned in the article was also doubtful. By definition, a retrospective study is always an observational study, which is more subject to bias and confoundings [3]. Missing data is also the Achille's heel of a retrospective study. But what we saw in the article was a well-controlled multicentre study. The interventions were chosen by the participants after only been informed with the names of the drugs. The baseline characteristics were balanced. And the attrition proportion was merely 6.7% with no documented treatment switching. However in a similar study in California, 14.4% of the 452 participants were either lost to follow-up or died, and another 17.3% had changed their treatments [4].

Finally, a non-inferiority design is almost always used in randomized control trials [5].

We believe quasi-experiment should be a more appropriate term for Cui's study. A quasi-experiment prospectively enrolls participants and assigns them to different arms according to a pre-specified non-random allocation strategy [3, 6]. The study in question had a so-called weak quasi-experimental design as the participants chose to receive either conbercept or ranibizumab treatment all by themselves [6]. Thus, the groups would have been different in a number of ways.

To carefully design a study and transparently report it are important, not only for minimizing the risks of bias and controlling for potential confounders but for properly interpreting the results of studies and correctly ranking the evidence.

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