**Supplementary material S1**

The thermal pulsation (intervention) group and control (warm compress) group were originally part of a randomized controlled trial involving several lid warming devices \(^1\). However, as the LipiFlow® machine was delivered late, the thermal pulsation group had to be recruited 1 month later than the control group and intervention groups involving other devices. The meibomian gland secretion variables (exploratory outcomes), namely lipid layer thickness and number of glands with liquid secretion, also could not be measured because LipiView® and the standardized force meibomian gland evaluator were delivered together with LipiFlow®. Therefore, the control group data from the original trial, involving the other devices, was used for comparison in this LipiFlow® trial.

While the patients assigned to thermal pulsation could not be randomised together with other patients, they were recruited using identical eligibility criteria at the same clinic by the same study team. Moreover, the control group only received warm compress and lid hygiene as described below and no other lid warming intervention. For this reason, we believe it is useful to examine thermal pulsation in a longitudinal interventional study that has the control group of the main lid warming study for comparison.

**References**