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Authors' response

We thank Drs Gurnani and Kaur for their interest in our article[1]. We have carefully considered every comment and responded accordingly.

First, the cases included in our study were all primary acquired lacrimal duct obstruction (PANDO). All participants underwent detailed review of medical history and slit-lamp examination before tear collection. Tear collection was followed by irrigation and probing excluding the affected eye with acute dacryocystitis. Then, those in the prelacrimal obstruction and acute dacryocystitis groups underwent orbit computed tomography (CT). Participants in the chronic dacryocystitis group had CT dacryocystography. Those with lacrimal duct obstruction secondary to trauma or tumour were excluded from the study. Also, none of the individuals included in our study showed any signs of active sinusitis, punctual stenosis, punctal atresia, and membranous punctum.

Secondly, individuals diagnosed with acute dacryocystitis were hospitalized immediately. We collected the tears first, then they were treated with systemic and local anti-inflammatory drugs and antibiotics for several days before endonasal endoscopic dacryocystorhinostomy (En-DCR) surgery. We performed syringing in the contralateral eye in acute dacryocystitis cases after tear collection to make sure the contralateral eye was unobstructed. Two main methods were employed to collect tears, capillary pipettes and Schirmer method[2,3]. Schirmer method was chosen as this is safe, convenient and is known to cause less irritation[4]. Tears remain in the conjunctival fornix, and we don't think the strip which was put in the fornix would have caused any contamination. For each eye, we individually held the Schirmer test strip with sterile forceps and placed them into the test tube separately to avoid chances of cross-contamination and misdiagnosis.

Thirdly, all the participants had more than six months of epiphora, a few of them had lacrimal pathology during En-DCR surgery, the pathology showed inflammatory cell infiltration and fibrosis in the mucosal tissue with no obvious epithelial cells. In our previous animal study, we had found the mucosa of the nasolacrimal duct showed different pathological features at different time points (1, 2, 4, 8, and 16 wk) after lacrimal duct obstruction[5]. We did not separate the different disease courses to discuss our results separately limited to the small sample size in this study. We think the inflammatory cytokine changes in lacrimal duct obstruction disease (LDOD) patients with different disease courses, especially in combination with pathology, which is an interesting question and worth studying in the future.

Lastly in context to the statistical analysis in this study, the confidence level cut-off of the assay was 95 per cent.

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