

**00142 Conus Ridge in Extreme High Myopia Is Associated With Glaucoma***Ralene Sim<sup>1</sup>, Wong Chee Wai<sup>2</sup>*<sup>1</sup>National University of Singapore, <sup>2</sup>Singapore National Eye Centre

**Aims:** Conus ridge (CR) is the ridge of sclera in the temporal peripapillary region that is commonly observed in extremely myopic eyes and could be associated with an increased risk of glaucoma. The aim of this study is to assess the association between CR with glaucoma in these eyes.

**Methodology:** This is a clinic-based observational study of 43 eyes of 29 patients with axial length (AL)  $\geq 32.0$  mm, enrolled from the high myopia clinic of the Singapore National Eye Centre. AL was measured with the IOLmaster and intraocular pressure (IOP) was measured with goldmann applanation tonometry. The presence of CR was ascertained from fundus photographs and swept source optical coherence tomography (SSOCT). Glaucoma was diagnosed by fellowship trained glaucoma specialists. The proportion of eyes with CR with and without glaucoma were compared.

**Result:** The mean age was 59.8 $\pm$ 12.1 years, mean AL was 33.0 $\pm$ 0.84mm and mean IOP was 16.1 $\pm$ 3.0 mmHg. The majority of patients were female (n=27, 62.7%). CR was observed in 21 eyes (48.8%) and glaucoma was diagnosed in 10 eyes (23.3%). Mean IOP was not significantly different between eyes with or without glaucoma (15.4 $\pm$ 3.4mmHg vs 16.3 $\pm$ 2.9mmHg, p=0.40). Glaucoma was more common in eyes with CR (n=8, 38.1%) than eyes without (n=2, 9.1%, p=0.03). On multivariate analysis adjusted for age, gender and AL, the presence of CR was independently associated with increased odds of glaucoma (odds ratio 9.62, 95% confidence interval 1.34-69.30, p=0.025). The depth of staphyloma (1552 $\pm$ 608um vs 1628 $\pm$ 400um, p=0.68) or height of the CR (158 $\pm$ 34um vs 208 $\pm$ 64um, p=0.21) were not significantly different between eyes with or without glaucoma.

**Conclusion:** Extremely long eyes with CR had increased odds of glaucoma independent of age and axial length. Eyes with CR should be carefully evaluated for the presence of glaucoma.