

## Background

- Fungal keratitis is known as an important cause of sight threatening infection worldwide.
- Variation of clinical characteristics and treatment have been observed among different geographic regions.
- Early diagnosis and management are essential to prevent irreversible sequelae including blindness.
- Broad-spectrum treatment should be administered once there is a strong probability of a mycotic infection
- Currently, clinical data of fungal keratitis in South East Asia remain scarce.

## Material and Methods

- Primary objective : To identify the causative fungi of fungal keratitis patient in KCMH
- Secondary objective : To evaluate diagnostic yield and outcomes of fungal keratitis patient in KCMH
- Case – Control study
- Population : Patient with diagnosis of fungal keratitis between January 2016 and December 2018
- Cases : ICD-10 code

## Results

Figure 1 : Population study

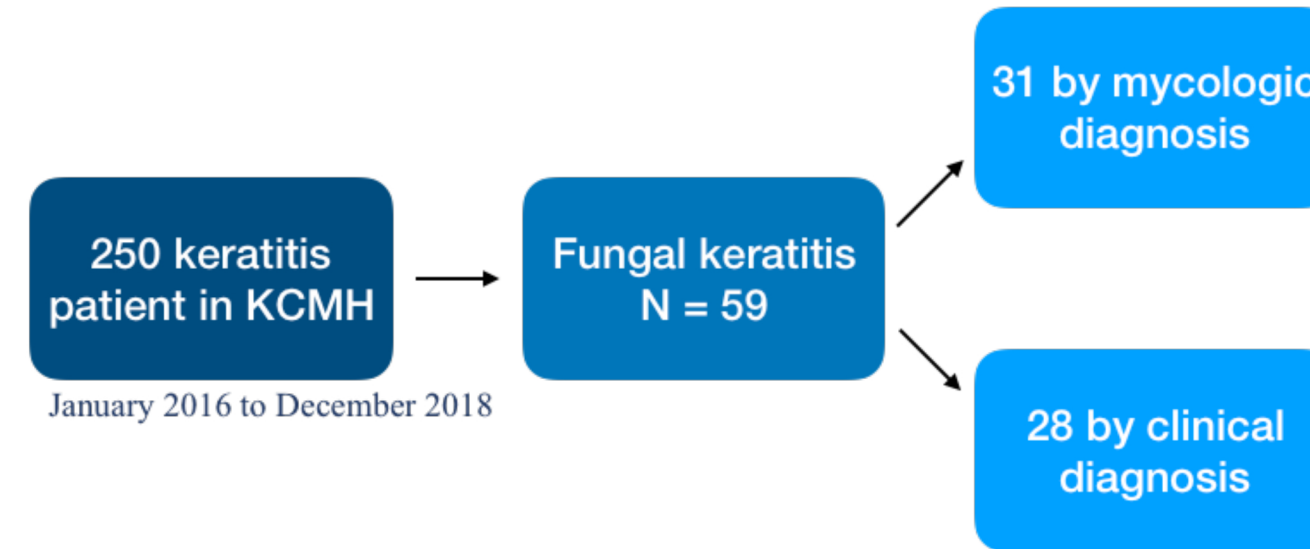


Table 1 : Clinical presentation

Clinical presentation	Percentage
Eye discharge	18%
Eye pain	35%
Eye irritation	45%
Photosensitivity	2%

Figure 2 : Causative pathogen

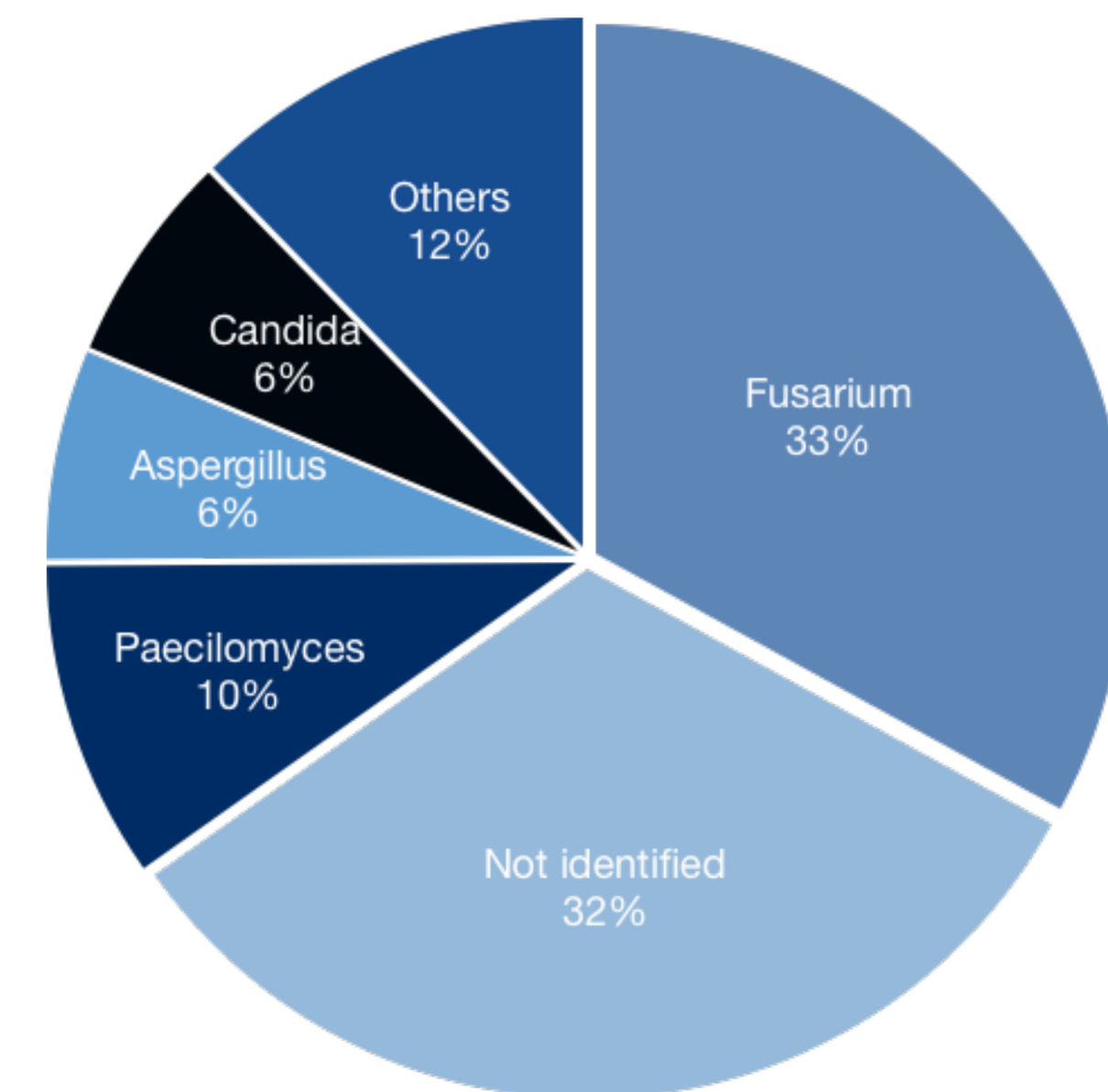


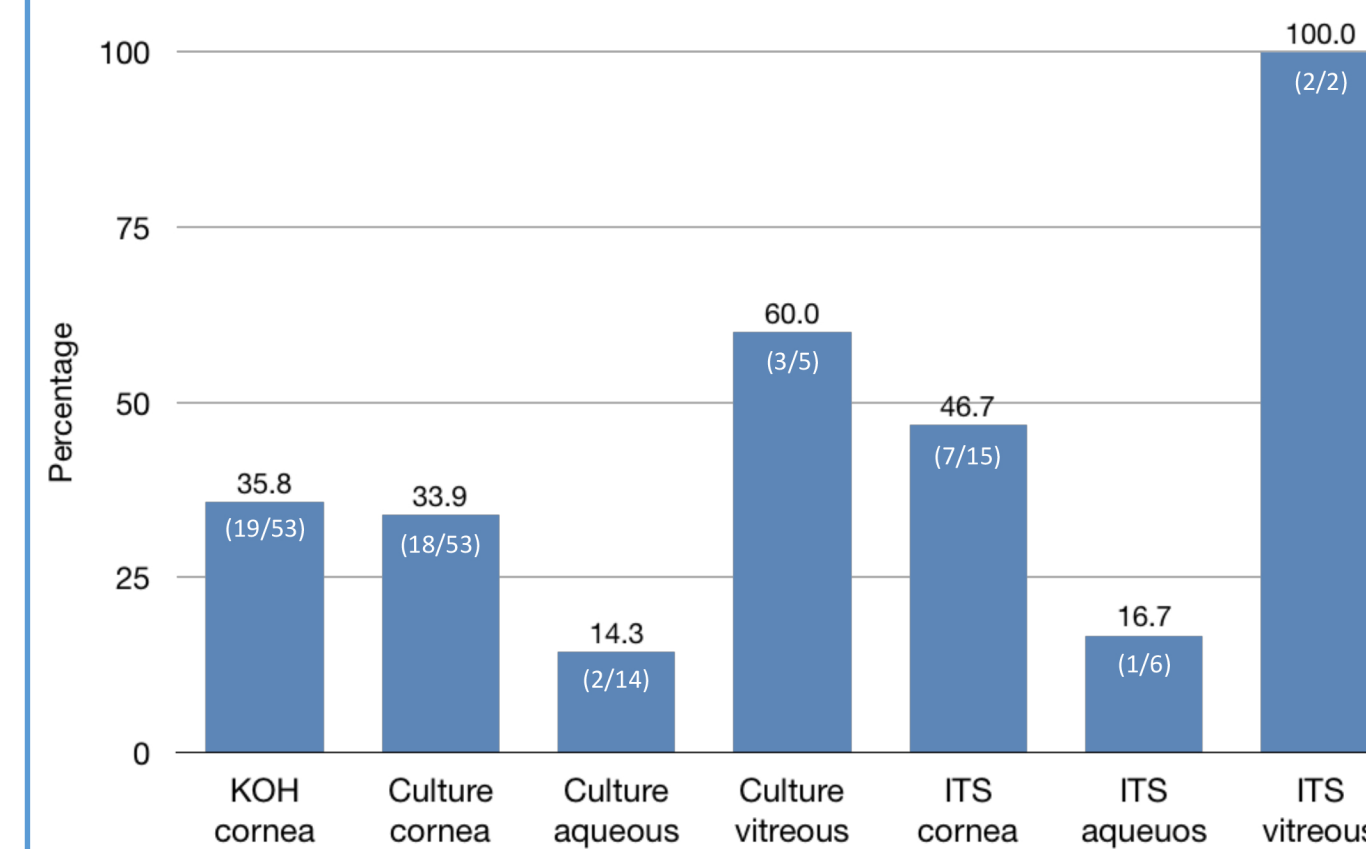
Table 2 : Treatment outcomes

Route of treatment	Percentage
Topical	100%
Systemic	64%
Intrastromal	40.7%
Intracameral	37.2%
Intravitreal	5.1%

No. of route of treatment	Visual improved	Visual not improved
1	10 (55.6%)	8 (44.4%)
2	3 (30%)	7 (70%)
3	10 (33.3%)	20 (66.7%)

Figure 3 : Diagnostic yield



Culture and molecular detection from clinical specimens provided additional mycological diagnosis in 8 and 5 cases with negative KOH preparation.

- Both culture and molecular detection were used in 22 cases. The concordance between culture and molecular detection is 77.2%

Table 3 : Operation performed

Evisceration	28.5%
Keratoplasty	71.4%
Vitreectomy	20%

Table 4 : Clinical characteristics and outcomes between mycological diagnosis and clinical diagnosis

	Mycological diagnosis (N=31)	Clinical diagnosis (N=28)
Median onset (IQR)	16.9 (7-21)	52.3 (8.75-34.25)
Uveal involvement (%)	9 (29)	11 (39.2)
Surgery required (%)	12 (38.7)	9 (32.1)
Visual improvement (%)	7 (22.5)	11 (39.2)

No statistical significant between two groups.

## CONCLUSIONS

- Fusarium* was the most common etiologic agent similar to study from other region
- Appropriate fungal culture and molecular detection from clinical specimens should be considered as they may increase diagnostic yield

## REFERENCE

- Wykoff C, Flynn H, Miller D, Scott I, Alfonso E. Exogenous Fungal Endophthalmitis: Microbiology and Clinical Outcomes. *Ophthalmology*. 2008;115(9):1501-1507.e2.
- Henry C, Flynn H, Miller D, Forster R, Alfonso E. Infectious Keratitis Progressing to Endophthalmitis. *Ophthalmology*. 2012;119(12):2443-2449.
- Kim D, Moon H, Joe S, Kim J, Yoon Y, Lee J. Recent Clinical Manifestation and Prognosis of Fungal Endophthalmitis: A 7-Year Experience at a Tertiary Referral Center in Korea. *Journal of Korean Medical Science*. 2015;30(7):960.