

Impact of COVID-19 pandemic on patients with corneal transplant

Dear Editor,

The recent COVID-19 emergence has inflicted the entire world dreadfully with India being no exception.^[1] Enduring effect on health of people was observed due to delayed treatment caused by global travel restrictions.

We, hereby, report a data of 10 cases presenting with graft rejection/failure in postcorneal transplant patients during COVID-19 pandemic lockdown April to July 2020 [Fig. 1].

The demographics are shown in Table 1. Four patients were one eyed. Six patients had no access to topical immunosuppressants and five patients had no access to ophthalmologists during this period. Eight patients at presentation had Best Corrected Visual Acuity (BCVA) less than 6/60. None of the lamellar transplant patients presented with rejection. The mean duration from onset of symptoms to presentation to hospital was 9.5 days [Graph 1]. None of the patients had any COVID-19 symptoms.

Three out of ten patients developed graft failure despite treatment, and one of them subsequently underwent Descemet's Stripping Endothelial Keratoplasty (DSEK). One patient with recurrent melt underwent tectonic keratoplasty to salvage the globe. Restraints and apprehensions regarding eye donation and procurement of tissues during the pandemic posed an additional challenge of visual morbidity in one-eyed patients. However, despite delayed presentation, we could

manage to restore functional vision in the remaining six patients post rejection.

We also compared the number of patients with graft rejection with that of the previous year during the same period. Although the number of patients that presented to us was almost the same ($n = 9$), the mean duration to presentation to hospital was 3 days.

We have observed delayed presentation of patients with rejection during the pandemic (9.5 days versus 3 days), which was contributed by the on-going pandemic indirectly in the form of lack of timely access to medications/ophthalmologists, hesitance to visit hospitals due to fear of contracting COVID-19, and lack of transport as a sequelae of restrictions of the lockdown.

Studies have shown that early treatment is beneficial and a longer interval between corneal graft rejection and treatment increases the risk of corneal decompensation and graft failure,^[2] which was reflected in our cases as well. There have been few isolated case reports on COVID-19 and acute graft rejection,^[3] which should also be borne in mind as a precipitating cause for rejection. Although the psychological impact of the pandemic on graft rejection is subtle, it will definitely be reflected in the form of low self-esteem and gross dependence especially in one-eyed patients. Despite attempts to track and telephonically contact patients who underwent keratoplasty, the fear of the pandemic still led to delayed presentation. Use of technology in the form of teleconsultation has helped in better management of patients. Educating, proper counseling, and creating awareness among patients will definitely help us in managing and preventing untoward outcomes in these patients in the coming time. With one year of pandemic gone by, arrival of second wave and with

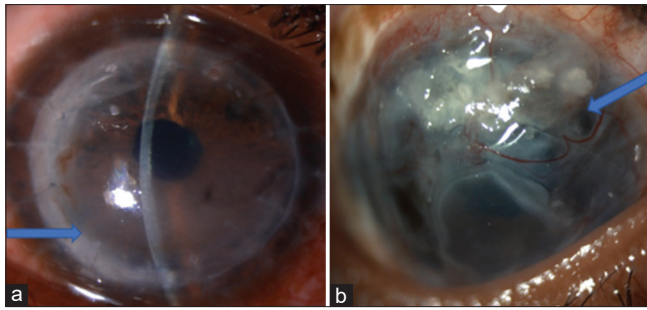


Figure 1: Clinical photograph of patients with (a) acute graft rejection and (b) graft melt

Table 1: Demographics and clinical profile of patients

Parameter	Value
Age	Mean 37.7 years
Paediatric	Range 13-65 years
Adult	2
	8
Sex	
Male	8
Female	2
Diagnosis for keratoplasty	
Regraft (graft failure)	6
CDK	1
Keratoconus	1
Corneal dystrophy	1
Mooren ulcer	1
Graft rejection	9
Graft melt	1
Patients with the previous episode of rejection	2
Interval between PKP and rejection	Range 11-26 months Mean 18 months

the vaccination drive on, newer challenges are surfacing in the form of graft rejection and graft viral keratitis. Thus, it is of prime importance to educate our transplant patients the need of topping up of topical steroids during immediate postvaccination period and seek timely assistance whenever needed.

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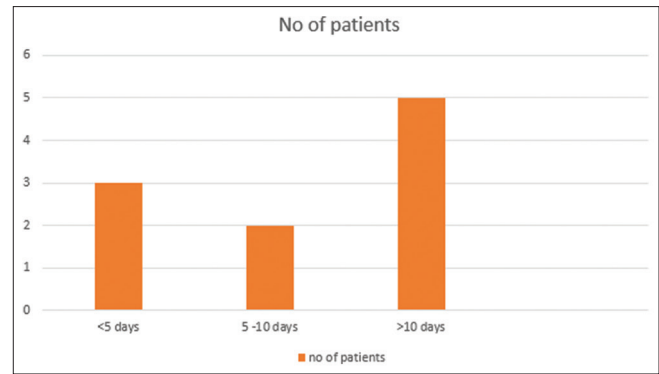
Nil.

Conflicts of interest

There are no conflicts of interest.

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Graph 1: Figure showing the time to presentation to hospital from onset of symptoms

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