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Technical note

3D-printed shields for slit lamps produced during the COVID-19 pandemic

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of different moulds that would each be used for limited production numbers. In this context, 3D printing was an ideal technique and was specifically adapted to respond to the need of protection devices for slit lamps in different ophthalmology departments within AP-HP and other hospitals such as Hôpital d'Instruction des Armées, Percy.

Fig. 1. Transparent home-made protective shield on a slit lamp on the physician's side.

Fig. 2. Design of a protection device to be fixed on the chin rest of Height Streit BQ 900 slit lamps, in order to protect the patient side and the physician.

Fig. 3. Device positioned on a Height Streit BQ 900 slit lamp on the patient side.

Regarding the specific case of the shield for slit lamps, two engineers from 3D COVID were sent onsite at Hôpital d'Instruction des Armées, Percy in order to collect data on the chin rest of the Height Streit BQ 900 slit lamp. After several minor adjustments performed based on exchanges with the 3D COVID engineering team, a final design was approved by ophthalmologists with 24 h and produced in 15 copies that could be used without major technical issues.

Of note, it has recently been shown that SARS-CoV-2 can survive up to 72 h on plastic surfaces [5] and that a large range of surfaces within hospitals carry viruses [6]. We propose that the 3D-printed shield should be cleaned after every clinical examination of a different patient by 62 to 71 % ethanol, 0.1 % to 0.5 % sodium hypochlorite or by commercial products responding to the EN14476 norm (virucidal activity in the medical area). ABS is compatible with such treatments.

Declaration of competing interest

None.

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