

membrane was laid over the entire mucosal surface of the eye and the ends of the membrane were sutured to the eyelid skin.⁵ While efficacious, the procedure was lengthy and required additional sedation and operating room availability for patient comfort. Herein we present a faster, bedside technique for application of amniotic membrane to the ocular surface using cyanoacrylate glue. The glue polymerizes when it contacts wet surfaces making it an attractive adhesive agent for the moistened membrane. Tissue histotoxicity is also very minimal.^{6,7}

METHODS

The report highlights method on a patient with histopathologic confirmation of SJS/TEN and ocular involvement. Informed consent of the procedure as well as off-label use of cyanoacrylate glue was obtained. A description of the procedure is illustrated in Figure 1. Prior to application of the membrane to eyelid skin, any necrotic tissue that would preclude the glue from sticking was gently debrided.

RESULTS

The total procedure time was forty minutes, approximately twenty minutes per eye. There were no complications or further compromise of the ocular surface during or after the procedure. Throughout the hospital course, the patient developed delirium and grew increasingly agitated insomuch that she ripped off her moisture chamber goggles and the amniotic membrane became dislodged. The adhesions between the amniotic membrane and the patient's skin, however, were still intact.. The ocular surface remained without signs of ocular surface disease by visual inspection with special lissamine green and fluorescein stains. The graft was successfully re-transplanted, however this lasted for only another day. The foreign body sensation of the forniceal symblepharon ring likely worsened the patient's agitation and delirium and the membrane was discontinued. Despite this limitation, her ocular surface had stabilized, only requiring surface lubrication with artificial tears at discharge.

CONCLUSION

Had our patient received the traditional AMT method using sutures, it would not be unreasonable to postulate that membrane and sutures would have torn and may have caused additional trauma to the skin. Cyanoacrylate glue has been used in ophthalmology for decades and is an effective medium to adhere amniotic membrane to skin. Its use in AMT can save unnecessary trauma, time, and cost associated with suture use.

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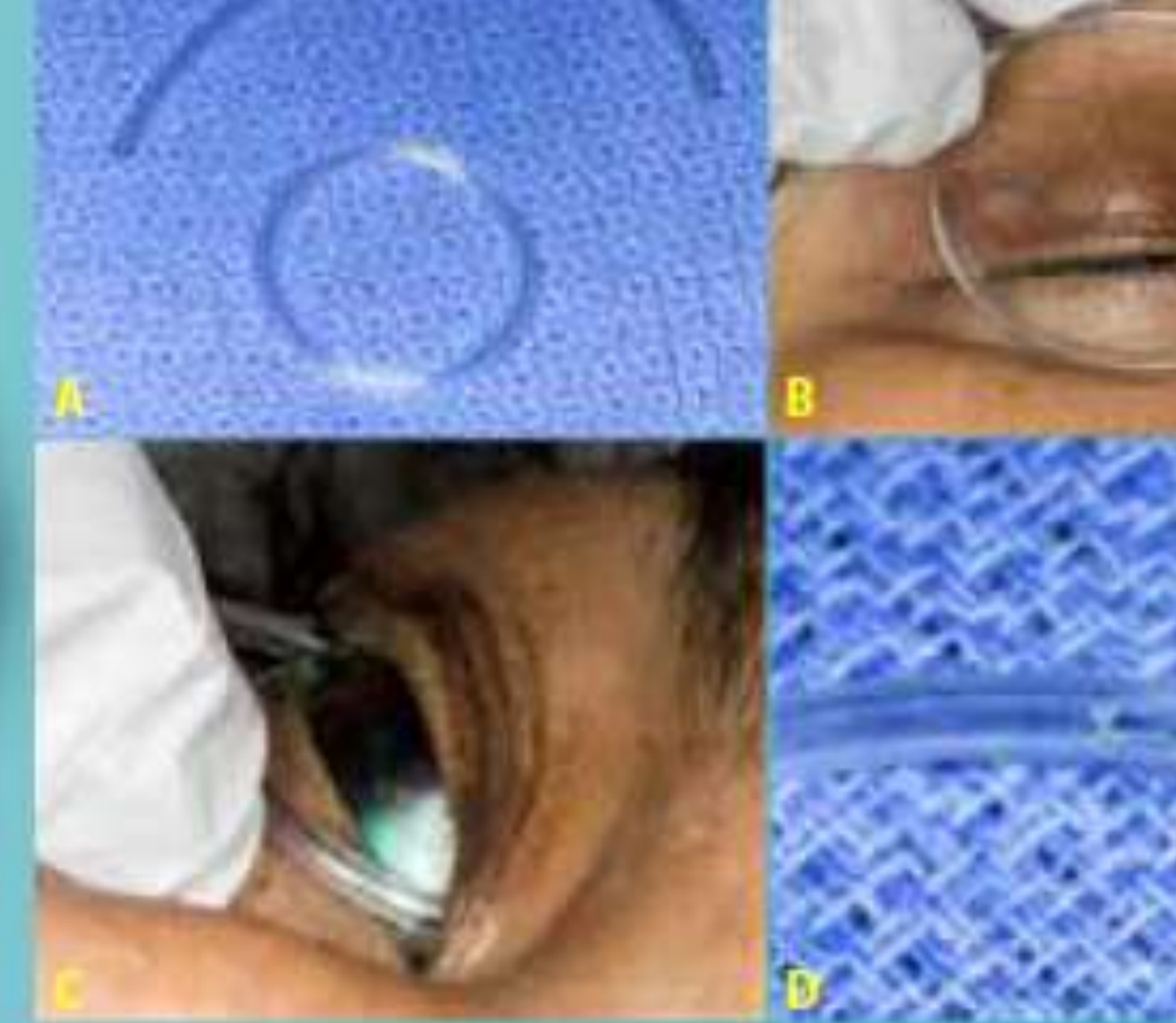
None

DISCLAIMER

The views expressed are solely those of the authors and do not reflect the official policy or position of the United States Army, United States Navy, United States Air Force, the Department of Defense, or the United States Government.



External photograph of subtle lissamine green uptake nasally and temporally in the eye of a patient with SJS/TEN.



A. Tubing used to create forniceal ring and constructed ring. B. Estimating approximate distance between patient's superior and inferior orbital rims to construct forniceal ring. C. Estimating needed temporal to nasal length for forniceal ring. D. Obliquely-cut edge of one end of tubing.

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After securing the inferior edge of the AM with cyanoacrylate glue, the superior edge is accordion-folded to create enough tissue to fill the superior fornix. With the aid of a muscle hook, the forniceal ring is then introduced into the superior fornix.

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The same procedure is then utilized for the inferior fornix. Upon manipulation, the inferior edge of the AM attached the skin but can be easily repositioned and secured with more glue.