Using Merocel Marked with Skin Marker as a Background in Microsurgical Anastomosis: Our Clinical Practice

Burak Ergün Tatar[1] Burak Sercan Erçin[2]

[1] Department of Plastic Surgery, University of Health Sciences, Bagcılar Training and Research Hospital, Istanbul, Turkey
[2] Department of Plastic Surgery, Bahçeşehir University, VM Medicalpark Pendik Hospital, Istanbul, Turkey

Address for correspondence Burak Ergün Tatar, MD, Department of Plastic Surgery, University of Health Sciences, Bagcılar Training and Research Hospital, Istanbul 34100, Turkey (e-mail: burakerguntatar@gmail.com).

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In microsurgical applications, excellent visualization is essential. Many materials are used to facilitate anastomosis area. Each material has its advantages and disadvantages.[1]

In this letter, we have presented Merocel (Medtronic Xomed, Jacksonville, Florida, United States), which is marked with a Sharpie (Atlanta, Georgia, United States) skin marker as the background. After the vessels or nerves were prepared for anastomosis, the Merocel was shortened to appropriate size; the Merocel was marked with a marker after moistening the tissue with surrounding blood. We mark the Merocel with a small touch so that it does not stain the vessel wall. It was placed in anastomosis area, and a classical anastomosis was performed (►**Fig. 1**).

Merocel is a product made of polyvinyl alcohol, available in compressed foam form. It has a structure that expands as it absorbs the liquid and is generally used as a nasal packing to prevent bleeding.[2] Certain studies have provided background information on anastomosis in microsurgery. Cho et al used Merocel to provide an easier anastomosis by providing the depth of the anastomosis area.[3] Bruce et al used Merocel for fluid suction in the anastomosis area.[4] When Merocel absorbs blood, the product turns from white to red, creating difficulty in distinguishing the vascular lumen and nerve fibers. As such, a skin marker is used to darken the background color. Merocel not only provided the moisture required for sutures and veins but also offered a suitable dry environment by absorbing the surrounding blood. It is very useful not only in large vessel anastomosis but also in fingertip amputations. As it swells as it absorbs the liquid, it provides a voluminous background where there is a step. In addition, due to its porous structure, there is no need to make any holes. The ground allowed vascular or nerve manipulation, and no rupture was observed when the sutures were pulled. Nerve fibers were clearly visible, which provided great comfort to the surgeon in the application of epineural neurorrhaphy. Sharpie was used as a skin marker because it contains N-propranolol with broad-spectrum antimicrobial activity.[5] No infection has been observed in any of the patients we have applied to date. However, when marking with a Merocel marker, using too much ink should be avoided because if the Merocel becomes too dark, suture visibility is reduced. We often use the color blue in our clinical practice, because in our country, the sterile marker is mostly blue, and we do not have experience with the use of other colors. We use one skin marker in each operation, so we keep the cost to a minimum.

Microsurgery advancements continue daily; new techniques and instruments affect surgeons' performance positively. The better the surgical view of the anastomosis area, the higher the surgical success. In this letter, we have presented our method that we frequently apply in our own surgical practice. We believe our letter will enlighten future studies.

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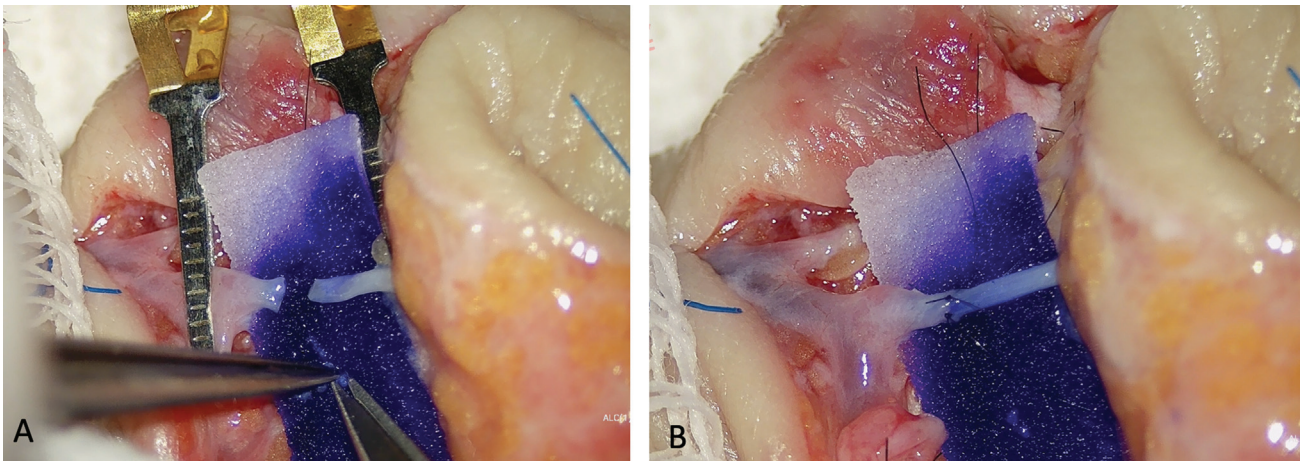

Fig. 1 Using Merocel as a background: (**A**) The view before anastomosis and (**B**) after anastomosis.

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