

Figure 1: Left fibula osteocutaneous flap for large right sided intraoral defect showing intraorally located posterior peroneal septum with skin paddle ideally located for the defect with posterior anastomosis

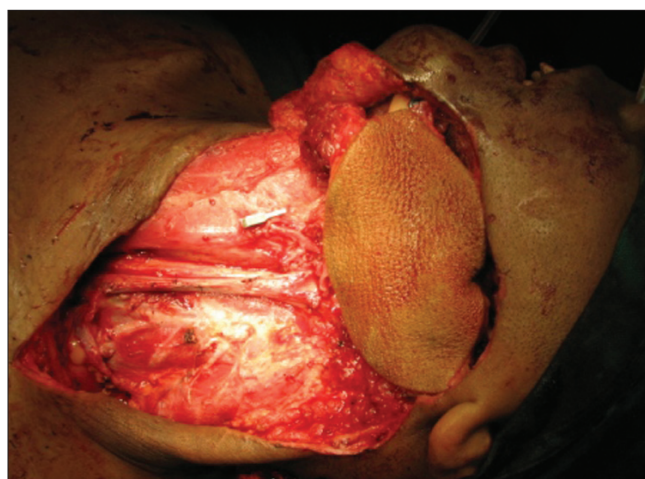


Figure 2: Ipsilateral osteocutaneous fibula for left mandibular body with skin defect showing posterior peroneal septum with skin paddle lying extra orally for posterior anastomosis

Role of laterality of free osteocutaneous fibula in complex oromandibular reconstructions

Sir,

We read with interest the article regarding donor site specificity of free fibula flap for complex oromandibular reconstruction by Prabha Yadav *et al.*^[1] We congratulate the authors for covering this controversial topic and backing it up with a large series of cases. However, there are certain issues we would like to highlight. The laterality may not be an issue when the defect is located centrally or laterally with small mucosal loss or when the defect requires only bone for reconstruction. However, when we have large intraoral or composite defects requiring fibula, osteocutaneous flap laterality has a role. For example, a right lateral defect with large mucosal loss with an



Figure 3: Ipsilateral Osteocutaneous flap ideally suited for skin defect as can be seen from this figure after skin inset

osteocutaneous fibula from the left side with right-sided anastomosis has the skin paddle lying in the oral cavity, which is ideally located for mucosal inset [Figure 1]. However, for the same defect, if we harvest a right-sided osteocutaneous fibula with anastomosis on the right side, it will have the posterior peroneal septum with the skin paddle on the lower and outer side of the mandible. The skin paddle will not move inside comfortably because of the limited movement of the septum. The superior border of this paddle will form the lower gingivobuccal sulcus and the inferior border will move superiorly. In order to reach the upper gingivobuccal sulcus, one has to take a larger paddle, which doesn't reach comfortably as the septum with limited mobility is not favourably located for the intraoral defect. However, in this case, the dimension of skin paddle is appropriate as required and one need not take a larger paddle than required to compensate for the limited mobility of the septum. Thus, the problem of partial skin loss can be significantly reduced. Let us evaluate another scenario for left-sided skin and bone defect. An osteocutaneous fibula with left-sided anastomosis ideally fits the defect [Figures 2 and 3]. To fit the same paddle for left mucosal defect requires flipping the paddle 180 degrees on its relatively immobile septum, which not only puts undue stretch on the perforator but also does not fit the defect comfortably. The illustrations by Dr. Prabha *et al.* have beautifully demonstrated this fact that by changing the sides, one can get the septum and the paddle to lie intraorally or extraorally.^[1] So, for a large intraoral defect, logically the paddle should lie inside and hence be from the contralateral side. In their article on donor side selection in fibula osteocutaneous flap, Yagi *et al.* have also suggested contralateral fibula for intraoral defect and ipsilateral fibula for facial skin defect when site of anastomosis is posterior.^[2] Hidalgo excised the skin paddle intraoperatively in three out of four patients for intraoral defect and the fourth had 30% loss of skin paddle because the septum of the graft was folded on itself to bring the skin island inside the oral cavity.^[3] In our series of 54 osteocutaneous fibula, we had three complete failures, and of the remaining 51 cases, only one had 20% partial skin loss.

As regards availability of recipient neck vessels, the issue crops up only in previously operated or irradiated cases in which case the harvest should start only after confirming the availability of recipient vessel. Overcrowding is not an issue, especially in free fibula harvest for a head and neck situation where the oncosurgery team is around the neck and the reconstructive team below the knee.

Changing the side of harvest only changes the position of the reconstructive surgeon and assistant, but space occupied on the leg end remains similar.

Our observation is that for central defects, bony defect with small mucosal defect or bone defect only, laterality may not be an issue. But for lateral segment mandible with large mucosal or composite defects, the opposite-side fibula gives a superior positioning of skin paddle, which geometrically fits better. In other words, if one routinely harvests left fibula, difficulty will be encountered for left lateral mandible with large mucosal defects or composite defects and right lateral mandible with large skin defect.

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