Bipedicled volar advancement island flap (BVAIF)

**Materials**

<table>
<thead>
<tr>
<th></th>
<th>BVAIF</th>
<th>OTF</th>
<th>p</th>
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<tbody>
<tr>
<td>Number</td>
<td>9 cases 11 fingers</td>
<td>9 cases 10 fingers</td>
<td></td>
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<tr>
<td>Age at injury (year)</td>
<td>33.7</td>
<td>46.6</td>
<td>0.072^*</td>
</tr>
<tr>
<td>Follow-up duration (month)</td>
<td>9.6</td>
<td>8.8</td>
<td>0.918^*</td>
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**Consideration items**

1. Distance of flap advancements (mm)
2. Range of motion (°) (extension & flexion, final follow-up)
3. Sensory evaluation (Semmes-Weinstein monofilament test)
4. Subjective evaluation (DASH Score)
5. Complications

**Discussion**

Bipedicled volar advancement island flap

→ Both sides of dorsal branches of digital artery (distal end of PIP joint)
   → ligate the branches (because of flap advancement)
   → There is no case of dorsal skin & nail necrosis.

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<th>Extended palmar advancement V-Y</th>
<th>Bipedicled volar advancement island flap</th>
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<tbody>
<tr>
<td>Flap advancement</td>
<td>≤ 15 mm</td>
<td>15 mm</td>
</tr>
<tr>
<td>Proximal exposure</td>
<td>Palma (MP joint)</td>
<td>Juxta-PIP joint</td>
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<tr>
<td>Dorsal branch of digital artery</td>
<td>Salvage</td>
<td>Ligation</td>
</tr>
<tr>
<td>Skin graft</td>
<td>Unnecessary</td>
<td>Necessity</td>
</tr>
</tbody>
</table>

**Vascular anatomy of the finger dorsum**

Endo T et al. J. Hand Surg (Am) 1992

**Similar flap: Volar flap advanced with V-Y closure**

Kojima et al. 1994 British Journal of Plastic Surgery

**Indications of BVAIF**

- Tamai zone 1/2 (Ishikawa subzone 1-3)
- Multiple fingertip injuries
- Use of old cases (claw nail deformity, fingertip scar etc.)

**Benefits of BVAIF**

- Reconstruction of round, natural appearance fingertip
- No suture line of finger pulp