**Superficial Circumflex Iliac Artery Perforator Flap (SCIP Flap)**

This is flap is composed of skin and subcutaneous tissue over the groin region, like the groin flap it has relatively low donor site morbidity.

**Anatomy**

The superficial circumflex iliac artery arises from the external iliac or femoral artery (2.5cm below inguinal ligament) and after 1cm or so divides into two branches that run superolaterally towards the anterior superior iliac spine (ASIS).

* The superficial branch lies superficial to the deep fascia of the sartorius muscle and its perforators tend to be found more proximally in the anteromedial groin.
* The deep branch lies deep to the sartorius fascia and its perforators are found more distally in the anterolateral groin region.

A SCIP flap includes a short distal segment of the **deep branch** of the SCIA and its dominant perforator. In cases where the superficial branch is dominant, i.e. when the deep branch is smaller or absent, it is used instead of the deep branch.

A groin flap differs from a SCIP flap in that it includes the whole length of the **superficial** and/or the deep branch of the SCIA (Fig 1). The groin flap tends to have a more proximal and deeper pedicle means that it is more difficult to thin what is usually a bulky flap.

**Flap elevation**

The perforators can be detected with a hand held doppler probe preoperatively in the clinical situation.

* A line is drawn 2.5cm **inferior to** and parallel to the inguinal ligament from pubic tubercle to ASIS. This corresponds to the course of the SCIA and the axis of the flap. A flap less than 8-10cm wide can usually be closed primarily (‘pinch test’); the flap can extend laterally beyond the ASIS.
* The dominant perforators of the superficial and deep branches are usually found 3cm medial to the ASIS and are explored through the superior or inferior flap incision. Perforators are traced in a retrograde fashion. The dominant branch is chosen as the pedicle of the flap. If present, a cutaneous vein should be preserved and include as the SCIVs can be small.
* Preserve cutaneous nerves as much as possible.
* Flap elevation should continue proximally in the suprafascial plane (Fig 3) until the perforator pierces the deep fascia, which should then be divided to follow the vessel proximally to include a distal portion of either the deep or superficial branch of the SCIA. The average size of the vessels for anastomosis is ~1mm.
  + Hong 2012 suggests dissecting at the interface of the smaller superficial fat globules and the deeper large fat globules.

**References**

Koshima I et al. Superficial circumflex iliac artery perforator flap for reconstruction of limb defects. PRS 2004. 113:233

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