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Conflict of interest

None.

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Axial propeller flaps: A proposal for update of the “Tokyo consensus on propeller flaps”



Dear Sir,

With this communication, we would like to propose an update to the classification of propeller flaps, since after its publication, new flaps have been described that need to be included.

In 2009, the “Tokyo” consensus on propeller flaps defined a propeller flap as an “island flap that reaches the recipient site through an axial rotation”.¹ In the actual classification, the type of nourishing pedicle, the degree of skin island rotation and, when possible, the artery of origin of the perforator vessel, need to be indicated.

With regards to the type of nourishing vessel, propeller flaps have been classified into 3 types:

- subcutaneous pedicled propeller flap;
- perforator pedicled propeller flap;
- supercharged propeller flap.

In the last years, we have described a different type of propeller flap that we have defined as axial propeller flap.^{2–4} The reason for this nomenclature is that it does not fit in any of the above mentioned types because it is not – by definition⁵ – a perforator flap, but it is neither a subcutaneous pedicle propeller flap since the vessels are dissected free from the surrounding tissues (that are not subcutaneous tissues anyway). To date we have described two flaps that fall into this category and that cannot be included in any of the existing types of propeller flap: the STAAP (supratrochlear artery axial propeller) flap (Figure 1) and the DLAAP (deep lingual artery axial propeller) flap (Figure 2). These two flaps do reach, as shown in Figures 1 and 2, the recipient site through an axial rotation. However, their pedicle is neither subcutaneous nor perforator. They aren’t supercharged and thus they do not fit in any of the types described in the Tokyo consensus based on the flap pedicle. The pedicle is indeed an axial, known vessel but the flap cannot be simply identified as axial flaps, since their pedicle enters the flap perpendicularly: as a result, they are harvested and transferred as propeller flaps and they perfectly fit the definition of propeller flap because they reach their recipient site through an axial rotation, their axis being a known axial pedicle.

For all these reason we believe that a new category of propeller flaps could be added to the Tokyo classification, in order to include this new type of propeller flaps, which combine the mobility of a propeller flap with the reliability of an axial flap. We would call it “axial pedicled propeller flaps”.

The types of propeller flap based on the vascular pedicle will thus become 4 as follows:

1. subcutaneous pedicled propeller flap;
2. perforator pedicled propeller flap;
3. supercharged propeller flap;
4. Axial pedicled propeller flaps.

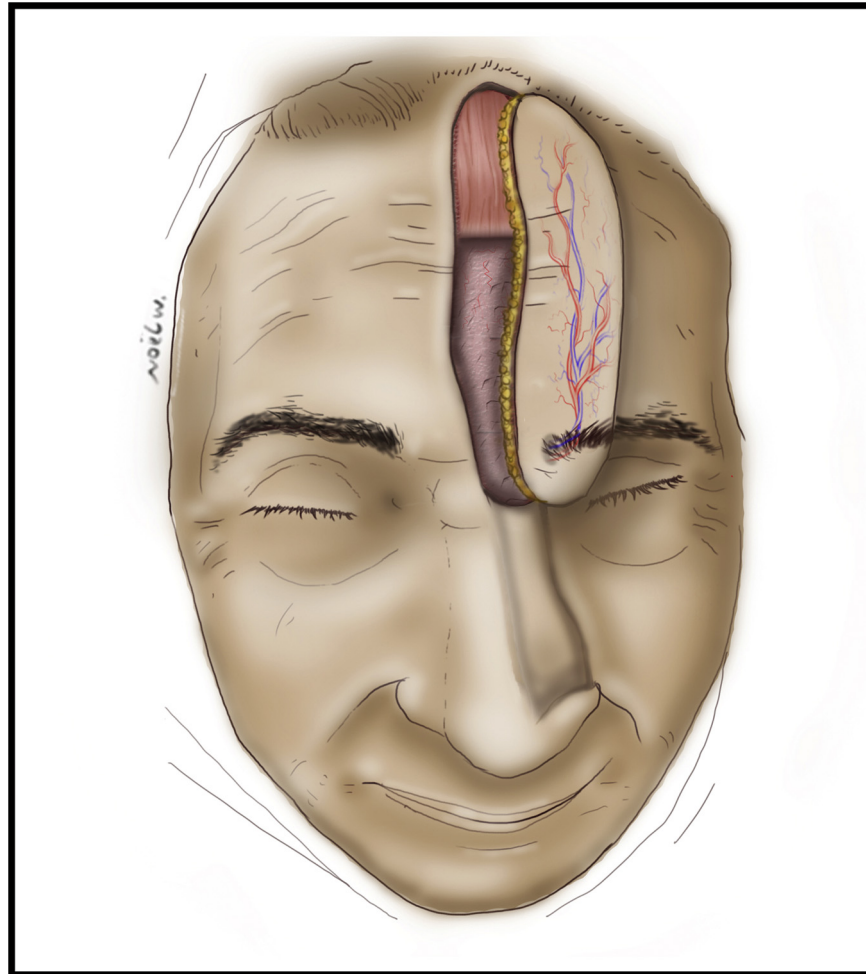


Figure 1 Schematic drawing of the STAAP flap. The flap is very similar to a forehead flap, but it is islanded and the pedicle is freed from the surrounding tissue. Although it is not a perforator by definition, since it comes out of the bone to enter the flap, it enters the flap perpendicularly. The pedicle itself is the pivot for the axial rotation that the flap undergoes to reach the recipient site. This movement defines the flap as a propeller. The vessels then runs axially inside the flap towards its tip: an axial pedicled propeller flap.

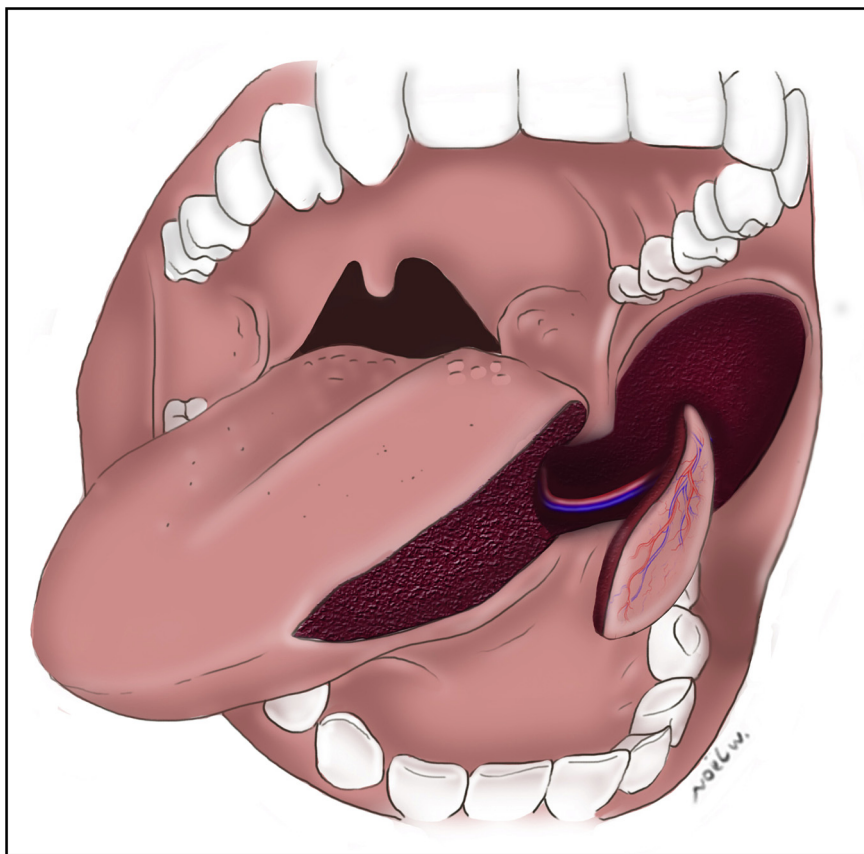


Figure 2 Schematic drawing of the DLAAP flap. The flap is raised with an approximate thickness of 6 mm and isolated on the deep lingual artery and venae comitantes, dissected through the genioglossus and the hyoglossus muscles. The vessels do enter the island mucosal flap perpendicularly. A cheek mucosal defect is outlined. The flap rotates axially around its pivot, made of the deep lingual pedicle, to reach the recipient site, which defines it as a propeller. The pedicle enters the flap and then runs axially towards the tip: it is an axial pedicled propeller flap.

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The effect of the Adult Exceptional Aesthetic Referral Protocol (AEARP) and NHS rationing of aesthetic surgery provision upon aesthetic training opportunities for Plastic Surgery trainees in Scotland



Dear Sir,

Aesthetic surgery remains one of the key sub-speciality areas Plastic Surgery trainees are required to have had significant exposure to/training in prior to the award of a Certificate of Completion of Training (CCT) in plastic surgery by the Speciality Advisory Committee (SAC) and Joint Committee on Surgical Training (JCST).¹ Concerns have previously been raised that National Health Service (NHS) rationing would lead to a reduction in aesthetic type

training and that efforts would have to be made to maintain standards.²

One such rationing system was instituted in Scotland in 2004 (the Adult Exceptional Aesthetic Referral Protocol (AEARP)) with the proviso that patients should only be referred for aesthetic type procedures should they have significant functional impairment and significant and prolonged psychological distress.³

We undertook a retrospective study to assess the effect the introduction of the AEARP had on the number of aesthetic type cases being performed within NHS Scotland.

A list of aesthetic type procedures, accessible to patients, both pre- and post AEARP introduction within NHS Scotland was compiled. In collaboration with the Information Services Division of NHS Scotland⁴ the Office of Population Censuses and Surveys (OPCS) code for each listed procedure was obtained and these codes used to generate a complete list of all the aesthetic type procedures carried out between 2002–2003 and 2012–2013. The data was truncated to show those procedures carried out by Plastic Surgeons and those procedures carried out by other non-plastic surgeons (i.e. ENT, General, Maxillo-facial). This data was further refined to show those procedures being carried out within Primary, Secondary or Tertiary centres. Primary centres were defined as one of the principal Plastic Surgery Units within Scotland; where trainees are routinely based, Secondary centres as hospitals where occasional cases are performed as a peripheral commitment or in conjunction with other specialities and Tertiary units as private sector establishments where NHS cases are performed as part of waiting list initiatives.

The number of aesthetic type cases performed by Plastic Surgeons and other surgeons in 2002–2003 compared to 2012–2013 is shown in Table 1. The overall number of aesthetic type procedures performed within NHS Scotland has actually increased since 2002–2003 (4989 vs 6605).

Table 1 Comparison of number of aesthetic type cases performed by Plastic Surgeons and Other Surgeons within NHS Scotland between 2002–2003 and 2012–2013.

Procedure	Plastic surgeons			Other surgeons		
	2002–2003	2012–2013	Difference 2002–2003/2012–2013	2002–2003	2012–2013	Difference 2002–2003/2012–2013
Abdominoplasty	240	216	–24	23	43	20
Augmentation mammoplasty	346	275	–71	14	16	2
Blepharoplasty	154	97	–57	397	766	369
Brachioplasty	32	83	51	5	1	–4
Browlift	1	3	2	30	113	83
Buttock lift	10	10	0	0	0	0
Facelift	31	33	2	9	21	12
Genioplasty of mandible	1	0	–1	94	118	24
Labial reduction	0	13	13	0	86	86
Liposuction	267	989	722	19	112	93
Mastopexy	159	312	153	14	32	18
Pinnaplasty	712	419	–293	247	294	47
Reduction mammoplasty	899	658	–241	20	172	152
Rhinoplasty	254	80	–174	1004	1632	628
Thigh lift	6	11	5	1	0	–1
Total	3112	3199	87	1877	3406	1529