RESULTS: Approximately 80% of patients had AWR with component separation and 8% had a bridged repair. The most frequently used mesh was porcine (Strattice, 56.5%), followed by bovine (Surgimend, 31.1%) and human (AlloDerm, 10.9%). There were 31 (16.2%) hernia recurrences with a surgical site occurrence rate of 25.1%. Among these patients, 13% had hernia recurrence within 3 years, while 16.7% at 5 years. BMI, bridged repair and AlloDerm are associated with higher hernia recurrence rate (respectively, HR=1.9, p=0.09; HR=10.1, p<0.001; HR=2.52, p=0.044). When bridged repairs and AlloDerm cases are excluded, hernia recurrence rate drops to 8.2% within 3 years and 10.7% at 5 years follow-up.

CONCLUSIONS: The use of ADM for AWR is associated to a low hernia recurrence rate at long-term follow-up. These outcomes can be optimized avoiding bridged repairs and AlloDerm meshes.

17.00 FREESTYLE PEDICLED PERFORATOR AND PROPELLAR FLAPS: ANATOMIC STUDIES AND CLINICAL APPLICATION

Guilherme BARREIRO, Alex FIORAVANTI
São Paulo, Brazil

INTRODUCTION: Freestyle perforator flaps have been described for soft tissue reconstructions throughout the body. The flaps are designed in accordance to the defect, the surrounding available perforators, and excess regional tissue. Knowledge of the anatomic angiosomes and respective perforators provide a broad spectrum of available pedicled flaps for the reconstructive surgeon. We present our anatomic studies and the clinical application of freestyle perforator flaps in the trunk, head and neck, and limb.

MATERIALS AND METHODS: Cadaveric anatomic studies were performed to identify reliable perforators based on individual angiosomes. In clinical cases, perforator-preserving incisions were used without the use of a hand-held Doppler or pre-operative imaging. Freestyle fasciocutaneous perforator flaps were harvested following subfascial identification of the largest perforator(s). Flaps were designed based on the defect size, location of the recipient site, and nearby available tissue. Dissection of the perforator was continued to its main vascular trunk for optimal mobility and rotation of the flap. Flaps were rotated or tunneled for final inset, and those that extended into a tertiary angiosome were supercharged as necessary.

RESULTS: From January 2012 to June 2015, 42 patients were reconstructed with freestyle perforator flaps without the aid of handheld Doppler or pre-operative imaging. Donor sites were primarily closed in 83.3% of the cases. Total complication rate was 21.4%, with 7 patients (16.7%) presenting with distal flap necrosis. All healed with re-advancement of the flap or dressings. There were no complete flap losses. All defects were adequately closed with the designed flaps.

CONCLUSIONS: Understanding of the anatomic perforasomes throughout the body provides the astute reconstructive surgeon with ample reconstructive options for the use of pedicled flaps. Freestyle perforator flaps are a safe and reliable option for trunk, head and neck, and limb soft tissue reconstruction and do not require the use of handheld Doppler or preoperative imaging.

17.10 DEVELOPMENT OF A NOVEL DIGITAL IMAGE SYSTEM IN PLASTIC SURGERY

Christian BONDE, Jens HOEJVIG, Alessandro VENZO
Copenhagen, Denmark

INTRODUCTION: Visual documentation is a vital part of assessing outcomes following both reconstructive and aesthetic plastic surgery. Photos are also helpful for both surgeons and patients when procedures are planned in order to achieve realistic outcome expectations. Images of surgical results also play an important part in plastic surgical research. Analogue, paper-printed, photographs have been used at our department for more than 35 years, and digital images have been used for the past two decades. However, handling large quantities of digital images and using them constitutes a significant challenge and the literature regarding this problem is scarce.

MATERIALS AND METHODS: Our department have collected almost 200,000 digital photographs