RP01

**Level 3 Oncoplastic breast reconstruction - techniques, outcomes and logistical considerations**  
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**PURPOSE:** Oncoplastic Breast Reconstruction (OPBR) is a challenging field with growing demand. Our study aims to analyze selection, surgical techniques and outcomes of patients who underwent a large volume lumpectomy (20-50% volume or level 3) with OPBR at a single centre. Secondary outcomes include a descriptive analysis of interdisciplinary operative planning logistics.

**METHODS:** A retrospective chart review of patients in a single centre who underwent level 3 OPBR between July 1, 2016 and September 1, 2019 in London, Ontario was conducted. Data collected included demographics, surgical techniques, tumour characteristics, and patient outcomes.

**RESULTS:** Twenty-four patients were identified to have received level 3 OPBR. Average age and BMI at surgery were 53.6 (37-73) years and 31.2 (21.7-46.4) kg/m2 respectively. Breast cup size ranged from C-DDD cup, and all breasts had grade 2 or 3 ptosis. Average oncologic resection weight was 176.2 (54-446) grams. Wise-pattern dermoglandular flaps were used for all 24 OPBRs. The nipple areolar complex (NAC) was preserved in 23 breasts, and excised in 1. Seventeen breasts required two or more dermoglandular pedicles to fill the lumpectomy defect. No skin flap or NAC necrosis were reported in the OPBR breasts.  

**CONCLUSIONS:** Breast conservation is a challenge for larger cancers requiring excision of 20-50% breast volume. Such cases are classified as Level 3 oncoplastic cases and benefit from the expertise of plastic surgeons to optimize aesthetic outcomes. In our study, various dermoglandular and adipofascial flaps were employed, alone or in combination, to address these large lumpectomy defects, with good cosmesis and no reports of skin flap or NAC necrosis.

**LEARNING OBJECTIVES:** 1. Define OPBR 2. Recognize various dermoglandular and adipofascial flap options utilized in OPBR 3. Recognize the value of multi-disciplinary team dynamics in the practice of OPBR

RP02

**Denervation as a treatment for osteoarthritis in the small joints of the hand: A systematic review**  
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**PURPOSE:** When conservative treatment options for hand osteoarthritis fail, surgical interventions such as osteotomies, arthroplasties and arthrodeses are pursued. However, each of these interventions are invasive and carry inherent limitations. Joint denervation was proposed as a less invasive option that maintains bony anatomy while alleviating pain. Herein we describe the first systematic review and synthesis of current evidence to assess the effectiveness and complication profile of denervation as a treatment for hand osteoarthritis.

**METHODS:** A systematic review of four peer-reviewed databases was performed in accordance with PRISMA guidelines. Screening was performed in duplicate with quantitative and qualitative data abstraction.

**RESULTS:** Ten relevant studies, with 203 patients, were included in the review. Seven articles described denervation in the first carpometacarpal joint, while the remaining three described denervation in the metacarpophalangeal joint, proximal interphalangeal joint and distal interphalangeal joint. In all included studies, pain was decreased and function was increased postoperatively. Combined analysis of three papers describing CMC denervation revealed significant decrease in pain (p<0.001). The
mean complication rate across all studies was 16% (n= 30/184). The most commonly reported complication was neuropathic pain or sensory loss, seen in 9.7% (n = 18/184) of included patients. **CONCLUSION:** Findings of this review suggest denervation is an effective and low morbidity procedure for the treatment of osteoarthritis in the hand. Denervation can serve as a useful tool in the hand surgeon’s armamentarium, particularly for patients failing nonoperative management and looking to pursue less invasive surgical management. Further prospective comparative studies are required to develop a more comprehensive understanding of the outcomes of denervation, especially in comparison to more conventional procedures of osteotomy, arthroplasty and arthrodesis. **LEARNING OBJECTIVES:** 1. Describe limitations of current operative options for hand osteoarthritis; 2. Understand current evidence on the technique and outcomes for denervation as a treatment for hand osteoarthritis.

**RP03**

*Suture enlocation of mandibular condyle fractures: A technical description and case series*

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**PURPOSE:** Open reduction and internal fixation of mandibular condylar fractures demonstrates superior outcomes to non-operative management for selected patients. In patients with comminuted, intraarticular fractures, a novel Suture Enlocation (SE) approach is proposed as an effective method to manage condylar position. This paper will describe the SE approach and illustrate the outcomes with a case series. **METHOD:** This study is a review of patients who underwent repair of condylar fractures between 2009?2019 using the SE approach. Health records and images were reviewed. The main outcomes at the last follow-up include diet, inter-incisal opening, occlusion and pain. **RESULTS:** Through a preauricular incision, the condylar fragment is visualized and reduced, a suture is then employed to provide enlocation of the condyle. A hole is drilled through the largest articular condylar fragment, and a PDS suture is then passed, retrieved, and fixed to the periosteum. Occlusion is managed with class 2 elastics. Indications include fracture dislocation, malocclusion, and inadequate surface area for traditional fixation. Seven patients and nine condyles were included. The age at time of injury ranged from 12?51 years and the time from injury to surgery ranged from 2-8 days. CT confirmed the presence of mandibular condyle fractures which would benefit from the SE approach. Follow-up ranged from 3-13 appointments. All patients progressed their diet; five patients had normal inter-incisal opening; three patients had normal occlusion, two had crossbite, two had anterior open-bite; and four patients reported discomfort or pain at last follow-up. One patient was considered a failure of the SE approach. **CONCLUSIONS:** Seven patients with nine mandibular condyle fractures illustrate the benefit of a novel SE approach. **LEARNING OBJECTIVES:** 1. A novel Suture Enlocation approach is proposed as an effective option for operative management of comminuted intraarticular mandibular condylar fractures when indicated.

**RP04**

*Adherence of clinical referrals to ABA criteria in a tertiary care burn centre: A retrospect review*

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**INTRODUCTION:** Burns are dynamic injuries, which makes patient triage for appropriate treatment difficult. The American Burn Association (ABA) created criteria to help identify patients that may require referral to a specialized burn center, but despite these guidelines, many patients are triaged inappropriately. **PURPOSE:** To characterize the regional referral patterns of burn patients to a tertiary burn clinic and determine the adherence of these referrals to ABA criteria. **MATERIALS AND METHODS:** A retrospective review of all burn patients presenting to a regional burn referral clinic between 2018 and 2019 was performed. Patient demographics and specific burn information was acquired from patient charts including burn depth, size, and source. This database was then analyzed for appropriateness of referral in comparison to ABA guidelines. **RESULTS:** A total of 137 patients (48 Females, 89 Males) were included, with an average age of 28.3 years (range 0.5-87 years). Causes of burns were: 44 contact, 34 flame, 34 scald, 13 grease, 6 chemical, 4 other, and 2 electrical. There were 10 superficial burns, 91 superficial partial thickness, 21 deep partial thickness, and 15 full thickness burns. Average number of clinic visits per patient was 2. Eighty-five patients had fully healed wounds at their first visit, with 91% of these having a <1% total body surface area wound. In total, 88% of consults met ABA criteria. **CONCLUSION:** Although the majority of referrals met ABA criteria, over half of cases were healed on first presentation. This may imply that although injuries meet ABA criteria, some patients may be appropriate for primary care follow-up allowing for improved specialty clinic utilization. **LEARNING OBJECTIVES:** 1. Understand common burn presentations that prompt specialist referral; 2. Identify teachable points to improve burn patient triage.

**RP05**

*Canadian trends in post-operative management following microsurgical lower limb reconstruction: A cross-sectional survey*
PURPOSE: Microsurgical free tissue transfers have become essential and are often used as first line options for lower limb reconstruction, allowing safe and effective reconstruction after trauma, oncological resections and complex wounds. The peri-operative management of fascio-cutaneous free flaps includes many factors aimed at mitigating the risk of microvascular complications. However, optimal management remains controversial. This study aims to assess the current state of practice among Canadian microsurgeons. METHOD: 56 Canadian microsurgeons were approached to complete an online questionnaire. The survey evaluated specific areas of interest regarding the post-operative (PO) management of fascio-cutaneous free flaps used for lower limb reconstruction. Trends in protocol timing and duration, use of venous couplers, application of compressive garments, thromboprophylaxis and surgeons’ satisfaction with their protocol were assessed. RESULTS: 28 surgeons responded and 57% did not have a specific mobilization protocol. Dangling was mainly initiated on PO days 5-6 (44.4%). The most common duration was 5-6 days (43%). Reducing prolonged venous pooling was the most common reason for delay of dangling (71.4%). Compressive garments were placed routinely by 12 surgeons (43%). Venous couplers were routinely used by 24 surgeons (85.7%). Trends in management were influenced by previous training in 53.6% of cases (vs. EBM 7.1%). Although 89.3% were satisfied with their approach, 92.8% would consider changing practice if higher-level evidence were available. CONCLUSIONS: The majority of Canadian microsurgeons initiate dangling early following lower limb reconstruction using fascio-cutaneous free flaps. Venous couplers are used by the majority. However, the use of compressive garments is limited. Trends in management are largely based on personal experience and almost all surgeons would consider changing their practice if higher level evidence were available. LEARNING OBJECTIVES: 1. Participants will understand Canadian trends in peri-operative management of microsurgical free flaps. 2. Participants will understand the necessity for further studies in this domain.