

Summer Scientific Meeting 2015- Poster Abstracts

(abstracts are listed in alphabetical order by presenter Surname)

Steam inhalation therapy in children: a “heated debate”?

Dr S Al-Himdani, Miss J Hughes, Dr O Falconer, Dr C Bidder, Miss D Nguyen
Morrison Hospital

Introduction

Steam inhalation is often recommended by health care providers as a treatment for the common cold in children. However, evidence from randomised controlled trials has demonstrated that it has no proven benefit and it may in fact result in serious paediatric scalds.

We aimed to evaluate our experience of scalds resulting from the inhalation of warmed vapour in the paediatric patient group over a five-year time period.

Method

We undertook a retrospective review of paediatric patients (age 0-16 years) presenting to Morrison Hospital Burns Centre, with scalds resulting from steam inhalation therapy over the period January 2010 to January 2015.

Results

During this 5-year period, 15 children were treated with scalds associated with the use of steam inhalation therapy (mean 3 per year). Ages ranged from 1-15 years (mean 7.5 years). Forty-seven percent of patients were aged under 5 years. The commonest indication for inhalation therapy was for treatment of the common cold. The commonest areas affected were from “lap scalds” ie. thighs (53%) and legs (27%). The average number of anatomical sites affected was 2. Seventy-three percent of patients required admission and the length of stay ranged from 0-10 days (mean 2.2 days). The mean TBSA was 2.3% and the majority of burns were superficial partial thickness injuries. All but one patient healed with conservative measures.

Conclusion

Steam inhalation remains a commonly utilised treatment for the common cold and upper respiratory tract infections, however, it carries a significant risk of scalds in the paediatric population. Health care professionals should be aware of these potential adverse effects and parents should be warned regarding the risk of significant scalds from this treatment.

The junior doctor's perception of plastic surgery

Miss S Bagirathan, Mr J Pollock

Nottingham City Hospital, Nottingham University Hospitals NHS Trust

Introduction

The broad nature of plastic surgery, from simple wound care to complex trauma and oncology, suggests it is highly relevant for medical professionals to have exposure in the discipline. We aimed to assess the junior doctor's perception of plastic surgery and how confident they felt with key topics.

Method

An online survey was sent to all foundation doctors training within one deanery, which currently does not provide foundation rotations in plastic surgery. The questionnaire asked which of 34 common surgical procedures did they perceive to be performed by plastic surgeons. Questions were also asked about how much exposure they had to the specialty within medical school, how confident they felt about key topics and whether they would consider a career or foundation job in plastic surgery.

Results

68 foundation doctors responded to the survey. 52.9% felt they had no exposure to the specialty, and 69.1% felt they had no confidence in the key plastic surgery topics required for finals. Whilst only 10.3% considered a career in the specialty, 32.4% would have considered a foundation job and a further 26.5% were unsure. Whilst the majority recognised that plastic surgeons were involved in breast reconstructions and burns, only 50%, 25% and 37.5% were aware of our involvement in skin cancers, lower limb trauma and hand trauma, respectively.

Conclusion

The key principles of plastic surgery can equip the junior doctor with core skills and knowledge required for working in any specialty. Our study shows that there is a clear interest in the specialty, however there is a lack of education to nurture this interest. We propose for plastic surgery departments to have stronger links with undergraduate faculty, as well as their local foundation schools.

Venous flaps in hand surgery: Worth another look? a systematic review of the literature

Mr C Bain, Mr R Wharton, Miss H Creasy, Mr M James, Mr A Fox

St Thomas' Hospital

Introduction

Venous flaps provide an elegant solution for coverage of soft tissue defects in the hand and are an alternative to arterially-based fasciocutaneous flaps and perforator flaps. Once transferred, they may be arterialized at the recipient site, or run solely from the venous system. Poor understanding of the physiology and confidence in their survival has limited their usage. We present a comprehensive systematic review of outcomes of published cases detailing venous flaps usage in soft tissue hand reconstruction.

Methods

Database searches were performed on Medline, Embase, AHMED, CINAHL, as well as grey literature by two separate researchers (CB, RW). Papers were analysed against pre-determined inclusion criteria by the authors as per PRISMA guidelines.

Results

77 papers were identified by the primary search, of which 45 were included in the final analysis, detailing 682 flaps. 81% of venous flaps were arterialized, with the remainder true venous flaps. The volar distal forearm was the commonest donor site. Venous congestion was included as an outcome measure in 30 studies, with an overall congestion rate of 66%. Almost all cases of congestion were managed non-operatively, with a 2.2% complete failure rate across all series. Unplanned return to theatre was reported in 5.3% of cases, most commonly for partial flap necrosis requiring split thickness skin grafting. Only 26 of the 45 studies included assessment of functional outcomes, with significant heterogeneity existing between these outcome measures.

Conclusions

Venous flaps appear to offer a versatile and well-tolerated reconstructive option in the acutely injured hand with an acceptable morbidity rate. Further large studies evaluating outcomes are required.

Randomised control trial of effect of home based training modalities in acquisition of basic microsurgery skills

Miss P Chadha, Miss D Masud, Miss N Hachach- Haram, Miss M Moustaki, Mr M Malik, Miss P Mohanna
St Thomas' NHS Trust

Introduction

It is essential that the acquisition of technical skills is undertaken without compromising patient care, which can be very challenging in microsurgery as it exhibits a steep competency learning curve.

Aim

In view of the modern NHS directive for to change delivery of education to overcome these challenges, our aim was to develop a low fidelity, low cost simulation course that could be undertaken at home.

Method

40 participants were given an introductory lecture to basic microsurgery and assessed at baseline and 4 weeks after training, using a chicken vessel anastomosis task, with 2 blinded assessors assessing their video recordings.

Participants were randomised into 4 groups: i) control group, C (no training), ii) gold standard, GS, (laboratory based training), iii) home tablet (HT) training group (using an Apple iPad at home), iv) home

microscope (HM) group (using an inexpensive jewellers microscope for home training). The two home training groups followed a modified simulation training curriculum at home.

Result

Time to complete task: Statistically significant difference noted between control vs; GS $p=0.006$, HM $p<0.001$, HT <0.001 . Number of sutures placed: A statistically significant difference noted between control vs; GS $p=0.038$, HM $p=0.019$, HT $p=0.028$. A statistically significant difference was noted between control vs; GS $p=0.004$, HM $p<0.001$, HT $p<0.001$.

Conclusion

Funding is not always available for simulators and scheduling time into the trainees already demanding schedule to access on site simulators can be challenging. Our study shows that home training modalities are comparable to gold standard training models, thus providing a low cost, accessible solution to training.

The use of transfixion suturing of acticoat dressings in burn and skin graft care: experiences from a regional burns centre

Dr A Chandra, Mr N Hamnett, Miss E Chamaidi, Mr A Farroha
Queen Elizabeth Hospital

Introduction

Acticoat is a widely used bi-layered silver based dressing. Acticoat's nanocrystalline structure increases the surface area of available bactericidal silver. It is effective against gram positive and gram negative as well as anaerobic bacteria, M.RSA, VRE and certain fungal pathogens.

Method

present our experience of using Acticoat in burns patients with the addition of transfixion sutures to stabilise the dressing in situ. For circumferential areas on limbs it is transfixed proximally, distally and onto itself. In convex and concave areas such as scalp, shoulders, buttocks, knees, antecubital or popliteal fossa the Acticoat is transfixed on one side then pulled across to ensure it conforms snugly with the contour of the wound bed and/or graft.

Results

It is our experience that this technique not only helps to improve the patient's experience due to fewer slipped dressings resulting in potentially painful dressing changes but improves graft take and a quicker time to healing.

Discussion

Failure to conform and to eliminate creases can cause pooling of exudate under the dressing as well as uneven pressure onto the skin graft. Most importantly this simple technique eliminates shearing forces on

healing wounds or skin grafts. The transfixed Acticoat is often covered with ample layers of dressing gauze which in the acute setting serves to absorb exudate, offer padding and protection whilst to some extent splinting and immobilizing major joints.

Conclusions

Transfixing the primary dressing in place frees up the hands of the surgeon and makes for speedier, more assured application of the secondary dressing layer.

Bilateral Breast Reconstruction with abdominal free flaps: a single centre, single surgeon retrospective review of 55 consecutive patients.

Mr K Yeow Chin, Mr P McAllister, Miss I Teo, Mr D A Munnoch
Department of Plastic Surgery, Ninewells Hospital

Background

Breast reconstruction using autologous free tissue transfer is an increasingly utilised oncoplastic procedure. There is growing evidence to show that abdominal based free flaps in breast reconstruction provide the most favourable long-term aesthetic results. The aim was to review all bilateral breast reconstructions using abdominal free flaps by a single surgeon over an 11 year period (2003 – 2014).

Methods

A retrospective case note review was performed on all patients who had underwent bilateral breast reconstruction using abdominal free flaps between 2003 and 2014 by the senior author. Data analysed included patient demographics, indication for reconstruction, surgical details and complications.

Results

Fifty-five female patients (mean 48.6 years [24 – 71 years]) had bilateral breast reconstruction. The majority (41, 74.5%) underwent immediate reconstruction and DIEP flaps were utilised. Major surgical complications requiring immediate unplanned surgical intervention occurred in 6 (10.9%) patients, all of which were postoperative vascular compromise of the flap. Failure to salvage the reconstruction occurred on 3 (5.5%) occasions resulting in a total flap failure rate of 2.7%. Obesity ($>30\text{kg/m}^2$) and patients older than 60 years were shown to have a statistically increased risk of developing post-operative complications ($p<0.05$).

Conclusion

Our experience demonstrates that abdominal free flaps for bilateral breast reconstruction fares well, with a flap failure rate of 2.7%. Increased body mass index and patient age (>60 years) were associated with higher complication rates. This is useful information to help clinicians regarding surgical decision making and for the counselling of future patients.

Effects of fluid filling and blood parameters on lower limb free flap survival

Dr H Chu, Ms A Giblin

Frenchay Hospital

Background

Major trauma is as an important cause of mortality and morbidity. A lower limb flap reconstruction database is kept at Frenchay hospital to improve flap survival following trauma. These complex cases require optimization of numerous variables to ensure successful union.

Aim

To interrogate parameters associated with patient filling; haemoglobin, haematocrit, fluid balance and urine output with lower limb free flap reconstruction success and survival.

Methods

The flap database was interrogated retrospectively and these parameters were analysed.

Results

In the 64 cases that were treated acutely, according to the BOA BAPRAS standards, the mean pre-operative Hb was found to be 11.0g/dL. Urine output varied more greatly and the mean flap survival for this cohort was 89%.

In the 34 cases that had delayed surgery the mean pre-operative Hb was found to be 12.1 g/dL. Urine output varied postoperatively and the mean flap survival was 96%.

Conclusions

Maintaining a patient's fluid status at an adequate level, by means of measuring fluid balance and urine output has been shown to provide the best flap survival rates. However, blood parameters also play a vital role in keeping tissue oxygenated, with haemoglobin and haematocrit maintained above recognised levels of 8gdL and 0.4 respectively.

Lessons from The Ad Industry: behaviour change techniques to improve clinician engagement in audit

Miss I Citron, Miss S Hendrickson, Mr A Fox
St Thomas' Hospital

Introduction

Failure of the clinical audit process often results from lack of "buy-in" by the clinical staff relied upon to participate. Widely used in advertising and public health, Michie et al. define 40 evidence-based behaviour change techniques (BCTs) shown to increase participation in positive behaviours. We aim to establish if BCTs can be applied in the context of clinical audit to increase clinician response rates.

Methods

Clinicians were asked via email to collect data for a real clinical audit. The email explained the audit rationale and instructions for completion. Responses were collected prospectively over a 6-week baseline period.

Subsequently, an intervention which combined 16 of the 40 recognised BCTs was delivered. These included highlighting to the clinicians how they personally benefit from audit completion, “defaulting” by incorporating audit completion into the existing case booking process, “fun theory” by making a satirical data collection box which caricatured the senior author, and “normalization” by highlighting that the action is performed by peers. This was followed up by weekly emails which used 6 supportive BCTs. Responses were collected for a further 6 weeks. Clinicians were blinded as to the explicit use of BCTs.

Results

Prior to the implementation of BCTs, 6 of the total eligible procedures were recorded, representing 10.7% compliance. After the behaviour change intervention, recording compliance increased by more than 50%, to 66% ($p < 0.0001$, Fisher exact test).

Conclusion

BCTs are an effective way to increase clinician participation in audit. These techniques should be widely taught and used to bolster clinical audit compliance.

An inexpensive set up for microsurgery practice

Mr J Coelho, Mr M Gorman, Mr S Gujral, Mr C Mills, Mr C Wallace
Royal Devon & Exeter Hospital

Introduction

Microsurgery is one of the most challenging elements to master within plastic surgery. Facilities and opportunities to practice and obtain feedback are often not available or catered for within current departmental and training programs. The costs of potential practice microscopes with attendant video recording facilities are prohibitive. We present our experience procuring an economical tabletop tri-nocular surgical microscope, with video recording facility.

Materials/Methods

The minimum requirements for the microscope set up were: tri-nocular, x20 magnification, 20cm working distance, high quality optics (similar to Zeiss/Leica standards), adequate light source (often too dim), and the ability to record and directly stream simultaneously.

Results

The complete set up above cost was £1500, however with adaptations the aim is to acquire everything within approximately £750 (the equivalent of a relatively inexpensive set of loupes).

This microsurgery set up allows the trainees to practice microsurgery skills on a frequent basis. Not only by developing a feel for the use of a genuine surgical microscope, but also offering video and direct streaming facilities, allowing the user to reflect on and develop their skills.

Trainees will be able to record their work and send it directly to assessors, acting as an ideal training tool with regard to “simulated” work-based assessments.

Conclusion

We demonstrate an innovative, exciting, affordable and effective set up for practicing microsurgery. We feel that this could be a cost-effective investment for plastic surgery departments and keen individuals. We are currently validating the set up against current practice.

Cosmetic ear piercing: is the public told the truth?

Mr S Coulson, Mr J Rodrigues, Mr Z Shariff
The Hand Centre, Northern General Hospital

Introduction

Hypertrophic and keloid scarring can occur following cosmetic procedures such as piercings. Little information exists on their incidence following cosmetic piercings, with no formal guidance on its disclosure as a complication when consenting. This study surveyed piercing parlour policies regarding awareness of and consent for adverse scarring from cosmetic piercings.

Method

Google was searched to identify cosmetic piercing businesses in Sheffield, UK. All were contacted by telephone and those that consented, were posed a questionnaire. Information regarding consent, operator experience, aftercare advice and customer demographics was obtained.

Results

Fifteen piercing businesses were identified, with 13 (80%) responding to the study questionnaire. 12 (92%) always obtained generic written consent, 3 (23%) using a generic form and 9 (69%) a company specific form. 6 (46%) discussed hypertrophic/keloid scarring as a complication during consent, whilst 3 (23%) did not routinely discuss any complications. 10 (77%) respondents would recommend a medical review if faced with a hypertrophic/keloid scar, with the remaining 3 (23%) providing inappropriate advice. Whilst 8 (62%) businesses provide generic aftercare leaflets none of those materials handle hypertrophic/keloid scarring.

Conclusion

This study highlights a lack of awareness and appropriate informed consent in cosmetic piercings and a risk of incorrect post procedure advice. The authors suggest that public health bodies embark on an education package with local businesses to overcome these shortcomings. Education packages could

include patient information leaflets and consent forms, formulated with guidance from local plastic surgery units.

Delayed reconstruction of the post-surgical, unhealed perineum using inferior gluteal artery perforator based flaps

Miss H Creasy, Mr M Pramateftakis, Miss P Mohanna, Mr P Roblin, Mr J Constantinides, Mr A Schizas, Mr M George, Mr D Ross

Guy's and St Thomas' NHS Foundation Trust

Introduction

Perineal wound complications following abdominoperineal excision (APE) are common, particularly in the context of neoadjuvant radiotherapy. The inflammatory bowel population pose their own challenge, with the use of immunosuppressants and poor wound healing. The use of myocutaneous flaps in immediate reconstruction following resection is well described, with the aim of recruiting healthy non-radiotherapised tissue to provide a tension free closure with obliteration of dead space. The approach to delayed reconstruction of the unhealed perineum following excision is less well defined.

Method

We present a series of patients with complicated perineal wounds following resection, who were reconstructed with inferior gluteal artery perforator (IGAP) based flaps. The local flaps were advanced in a VY fashion, filling the defect in order to promote healing. A retrospective analysis of patient demographics and post-operative outcomes was performed.

Results

Twenty patients underwent delayed IGAP flap reconstruction of the unhealed perineum following APE (14), panproctocolectomy (4) or pouch excision (1). The median follow-up was 9.8 months. There were 6 minor complications, (3 cellulitis, 3 superficial dehiscence). Two patients returned to theatre for debridement and VAC application during their inpatient stay. Late return to theatre occurred in six patients (3 debridement and VAC, 2 re-suture, 1 re-advancement). All of the patients apart from one went on to heal. There were no perineal hernias observed in this series, but one patient reported chronic pain on sitting.

Conclusion

This series demonstrates the successful use of IGAP based flaps in reconstruction of the unhealed perineum in a challenging population.

Open access one-stop plastic surgery trauma clinic: auditing and improving efficiency

Mr J Dunne, Ms K Miyagi, Ms E Pardoe, Mr J Haeney
Hull Royal Infirmary

Introduction and Aims

Trauma represents 25% of the plastic surgery workload. An efficient service is vital to reduce delays to surgery, which may adversely affect outcomes. A minor operations clinic theatre may reduce demand for main theatre lists.

The aims of this study were to: 1) assess the utilization of a new clinic theatre; 2) assess service efficiency in a repeat study after producing a list of core procedures.

Methods and Materials

The trauma service consists of a daily morning clinic and afternoon theatre list. A study of consecutive cases presenting to a new clinic with a theatre over 2 weeks in December 2012 was undertaken, with a follow up study over 2 weeks in March 2013.

Results

120 patients presented in December 2012, of which 82% were upper limb trauma. 60 patients (50%) required an operative procedure. 24 operations (40%), which previously would have been done in main theatre, were performed in clinic. 53 patients (88%) had their operation on the day of clinic.

15 of 36 (42%) operations in main theatres were identified as suitable for management in clinic theatre, but were not because: 1) theatre was not appropriately stocked; 2) staff unsure of suitable operations.

These factors were addressed, and suitable procedures established including nail bed and digital nerve repair.

In the repeat study, 103 patients presented, of which 55 required an operation (53%). 53 patients (96%) had their operation on the day of clinic. 3 patients (5%) had operations in main theatres but could have received treatment in the clinic theatre.

Conclusions

A protocol of procedures to perform in clinic greatly improves service efficiency. Provision of a trauma clinic theatre may lead to earlier treatment, and considerably reduces strain on main theatre lists.

Non-hand and wrist dog bites: a management algorithm

Mr J Dunne, Mr D van Gijn, Mr J Colville

St George's Hospital

Introduction and Aims

Dog bites account for 0.5% of Accident and Emergency (A&E) visits. Most of these should have a good outcome after washout in A&E and discharge home with antibiotics. Some bites will however do better with inpatient treatment to prevent infection, stiffness and pain.

Our aim was to review dog bite outcomes not involving the hand or wrist and identify groups likely to do better if admitted.

Materials and Methods

A retrospective one-year review (2013) of consecutive non-hand and wrist dog bites presenting to a teaching hospital A&E, or referred for tertiary surgical review, was performed.

Results

58 patients with a mean age of 30 years were included of which 28% were paediatric (\leq 16 years). 25 (43%) patients had bites to the lower limb, 14 (24%) the face and 14 (24%) the upper limb. 31 had puncture wounds (53%), with 48 (83%) presenting on the day of injury.

Following assessment, 4 were diagnosed with cellulitis and 3 with tendon or nerve injury; the remaining 51 had wounds only. 43 (74%) were managed in A&E including 8 cases referred to specialists. 38 (88%) received antibiotics and 32 (74%) had wound irrigation. None returned with a complication.

15 patients were admitted and 14 went to theatre, all only on one occasion, of which 11 were punctures. 6 were paediatric cases needing GA, 3 were adults with infected wounds or structural injury. One patient had a breast wound successfully treated with intravenous antibiotics alone. None returned with a complication.

Conclusions

Our indications for inpatient surgical debridement are paediatric cases not appropriate for LA, infection, structural injury, and deep puncture wounds. The majority of bite wounds are successfully managed in A&E with wound irrigation and prophylactic antibiotics.

Open-label, multicentre STEVIE study of the hedgehog pathway inhibitor vismodegib: updated global interim analyses and UK case studies from patients with advanced basal cell carcinoma (aBCC)

Mr A Durrani, Professor B Dréno, Professor R Kunstfeld, Professor J Grob, Professor L Mortier, Professor N Basset-Seguín, Professor J Hansson, Professor A Hauschild, Miss S Jones, Dr K Fife

Introduction and aims

Aberrant hedgehog (Hh) signalling is the key driver in basal cell carcinoma (BCC) pathogenesis. Vismodegib, a first-in-class Hh pathway inhibitor, is licensed in the UK for aBCC inappropriate for surgery or radiotherapy. STEVIE, the largest ever aBCC study, is investigating vismodegib safety; efficacy is a secondary objective. We present selected UK patient cases and key global interim data from STEVIE (data cutoff: 6 November 2013).

Materials and methods

Adults with locally advanced (la) or metastatic (m) BCC received vismodegib 150 mg once daily until progressive disease, unacceptable toxicity, or withdrawal. Safety is assessed with National Cancer Institute Common Terminology Criteria for Adverse Events (version 4.0).

Key results with supporting statistical analysis

The interim analysis included 501 adults (laBCC=470; mBCC=31) with potential \geq 12 months' follow-up. Common treatment-emergent adverse events (TEAEs) were muscle spasms (63%), alopecia (61%), dysgeusia (54%), decreased weight (32%), asthenia (28%), decreased appetite (25%), ageusia (22%), diarrhoea (17%), fatigue (16%), and nausea (16%). Overall response rate in adults with measurable disease (Response Evaluation Criteria In Solid Tumors, version 1.1) was 67% (laBCC; n=302/453) and 38% (mBCC; n=11/29); median durations of response were 23 and 14 months, respectively. Safety and efficacy outcomes from selected UK patients will be presented.

Conclusions

The STEVIE global interim analysis confirms the safety profile and efficacy of vismodegib. Data from UK patients further support vismodegib treatment of aBCC. STEVIE recruitment is complete (n=1,227); patient treatment and follow-up are ongoing.

The facts and fiction of topical anaesthetics: a review of their use in minor skin surgery to alleviate pain and distress

Mr M Gorman, Mr J Coelho
Royal Devon & Exeter Hospital

Introduction

Per GMC 'Good Medical Practice', doctors should 'take all possible steps to alleviate pain and distress'. Local anaesthetic (LA) injection during outpatient skin surgery procedures (OPSS) is painful and distressing, but may be improved by topical anaesthesia (TA). We thus reviewed the facts and fictions surrounding TA's clinical utility and basic physiological science.

Methods

Literature searches with defined terms were designed to identify studies using TA within OPSS and non-surgical procedures. Studies evidencing TA's basic science were also included, but lower level evidence (case reports and studies lacking robust methodological design) were excluded.

Results

Post inclusion criteria, 43 studies were identified. Framework analysis revealed TA achieves adequate skin anaesthesia in non-surgical procedures and superficial surgical excision. Patients report significantly decreased pain when used supplementary to injectable LA (in OPSS), and >50% feel its independent application would suffice in full thickness skin excision. The main objection to TA is the extra time and inconvenience added to procedures. However, protocols are often not based upon evidenced parameters and so overestimate, for example, TAs duration of onset.

Conclusion

TA is effective when excising superficial lesions and to greater depths with ancillary measures. Research conclusions commonly overlook TA's efficacy supplementary to injectable LA and employ protocols that are not based on TA's evidenced basic science. These trends may have led to a misunderstanding of TA's utility in tackling the important issue of pain and distress in OPSS.

Putting on a brave face: the experience of 407 patients in a multidisciplinary facial palsy clinic

Mr T Hampton, Miss F Ruccia, Miss M Venables, Miss V Venables, Miss C Neville, Miss A Thomas, Mr C Nduka

Queen Victoria Hospital

There is increasing focus on patient reported outcome measures (PROMS). We have prospectively evaluated 407 patients referred to the facial palsy (FP) specialist service at Queen Victoria Hospital. Functional, social and psychological scores are collected by questionnaire prior to attendance. Our main focus was the prevalence of psychological distress at the point of referral as purely aesthetic improvements in symmetry will not usually be funded.

The average age was 51 (range 2-97yrs) with almost twice as many women to men. More than half of the group were still working. The mean duration of FP prior to referral >5 years. Referrals came from GPs (46%) Neurology (22%), and Specialists (29%) i.e. ENT, Maxillo-facial & Ophthalmology combined.

The most common pathology was Bell's palsy (47%), followed by Ramsay Hunt syndrome (10%) and acoustic neuroma (10%). Mean severity of FP varied with diagnosis (House-Brackmann); Bells 3, Ramsay 3.2, Acoustic neuroma 4.5 but the correlation with the Sunnybrook scale was poor. 52 % of patients had significant Hospital Anxiety and Depression scores at referral.

We believe this study represents the largest reported prospective cohort of consecutive patients referred to a facial palsy service in the UK. Given the prevalence of psychological burden, psychosocial PROMs will need to be part of future facial reanimation and rehabilitation outcome reporting. Furthermore, the demonstration of psychosocial benefits will help ensure ongoing funding of these treatments.

Scalded toddlers: can we predict the unpredictable?

Mr T Hampton, Mr R Vijayan, Mr B Dheansa

Queen Victoria Hospital

Scalds are a common mechanism of burn injury in children and a significant proportion of our caseload. Energetic, unpredictable toddlers and a momentary lapse in concentration by supervising adults can have severe consequences. At our burns unit, we noticed a recurrent topography of scald injuries, prompting us to analyse the clinical photographs of the last 125 consecutive children referred.

Only children aged 12 months to 4 years (i.e. ambulant and exhibiting controlled prehension) with scald injuries reported as the child 'pulling' a vessel over, were included. We found most scalds on the face, shoulders, upper limbs and central chest. A quarter of scalds involved a characteristic baby's bib distribution (Fig 1). There was a 54% left sided preponderance of scalds (26% on the right). 63% were sustained by boys. Average TBSA was 3%.

These findings suggest that 'self-induced' scald injuries in toddlers demonstrate some consistent patterns of anatomical regions affected, gender and even laterality, indicating an element of predictability. The topography of injuries correlates with the mechanism of a child reaching for a vessel containing hot liquid from a surface above their head. We wonder if an abundance of left sided injuries reflects the emerging hand dominance of toddlers [i]; with nearly 85% destined to be right handed [ii], clumsy grasps leading to spillage over the contralateral side. It is unclear if boys' risk reflects mischief or differences in clothing.

This knowledge may add to information at clinicians' disposal when distinguishing genuine accidents from non-accidental injuries. The common "bib distribution" of scald could prompt new health advice promoting the wearing of heat resistant bibs in toddlers at tea-time.

Ultra-violet breast tattoos (non-permanent radiotherapy marking)

Mr T Hampton, Mr S Rahman, Dr R Simcock, Mr S Mackey

Queen Victoria Hospital

Our centre performs 250 free flap breast reconstructions yearly. We're often approached with enquiries about alternatives to permanent blue dot radiotherapy marking tattoos.

Breast radiotherapy traditionally requires permanent ink tattoo for initial set-up accuracy but also for field resimulation in the event of relapse/recurrence. With shortened radiotherapy courses, lower recurrence rates and availability of other marking techniques e.g. pen, temporary henna or ultraviolet visible inks, is now the time for a change in approach?

We conducted a literature review on use of non-permanent tattoos. We then questioned Breast patients in clinic to gauge their opinion.

Of 23 articles, numerous studies vouched for the safety and accuracy of henna or UV tattoos without impact on the quality assurance of radiotherapy delivery. Many documented dissatisfaction with permanent tattoos. In our survey >50% patients were dissatisfied with the tattoo. Dissatisfaction was due to cosmesis but also the reminder of prior treatment and disease.

Ease and efficiency of radiotherapy set-up were common justifications for permanent tattooing. Given the hours dedicated to DIEP or TRAM flaps in pursuit of perfect reconstruction, surely we cannot encourage our colleagues using permanent tattoos if equivalent, cost effective and temporary alternatives exist?

The National Cancer Research Institute conference suggested interest and innovation amongst Oncologists. We are extending an audit of breast cancer patients to demonstrate the extent of patient dissatisfaction. We encourage radiation oncologists to rethink convention and test the safety of non-permanent blue ink solutions as cosmetically sensitive and patient centred approaches.

Sub-acute ablative fractional carbon dioxide laser treatment for aggressive burn-related scar contractures: case report and postulated mechanism

Mr K Harms, Dr A Murray, Professor S Rea, Winthrop Professor F Wood
Royal Perth Hospital

Introduction

There is no current consensus on CO2 laser treatment for burn scars. The Western Australian Burns Service initiated a prospective randomized control trial (RCT) to evaluate the efficacy of CO2 ablative

fractional laser (AFL) in treating hypertrophic scarring (HS) at least 6 months post burn injury. Having established a good safety profile, this protocol was trialled in the sub-acute phase (2-4 months post injury).

Aims

To assess the impact of CO2 AFL on range of movement of joints with burns scar contractures. Observed changes in the sub-acute group were correlated with histological data from RCT in the intermediate-long term cohort.

Method

Two patients with full-thickness burn injuries to shoulder and axilla regions consented to AFL treatment. A 10,600nm CO2 AFL (Lumenis ®) was used in the 'Ultrapulse' mode with energy settings of 50mJ and 5% density.

ROM was assessed using goniometry by a single physiotherapist (before and after AFL). Fast fourier transform (FFT) image analysis was used to assess collagen orientation of RCT biopsy data. These images were analysed for structural collagen changes post AFL treatment.

Results

Both cases displayed improvements in range of movement following sub-acute CO2 AFL (7 – 27% increase in shoulder flexion/abduction). FFT showed statistically significant change ($p=0.0371$) in the deep dermis, as collagen structure shifted from a dense linear orientation towards a more random pattern. Image analysis also showed evidence of micro-fenestration of HS.

Conclusion

Sub-acute CO2 AFL appears to be an effective, low risk treatment modality for micro-reconstruction of burn scars. The observed increase in ROM may be due to altered collagen orientation and direct micro-fenestration of HS tissue.

Thinking outside theatres: maximising the use of a minor operating room in a hand trauma unit

Miss S Hendrickson, Miss I Citron, Mr A Fox
St Thomas' Hospital

Introduction

Improving patient care while cutting costs is a challenge in the modern National Health Service. Many minor plastics trauma cases are performed under local anaesthetic on day surgery (DS) lists. This can generate a delay from presentation to treatment, which patients may perceive to be detrimental and inconvenient. In an effort to improve patient care, we assessed the use of a minor operations room (MOR) in our hand unit.

The use of MOR has three main benefits: patients receive immediate definitive care, junior surgical staff gain increased procedural experience, and costs are lower: in our department, the average cost per case in DS is £204, compared to £44/case in MOR. We aim to assess why, despite these benefits, many simple local anaesthetic cases are performed in DS in order to improve our service.

Methods

Data was collected prospectively over a 6-week period. All cases booked in DS under local anaesthetic were recorded, including the procedure, date, time, patient demographics and reason the procedure was not performed in MOR.

Results

37 procedures were recorded. The commonest was nailbed repair (27%), followed by repair of fingertip amputation (18%) and exploration and repair of lacerations to extensor zones 1 – 4 (16%). In 56% of cases, procedures were not performed in MOR due to lack of time. 22% of cases were perceived by the clerking clinician as too complex for MOR. These 37 cases represent an estimated monetary loss of £5,920.

Conclusions

The commonest reason simple cases were not performed in MOR was lack of time. We have demonstrated the need for more efficient use of our MOR in order to improve patient care and save costs. We recommend this may be achieved by rostering additional junior surgical staff to perform such cases in MOR.

Changing landscapes for plastic surgery: the effect of the Major Trauma Network on emergency operative workload

Miss S Hendrickson, Ms D Osei-Kuffour, Mr K Rahman, Mr J Simmons, Mr S Hettiaratchy
St. Mary's Hospital

Background

The advent of major trauma centres (MTCs) in the UK in 2010 has led to a concentration of complex, polytrauma cases in these centres. The role plastic surgeons play in trauma has increased and evolved over time,¹ and currently plastic surgeons input into a wide variety of trauma.² Our study aimed to analyse the effect of MTC status on plastic surgery activity at our centre.

Method

All trauma patients admitted to a London MTC in 2013 who underwent an operation were identified using Trauma Audit & Research Network data. Operative procedure(s) and operating specialty were recorded. This was compared to local historical data from pre-MTC go-live (2008 –2010).

Results

Of the 2606 trauma calls in 2013, 416 patients required surgical intervention. 29.3% of these patients (n = 122) were operated on by plastics (either as sole operating team or part of multi-specialty team). 76.2% (n = 93) involved lower limb trauma and 30.3% (n = 37) upper limb trauma. Emergency general extremity referrals increased from an average of 65/year to 484/year in the period 2011 to 2013, whilst plastics operative workload increased from an average of 53 cases/year to 407/year in the same period. This represents a more than sevenfold increase in the plastic surgery operative workload at our centre.

Conclusion

There has been a dramatic increase in emergency plastic surgery activity following designation of major trauma centre status at our centre. Understanding the epidemiology of plastic surgery is vital to improve service design, postgraduate training in the specialty, and workforce provision.¹

References

- 1) Khan A et al. JPRAS. 2010, 63:1962-1971.
- 2) Jalali M et al. JPRAS. 2011, 64(4):558-559.

Venous thromboembolism in free flap breast reconstruction: the need for national data and guidance

Miss S Hendrickson, Miss Y Tavsanoglu, Mr P Roblin

Guy's and St. Thomas' Hospital

Introduction

Free flap breast reconstructions are associated with prolonged anaesthetic times with significant inpatient stay and reduced mobility, on a possible background of active cancer and chemotherapy. They therefore carry a significant venous thromboembolism (VTE) risk. One centre reported a pulmonary embolism (PE) rate as high as 20%. Protocols vary widely amongst centres in the United Kingdom, and currently there are no nationally-recognised guidelines for VTE prophylaxis. We aim to ascertain the incidence of PE and deep vein thrombosis (DVT) after free flap breast reconstruction surgery at our centre, and highlight the need for clear guidelines.

Methods

Patient records for all free flap breast reconstructions performed at our centre over an 18-month period retrospectively analysed. All patients received prophylactic dose low molecular weight heparin (LMWH) and Thrombo-Embolic Deterrent Stockings (TEDS) as inpatients only. Patient demographics, type and site of surgery, length of hospital stay, VTE risk factors and post-operative complications were recorded.

Results

203 patients with a total of 258 breast reconstructions were included in the study. 64% of patients had active cancer and 17% had received neoadjuvant chemotherapy. The mean BMI was 29.2 kg/m² and 10% of patients were smokers. 76.7% of cases were immediate reconstructions. 3 patients suffered one or more PEs post-operatively (1.16%) and 3 patients suffered a DVT (1.16%).

Conclusion

We found a relatively low incidence of PE and DVT in our cohort. However, VTE represents a potentially fatal complication. Data from other centres nationally are required to establish national VTE prophylaxis guidelines for this growing patient group.

Negative Pressure Wound Therapy (NPWT) on complex closed breast incisions promotes wound healing in oncoplastic breast surgery

Mrs R Holt, Mr J Murphy
UHSM

Introduction

Oncoplastic techniques allow more patients to have breast cancer resection whilst preserving cosmesis. The intricacies of these surgeries may lead to higher wound complications rates requiring repeated dressings and specialist wound care as well as potential delays to adjuvant therapy. We sought to assess whether NPWT on closed incisions in oncoplastic procedures promotes wound healing.

Methods

24 consecutive patients had oncoplastic breast procedures performed by the senior author over 20 months. All patients had simultaneous symmetrising surgery. The therapeutic breast had a PICO dressing applied whilst the symmetrising reduction was dressed with conventional dressings.

Patient demographics, comorbidities, procedures and resection weights were recorded. Wounds were assessed on days 6 and 12 post-operatively. Outcome measures included delayed healing, wound breakdown, fat necrosis and delays to adjuvant therapy.

Results

The rate of delayed healing was 4.2% on the therapeutic side (dressed with PICO) and 16.7% on the symmetrising side. One patient had an episode of fat necrosis on the therapeutic side following a complex two pedicle procedure and had a delay to adjuvant therapy by 8 weeks. The average time to healing was 10

(6-12) days on the therapeutic side and 16 (6 – 70) days for the contralateral reduction. There was no correlation between age, BMI, tumour grade, size or resection weight and wound breakdown.

Conclusions

The results suggest that NPWT can reduce the incidence of delayed healing in this cohort of patients. The PICOsystem is tolerated well and initial analysis suggests it is cost effective.

Theatre time utilisation in plastic surgery

Mr M M Hosain, Mr S Veeramani, Mr P Sugden, Mr G S Rao

Glasgow Royal Infirmary

Introduction

Operating theatre services are expensive to run so the operating theatre times should be used as efficiently as possible. This will help ensure a cost effective service along with a better patient experience. By reducing time wastage more patients can be treated in any given theatre session.

Aims

The aim of the study is to find out the actual surgical time and compare it with total theatre time and associated time. This included patient transfer time, anesthetic time and time lost in between cases. Also find out how effectively we use our theatre and factors related to delay.

Materials and Methods

A retrospective study with a random selection of 75 plastic surgical procedures (25 adult ward, 25 paediatric ward and 25 from day surgery) over 3 months in 2013. Data was collected and analyzed using a computerized spreadsheet.

Results

The mean theatre utilization time for each operation was 95 minutes which included 53 minutes for actual operating time and 42 minutes for associated time (patient transfer, anaesthesia, recovery).

The following had no significant effect on delay

- Elective vs emergency
- Male vs. female
- Morning vs afternoon session

The mean time for-

- Transfer from ward to theatre front desk was 10 minutes
- Theatre front desk to anaesthetic room 10 minutes
- Anaesthetic room to theatre 16 minutes (GA 19, LA 7 minutes)
- Prep and drape 5 minutes

Surprisingly nearly half of the theatre time (44%) was used as associated time.

Conclusion

This study helps to highlight the reasons for, and objectively measure, the delays along the patient pathway to theatre. This should help to change the scheduling of patients for plastic surgical procedures with a reduction of wasted time and increased theatre utilization

Human bite post-exposure management: closing the audit loop

Dr L Humphreys, Mr G Lye, Mr T Longworth, Ms S Hemington-Gorse
Morrison Hospital

Introduction

Transmission of Hepatitis (Hep) B, Hep C, and Human Immunodeficiency Virus (HIV) via human bites has been reported. Health Protection Agency (HPA) guidance recommends: 1. Blood testing of biter and patient is performed at initial presentation; 2. Hep B vaccination is given as necessary; 3. Repeated screening occurs at 6 weeks, 3 months and 6 months. Previous audit of our institution against this guidance showed Hep B status was recorded in only 9% of cases and Hep B vaccination was given in 12.5%. Poor compliance was found in the arranging of GP follow-up screening and in documentation of the biters infection status.

Method

Closure of audit loop. Clinical record review of human bite injuries over a 12-month period using the original audit proforma.

Results

32 patients were identified with 81% (n=26) being reviewed. 58% (n=15) were assault/fighting injuries; 35% (n=9) had Hep B status recorded; Hep B vaccination was given in 31% (n=8) of patients; GP follow-up requested in 8% (n=2) and 0% (n=0) of biter viral status was recorded.

Conclusion

Appropriate management of human bite injuries aims to reduce infection risk from blood-borne viruses. This audit shows some improvement but poor compliance still remains despite the introduction of a proforma for managing human bite injuries. We plan to amend the clerking documentation to ensure appropriate blood tests and primary care follow-up are arranged. Staff education sessions will also be organised to improve compliance. A re-audit will occur in 12 months.

A case of an ureaplasma infection causing significant soft tissue destruction to the vagina, perineum, and abdominal wall

Miss D Hunt, Mr J Srinivasan
Royal Preston Hospital

Presentation

A 23 year old female with B-lymphocyte deficiency presented with a UTI which quickly progressed into recurrent abscesses and then widespread infection of the pubic region and genitalia , requiring multiple surgical debridement. This lead to a significant soft tissue defect producing complex reconstructive challenges. A distally based rectus abdominus turn down flap and skin graft was used to reconstruct the pubic defect. However, despite the flap being viable with no outward evidence of infection, the healthy tissue did not heal. In addition, the surgical wound used to raise the flap broke down and the entire anterior rectus sheath disintegrated.

Despite multiple wound swabs and cultures the causative organism could not be isolated. Numerous broad spectrum antibiotics were trialed, yet the wound persisted for over a year, with recurrent admissions and operations. Finally, specific viral transport medium and PCR identified ureaplasma and after starting doxycycline, the patient drastically improved within weeks.

Ureaplasma

Ureaplasma species make up part of the normal genital flora and rarely penetrate the submucosa, except in the case of immunosuppression/ instrumentation. However, there are no cases in the literature of ureaplasma causing such significant tissue loss.

It is important to suspect mycoplasma when the clinical picture indicates infection, but the infectious agent cannot be isolated on standard culturing methods. Involving support from microbiologists early would be helpful in such cases.

Readability of patient education materials on the British Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRAS) and British Association of Aesthetic Plastic Surgeons (BAAPS) websites.

Dr J Jackson, Mr E Wilson
Southmead Hospital

Background/Aims

Patients increasingly use the Internet to access information related to their disease and when considering an elective procedure, websites may be the first resource utilised by a patient, however, poor health literacy is known to impact negatively on medical outcomes. According to the literature, a Flesch-Kincaid 6th Grade level (UK reading age of 11-12 years) is the maximum recommended for public health information, consistent with the average UK reading age; between 9 and 11 years.

This study evaluates whether the BAPRAS and BAAPS websites' patient-targeted content, meet recommended readability guidelines for medical information.

Methods

Patient-targeted content was downloaded from both the BAPRAS and BAAPS main websites. A total of 43 articles (21 from BAPRAS and 22 from BAAPS) were assessed for readability using 5 established analyses, including the Flesch-Kincaid grade level and reading ease tests.

Results

The average Flesch-Kincaid reading grade was 11.4 across all articles from both sites (BAPRAS, 11.5; BAAPS, 11.3). None of the patient-targeted content examined was written at or below the recommended Flesch-Kincaid 6th grade level (range: 9.4 to 14.77). According to the Flesch-Kincaid Reading Ease classification, 2% of articles were classified as very difficult, 53% as difficult, 40% as fairly difficult and 5% as plain English.

Conclusions

Online patient targeted content from BAPRAS and BAAPS websites exceed the recommended reading levels for public health information and are too difficult to be understood by a large proportion of the population. Adapting the patient targeted content on these websites could increase their accessibility to a wider audience.

The work of Sir Harold Gillies: a hundred years on

Mr G Janakan, Miss G Mclachlan, Dr M Khalili
St Thomas' Hospital

Aim

Sir Harold Gillies was a Major in the Royal Army Medical Corp and during World War I, serve a large part of his career at Queen Mary's Hospital in Sidcup. His work on innovative techniques in plastic surgery is now considered as the basis of modern plastic surgery. His original patient case files survive and are now archived, in part, at the Royal College of Surgeons of England.

Method

Retrospective review of a selection of his case notes including the photos and artistic drawings linked to them.

Results

27 case notes; all male, mean age 25.1yrs (range 19-35yrs).

Time to presentation (injury to Sidcup): mean 82.8 days (range 19-192 days)

Length of admission: mean 554 days (range 61-1574 days). Though this was a mix of continuous admission and those discharged and had multiple admissions.

The techniques employed to treat these injuries were varied and are explained in detail in the full article. The corresponding photos and diagrams demonstrate how these injuries were treated over an extended period of time as well as these novel techniques used.

Conclusion

This was the first time in history where both function and aesthetics were considered when treating patients. From the front line there were a significant number of patients that required Gillies' novel and effective techniques. It is important to remember what this surgeon did for both modern plastic surgery as well as what he achieved with the limited resources during the War. Sir Harold Gillies is the father of modern plastic surgery.

Decellularised cartilage scaffolds for reconstructive surgery

Ms Z Jessop, Dr Y Zhang, Dr I Khan, Professor I Whitaker

Welsh Centre for Burns and Plastic Surgery

Introduction and Aims

Decellularised scaffolds lack cellular and nuclear material while retaining the composition, biological activity and mechanical integrity of extracellular matrix (ECM). Our aim was to use a freeze-drying protocol to decellularise mature and immature bovine nasal cartilage to create ECM scaffolds for use in cartilage tissue engineering.

Material and Methods

Bovine nasal septum 6mm punch biopsy samples were collected and stored at -80°C until analysis. A physical freeze-dry (-110°C) 20 hour protocol was used to decellularise cartilage samples. We determined tissue water content through wet and dry weights, decellularisation efficiency using histological analysis (H&E and DAPI staining) and analysed pore structure (scanning electron microscope).

Results

Five mature and immature bovine nasal samples were collected and underwent freeze dry decellularisation protocol. Mature bovine nasal cartilage had a greater starting weight and percentage water content (0.158g, 86%, n=3) compared to immature samples (0.126g, 78%, n=3). After 20 hours of freeze drying both mature and immature demonstrated >70% decellularisation efficiency using DNA quantification.

Conclusion

This protocol avoids residue from chemical or enzymatic decellularisation treatments described in the literature, which can potentially invoke an adverse immune response in the host. ECM is generally conserved among species and tolerated well even by xenogeneic recipients. This suggests potential for

transplantation of bovine ECM with or without human chondrocyte seeding for reconstructing cartilage defects.

Incidence of residual tumour in incompletely excised non-melanocytic malignant skin lesions: an audit cycle completed

Miss S Jmor, Mr A Lahiri, Miss J Wilson
University of Birmingham

Introduction

Surgical excision remains the mainstay of treatment for malignant skin lesions. The British Association of Dermatology state there should be incomplete excision in less than 5% of patients. Of those undergoing re-excision, the histology should be positive for residual tumour in above 25% of specimens.

Aims

To assess the incidence of incomplete excision on histological report and residual tumour present in re-excision specimens.

Methods

The audit cycle consisted of all non-melanocytic skin malignancies excised between 01/10/2010-30/09/2011(baseline audit) and 01/01/2012-30/09/2014 (re-audit). Incomplete excisions were identified from the histology database and histological findings of all re-excisions were noted.

Results

The results from the first audit (see table) were presented at the skin MDT operational meeting: it was stressed that for low risk patients, morbidity needs to be considered before deciding to re-excise. Additionally, all margins/incomplete excisions are now routinely verified by two consultant histopathologists.

	Baseline audit	Re-audit
Incomplete excision rate % (incomplete excisions/total no. specimens)	4.56 (27/593)	2.38(43/1807)
% residual tumour in re-excised specimens (re-excisions +ve residual tumour/total no. re-excisions)	14.8 (4/27)	65 (13/20)

Conclusion

Whilst it is difficult to directly assess the effect of double varification and more careful treatment planning in patients with an incomete excision report, the changes appear to have led to the significant fall in

incomplete excision reporting and higher presence of residual tumour in re-excised specimens. This has resulted in fewer patients undergoing unnecessary surgery with potential complications

Clearing the field with a novel suction device to assist microsurgeons

Mr D Jordan, Mr R Jeevan, Mr O Koshy
Whiston Hospital

Introduction

Both nerve and vessel repair or anastomosis are facilitated by a dry and clearly presented visual field that helps optimise microsurgery.

This routinely involves the use of a suction device and visibility background, which aid removal of blood and other irrigation solutions and enhance the visualisation of structures in the surgical field respectively.

Placing the background may be cumbersome in relatively inaccessible areas and application of a suction device has the potential to disturb and damage key structures.

We have conceived a simple and easily fashioned adjunct which ensures continuous suction. This maintains a dry surgical field and improves visibility without disturbing the delicate structures of interest, allowing the optimal microsurgical repair of neurovascular structures.

Method

The background is sized and cropped to twice the needed size. This is folded, ligaclipped to prevent unfolding and a series of 'drainage' fenestrations are made.

An infant feeding tube is passed through the muscle within the operative field. The tip of the tube is inserted into the folded background and secured with a series of clips. The combined background-drain is placed behind the vessels at the surgical site. The residual length of the feeding tube is looped away from the operative field and secured using one or more skin staples. The proximal port of the feeding tube is joined to the suction device.

The vessels and the field can be irrigated as required, and the constant gentle suction applied immediately clears the field of fluid without distorting the vessels.

We have found a simple, cost effective and easily reproducible technique which will aid colleagues in their microsurgical practice.

Hand trauma and driving: educating the doctor to educate the patient

Mr D Jordan, Mr S Hindocha, Mrs C Kelsey, Mr D Bell
Whiston Hospital

Introduction

Hand trauma accounts for a high attendance at emergency departments. It is estimated that over 70% of the UK population hold a valid driving licence.

We noted a high proportion of patients attending for review and surgery having driven themselves to the tertiary treatment centre. We conducted a study to see why this was occurring.

Methods

A questionnaire was given to patients operated on at a regional hand trauma centre. Questions included if advice on driving had been given on attending local or regional sites, and if they drove during this time. Subsequently, we disseminated the results to both the referring and trauma units. The study was repeated after a two-year interlude, to see if a higher standard of care had been implemented and maintained.

Results

Of 100 patients, only 25% of patients were advised regarding their driving state by either primary or tertiary centre. Almost 50% drove between attending these two sites.

The repeat study showed increased patient awareness (66% at primary, 76% at tertiary) and reduced driving rates (26%).

Conclusion

We have found by educating the professional body in regard to the dangers of driving with hand trauma we have increased patient awareness post injury and reduced the risk to the patient and public when attending and receiving definitive treatment.

With an increasing dependence on medical advice, and a medico-legal culture, all patients with hand trauma, especially those requiring specialist input should be advised not to drive until further assessment.

This advice should be clearly documented in the patients' notes. We feel it is vital our colleagues who manage these patients are aware of these points.

Squamous cell carcinoma complicating chronic osteomyelitis: clinical features and outcome of a case series

Miss R Khundkar, Miss G Williams, Mr A Ramsden, Mr M McNally
Nuffield Orthopaedic Centre

Aims

Squamous Cell Carcinoma(SCC) is a rare complication of chronic osteomyelitis (OM), often arising in a sinus tract. We routinely send samples for histological analysis for all longstanding sinus tracts in patients with chronic osteomyelitis

Methods

A retrospective study was performed of OM patients between Jan 2004 and Dec 2014 in a single tertiary referral centre. Clinical notes and pathological records were reviewed for those with OM associated SCC.

Result

We treated 7 patients with chronic OM related SCC. The mean age at time of diagnosis was 51 yrs(range 41-81yrs). The mean duration of OM was 16.5yrs before diagnosis of SCC. SCC arose in OM of the ischium in 4, sacrum in 1, femur in 1 and tibia in 1 patient. The histology showed well differentiated SCC in 2 cases and moderately differentiated SCC in one case with invasion. Two patients had SCC with involvement of bone. All patients had polymicrobial or Gram-negative cultures.

Four patients died as result of their cancer despite resection. The mean survival after diagnosis of SCC was 1.3 years and mean age at time of death was 44.7 years. Two patients had ischial disease and were treated with hip disarticulation, partial pelvectomy and iliac node clearance.

Three patients remain disease free at a mean of 3.4 years (range 0.25 – 7years) after surgery. One patient in this group underwent a through-hip amputation, one an above knee amputation and one excision of ischium and surrounding sinuses.

Conclusions

This case series demonstrates the consequences of an uncommon complication of OM. Only 1 patient underwent biopsy for suspected SCC due to clinical appearances. The others were identified incidentally from routine histological samples– highlighting the importance of this practice.

Investigating incomplete excision of facial basal cell carcinoma: a retrospective clinical audit

Mr T Layton

Royal Preston Hospital

Introduction and aim

Basal cell carcinoma (BCC) is the most common malignancy in humans. Incomplete excision following surgical excision occurs only in a minority of patients (5-14%), but requires careful consideration due to the potential disfigurement from recurrent tumours. We performed an audit at a large plastic surgery unit over an eight-month period aimed at investigating incomplete excision of facial BCC and define the unit's overall incomplete excision rate.

Materials and Methods

456 facial tumours treated by conventional surgical excision between October 2013 and May 2014 at Royal Preston Hospital were evaluated to find 50 incompletely excised tumours. 50 incompletely excised BCCs

where compared to 50 controls with regards to tumour location, histology, grade, grade of surgeon and method of reconstruction. P values were calculated using logistic regression, Chi-squared test and Fisher-Freeman Halton exact where appropriate and P value <0.05 was taken as significant.

Results

Only the location of the BCC and the histological type had a statistically significant impact upon the completeness of surgical excision. Infiltrative, micronodular and mixed tumours had a higher chance of incomplete excision, as did tumours located on the inner canthus and ala nasi. The overall incomplete excision rate was 10.96%

Conclusion

The incomplete excision rate for our unit within in the quoted range. The categorization of high risk tumours aids clinical decision making when treating cancer. Our results suggest that more aggressive tumour variants may require an increased resection margin and tumours located at sensitives sites could benefit from novel treatments like mohs surgery.

Evaluation of the management of feet burns in a regional adult burns centre

Mr Y Majeed, Mr M Minhas, Mr Z Sheikh, Mr N Khwaja

University of Manchester

Introduction and Aims

Burns to the feet can result in a considerable level of morbidity, particularly at extremes of age. These injuries frequently lead to admission to a specialised burns centre, prolonged periods of bed-rest, time off work resulting in financial loss, and are associated with a substantial risk of complications. This study aimed to identify factors that have a significant influence on the outcome of patients with feet burns.

Materials and Methods

A retrospective study of 98 patients who attended a regional adult burns centre over a 12-month period was performed. Data was collected regarding patient demographics, time to presentation, mechanism of injury, wound management, hospital stay, complications and time to wound healing.

Results

The mean age was 40 years (range 16-80) with a mean TBSA of 0.79%. The average time to presentation was 4.1 days (range 0-50) and scalds caused the majority (59%) of injuries. The overall wound infection rate was 38%; this was higher in those with delayed presentation ($p<0.05$). The mean hospital stay was 7.7 days (range 1-35) and was greater following wound infection ($p<0.05$). 4 patients had surgery. The mean time to wound healing was 40.6 days (range 5-127); an increased burn depth and time to presentation both prolonged the time to wound healing ($p<0.05$). Patients with diabetes mellitus took an average of 7 days longer to achieve wound healing but this was not statistically significant ($p>0.05$).

Conclusions

Delayed presentation has been identified as the key factor leading to worse outcomes in patients with feet burns. Patient education on the importance of seeking prompt medical assistance and emphasis on the need for early referral is essential to avoid unnecessary delays.

A retrospective, single centre cohort study to assess whether the 'Angelina Jolie Effect' has led to an increase in risk reducing mastectomy and reconstruction in South Wales

Dr C Malcolm, Mr M Javed, Ms D Nguyen
Welsh Centre for Burns and Plastic Surgery

Introduction and aims

On 14th May 2013, actress Angelina Jolie made public her prophylactic double mastectomy and reconstruction. Following this, referrals to the All Wales Genetics Service nearly doubled in 2013 compared with 2012. This coincided with the publication of revised NICE guidance on familial breast cancer in June 2013. The resultant increase in demand for genetic screening was labelled the 'Angelina Jolie Effect'. This study evaluates the trends of patients undergoing risk reducing mastectomy and reconstruction at the Welsh Centre for Burns and Plastic Surgery.

Material and methods

Retrospective data was collected from consultant diaries from 01/01/2012 – 31/12/2014 of all risk reducing breast reconstructive procedures undertaken at the Welsh Centre of Burns and Plastic Surgery which serves a population of 2.4 million in South Wales.

Key Results

The number of risk reducing procedures performed each year has increased considerably. The total has nearly doubled between 2012 and 2013 and this increase appears to have been sustained. The highest numbers of procedures were performed in early 2014 which may be explained by the average 6-8 month wait for being seen by genetic testing services and receiving results.

Table 1: Number of risk reducing procedures undertaken by month

Month	2012	2013	2014
Jan-March	3	5	15
April- June	2	9	7
July-Sept	3	8	3
Oct- Dec	8	7	3
TOTALS	16	29	28

Conclusions

These results suggest there has been an increase in risk reducing breast procedures since the widespread publicity surrounding Angelina Jolie; however the numbers are too small to be able to draw any statistically significant conclusions. A longer period of data collection is needed to see if this effect is ongoing.

Simulation works in aviation, it should work in surgery: increasing fidelity in simulation for surgeons, a Burns Simulation Course in Edinburgh

Miss K Medjoub, Mr I Stewart, Miss S McGarvie, Dr S Edgar, Mr D Widdowson, Mr H Bahia, Mr K Stewart
NHS Lothian

Introduction

Since the Introduction of the European Working Time Directive (EWTD), concerns regarding the effect on training have been constantly raised. In one study 68% of surgical trainees perceived the quality of their teaching and operative skills to have deteriorated. Recently, trainees reaching CCT (Certificate of Completion of Training) level have been found to be lacking a huge number of expected Major Burn Resuscitation cases.

Simulation is widely used, however, surgeons are generally known for being apprehensive about the role of simulation in surgical training as it 'does not feel real'. Our aim is to introduce hi-fidelity simulation to plastic surgery trainees as an acute burns course using Moulage.

Method

The scenarios objectives were mapped to plastic surgery curriculum. A hi-fidelity simulation centre was used to launch the pilot course for trainees of the regional burns unit/ plastic surgery department. A debrief session facilitated by a tutor experienced in reflective debrief followed each scenario.

On completion of the final scenario participants and observers were asked to fill out a feedback questionnaire. The Friedman test was used for hypothesis testing on SPSS. Results were considered significant if $p < 0.05$.

Results

The most commonly selected response in all questions was either agree or strongly agree. There was no significant difference between respondent's views across different quality measures ($p=0.977$) (graphs will be included in the poster).

Conclusion

The results of the feedback and debrief sessions are supportive of face validity of the course
Using hi-fidelity equipment and Moulage was important in attracting surgical trainees and consultants and greatly enhanced their engagement

Novel 'legal highs' which are injected are associated with severe soft tissue infections: a case series from South East Scotland

Mrs K M Milto, Ms L Yong, Mr Z Sheikh, Miss C Simpson

St John's Hospital

Introduction and Aims

There has been a recent rise in the popularity and abuse of new psychoactive substances referred to as "Bath salts" or "legal highs" in Scotland. We present a case series of patients presenting to a regional Plastic, Reconstructive and Hand Surgery Unit who injected these substances and went on to develop severe soft tissue infections.

Materials and Methods

Retrospective case note analysis over a 6-month period.

Key results

Number of patients identified n=10. Male to female ratio 4:1. Median age 36.5 years. The most commonly injected substance was called 'Burst' also known as 'Blue stuff' (90%). 60% of patients developed a severe soft tissue infection with progressive cellulitis, frank pus and necrosis with Group A Streptococcus pyogenes being the responsible organism in each of these cases. These patients had hospital stays ranging from 7 to 46 days; including ITU admissions (n=2). Treatment involved multiple debridements (range 3 – 5), poly-antimicrobial therapy (range 2 - 5) and reconstruction with split thickness skin grafts (n=2) or pedicled flaps (n=1, Foucher's flap). 3 patients had the same strain of Streptococcus Pyogenes Group A (emm type 0.76), 1 patient had strain emm type 0.75 and 2 strains were not tested.

The remaining 40% of patients developed less severe infections, associated with Staphylococcus Aureus and required fewer operative procedures (range 0-2).

Conclusion

'Burst' is thought to contain ethylphenidate, 4-methylethcathinone or butylone which is the active ingredient that brings about the 'high'. Recreational use of injectable legal highs, such as 'Bath Salts', 'Burst' and 'Blue stuff' can lead to aggressive soft tissue infections most commonly associated with Streptococcus Pyogenes Group A.

Mammalian bite injuries to the upper limb: a plastic surgery unit's experience

Dr M Mohammed, Dr R Munyal, Mr D Yue, Mr J Chan, Dr O Assad, Mr P Govilkar

Stoke Mandeville Hospital

Introduction and Aims

Mammalian bites are common injuries to the upper limb and are usually inflicted by dogs, cats or humans. Injuries can cause significant damage to underlying structures. They contribute to healthcare cost, loss of

work hours, and may lead to permanent disability. One unit's experience of such injuries are reviewed with the aim of identifying factors that may affect outcome.

Methods

Patients presenting to our department with mammalian bites to the upper limb between September 2013 and August 2014 were identified retrospectively. General demographics, type of mammal and injury characteristics were recorded. Time to medical and surgical treatment, microbiology and complications were also analysed.

Results

69 patients were identified – 25 (36.2%) male and 44 (63.8%) female. The modal age group was the 46 – 60 years with 47 (68.1%) dog bites and 14 (20.3%) cat bites. 81.2% affected the hand; 10.1% presented with flexor sheath infection; 33.3% had underlying structural damage. Most (56.5%) did not have a documented emergency department washout. 79.7% were given intravenous antibiotics; within six hours in 53.6% of these. 44.3% had a theatre visit with a mean of 2.3 total procedures per patient. For long-term complications, there were no statistically significant differences between mammal type ($p=0.057$), time to theatre ($p=0.534$), time to intravenous antibiotics ($p=0.373$), and presence of co-morbidities ($p=0.359$).

Conclusions

Identifying such patients and deficiencies in their management may help to improve patient care. Type of mammal, time to initial treatment and patient co-morbidity did not affect long term complications. Documentation of the initial treatment is important.

Micro Hoffmann external fixation for phalangeal fractures: the Preston experience

Mr A Molajo, Dr G Turnbull, Mr A Hamilton, Mr E Jeans, Mr S McKirdy

Royal Preston Hospital

Introduction

We present our audit findings for use of micro Hoffman external fixator system for phalangeal fractures performed by the senior surgeon author.

Method

Patients undergoing fixation of phalangeal fractures using the micro Hoffman external fixator were reviewed. The senior surgeon operated on all patients in the series under general anaesthetic on a day case basis. Patients were reviewed in the senior surgeon's hand clinic and mobilised immediately. Post operative ROM measurements were performed by the hand therapists to avoid bias.

Results

13 patients treated for phalangeal fractures with a micro Hoffman external fixator were identified from theatre log books and therapist notes. Average age of patients was 41.5(range 12-76). Mechanism of injury: Sports (1), crush (4), assault (1) power tools (2), fall onto outstretched hand FOOSH (2) unclear from notes (3) Average external fixation time period 5.6 weeks (range 4-8 weeks) .12 united fractures 1 patient opted for amputation (communitated fracture of middle phalanx with bone loss in a farmer). No infections were reported with the external fixators in the audit. Poor range of movement was noted in patients with multiple phalangeal fractures (especially within the same digit) compared with patients with single phalangeal fractures. Single phalangeal fractures appeared to achieve greater range of movement.

Conclusion

External fixation should be considered for more phalangeal fractures as the audit shows low infection incidence and good ROM for single phalangeal fractures.

Micro Hoffman external fixators are well tolerated and allow early mobilisation as well as less soft tissue disruption and collateral damage to bone during surgery.

Infrared technology to improve efficacy of venous access in burns population

Mr M Nizamoglu, Miss A Tan, Ms H Gerrish, Professor P Dziewulski

St. Andrews Plastic surgery and burns centre

Background

Obtaining venous access in the burn population is challenging both in the acute and elective surgical setting. In paediatric burns, this is further compounded by smaller veins, thicker subcutaneous fat and poor cooperation. The introduction of infrared technology (Accuvein®) to identify veins up to 10mm deep has been shown to increase efficacy. It has been promoted in challenging cases. We aim to ascertain whether Accuvein® is a useful clinical tool in the context of burns population.

Methodology

A formal service evaluation of the device was carried out prospectively during a 6-week period. User feedback questionnaires were circulated. We reviewed patient demographics, indication of use, number of attempts and skin quality. We rated user satisfaction using visual analogue scales and a free text comment section.

Results

28 questionnaires were returned. We noted inclination for use of device in paediatric patients compared to adults. Ethnicity included Caucasian, Asians, Afro-Caribbean and Hispanic. Skin quality in majority were described as normal, only 4 patients had poor quality skin (burn scars, friable thin skin). 15 patients had successful first attempts. 96% of practitioners felt that the device was useful, although 59% required assistance initially. We noted it was not useful in detecting veins through grafted burn sites.

Conclusion

Accuvein® is a useful adjunct for venous access particularly in the paediatric population. By reducing the number of attempts to obtain venous access, this saves time and improve efficacy of care. However, we noted it is not helpful over grafted burn sites. This could be attributable to the nature of the initial burn surgery (tangential excision) rather than the thickness of overlying skin.

Eccentric hyperbola: a new technique for re-excision of skin scars on concave surfaces

Dr G Pafitanis, Miss K Mason, Miss E Theodorakopoulou, Mr R Alamouti, Mr G Moir
Royal London Hospital, BartsHealth NHS Trust

Introduction

'Re-excision of scar' is a common procedure following diagnostic or therapeutic excision of cutaneous lesions often for skin cancer. With the conventional techniques skin tension on concave surfaces results in an elongated scar and reduced cosmetic results when primary closure is compromised. Studies recommend immediate re-excision using the Mohs micrographic surgery (MMS), as a 'watch and wait' follow-up could lead to an increased risk of morbidity if disease progression ultimately requires a more extensive excision which may also have increased cost implications.

Methods

We present a new technique for cutaneous scar re-excision that allows improved final scar length: The 'eccentric hyperbola'. We demonstrate the effectiveness and outcome of this technique using advance geometrical analysis.

Results

Using the same analysis this new technique proves to be superior to conventional elliptical excisions on concave surfaces resulting in; reduced final scar length whilst requiring less healthy tissue resection.

Conclusion

We present a new design in re-excision of scar on concave surfaces using a deviated angle for incision from traditional longitudinal axis: the eccentric hyperbola. It is a potent tool that utilizes the laxity of the surrounding skin enabling primary closure thereby minimizing scar length, the need for skin grafts and therefore improved cosmetic result.

One and Done: a case report of single-stage dermal matrix and skin grafting to treat a complicated hand wound

Dr A Parcels, Dr M Granick, Dr E Lee

Rutgers New Jersey Medical School

Background

Management of complicated hand wounds represents a challenge when reconstructive options are limited. Bovine dermal matrix is a bioactive collagen and glucoaminogylcan (GAG) scaffold that assimilates into wounds and stimulates vascularization and dermal regeneration.

Methods

We present the use of single-layer collagen matrix (Integra) combined with a split thickness skin graft as a one-stage procedure in the treatment of full-thickness dorsal hand wound.

Results

A 58-year-old female on immune suppression therapy for a prior kidney transplant developed a paronychia refractory to antibiotics or local debridement therapy. The infection rapidly progressed and required extensive operative debridement. Her resulting hand defect encompassed the majority of her dorsal surface (150cm²) and was full thickness down to the extensor tendons. Wound cultures revealed mycelia sterilia, and antifungal therapy commenced. Once the infection clinically resolved, we applied a single-layer collagen-GAG matrix in combination with a split thickness skin graft over the wound, which allowed dermal regeneration and successful epithelialization, resulting in complete wound healing.

Conclusion

Our experience shows single-layer collagen-GAG matrix combined with skin grafting to be an effective method in the management of complicated hand infection in selected cases. Further studies need to be implemented to confer this conclusion.

Plastic surgery readmissions in the NHS: the MYHT experience

Dr G Perin, Mr N Lympelopoulos, Mr S Southern
Mid Yorkshire Hospital NHS Trust

Introduction

The number of unplanned surgical readmissions is considered an indicator of quality of service provision in the NHS. The aim of this study is to identify the reason and potential avoidability of the unplanned readmissions after discharge from the Plastic Surgery department of Mid Yorkshire Hospital NHS trust.

Materials and Methods

A significant sample of the 28 day unplanned readmissions from January 2013 to December 2013 was extrapolated in retrospect from an electronic patient file system. Data available were analysed with the aim to identify discharge information, planned follow up, readmission information and reason for readmission.

Results

A representative sample of 204 cases was randomly extrapolated from the 424 unplanned readmissions recorded: 58/204 (28.6%) were cases wrongly clerked as emergency readmissions; in 52/204 (25.6%) cases was impossible to find a reason for readmission due to lack of documentation; 51/204 (25.1%) readmissions were secondary to surgical site infection or other surgical complication; 25/204 (12.3%) were readmissions under another speciality.

Conclusions

Plastic Surgery is a speciality often flagged in NHS as high risk for readmission: in our experience a big part of the readmissions recorded were due to administrative errors rather than true re-admissions.

Have the revised 2009 American Joint Committee on Cancer (AJCC) melanoma staging guidelines improved T1b melanoma referral criteria?

Mr J Ranson, Mr D Mowatt

Manchester Medical School, University of Manchester

Introduction

In 2009 T1a graded melanomas of BT $<1\text{mm}$ with ulceration or a mitotic rate $\geq 1\text{mm}^2$ were re-graded to T1b. Consequently SLNB should be offered to patients presenting with these tumours.

Aim

To audit all T1b melanoma patients who underwent SLNB from July 2010 to July 2014. Determine whether the revised staging guidelines have improved SLNB referral criteria.

Method

Patients were assessed through retrospective analysis of clinical notes and histopathology reports. Statistical analysis was performed using SPSS.

Results

224 patients assessed. 191 patients had a negative SLNB; 33 patients a positive SLNB. Of these 33, 28 had BT $>1\text{mm}$, 5 $\leq 1\text{mm}$. Cohort SLNB positivity rate was 15.18%; 1.01 - 2.00mm tumours 17.18%; $\leq 1\text{mm}$ 8.20%. Positivity rate for melanoma BT 0.76 - 1.00mm with ulceration/mitosis was 14.29%; BT $\leq 0.75\text{mm}$ was 3.03%.

Discussion

Is a positivity rate of 8.20% sufficient to warrant SLNB referral of BT $\leq 1\text{mm}$ melanoma with ulceration/MR of $\geq 1\text{mm}^2$ for SLNB?

Analysis highlights the possibility of further stratification of T1b melanoma by only adding melanoma of BT 0.76 - 1.00mm in the T1b grading criteria. Larger cohort analysis is required for confirmation.

PET-CT Imaging in Patients with Chronic Sternal Wound Infections prior to reconstructive surgery: a case series

Miss C R Read, Mr O A Branford, Mr L S Verjee, Mr S H Wood
Imperial College London

Introduction and Aims

Late presenting and recurrent sternal wound infections post-sternotomy are difficult to treat, with the clinical picture not necessarily reflecting the underlying problem. As a result of our experience, we suggest that these chronic cases should be managed using a different algorithm to acute sternal wound infection. We present three cases which support the need for pre-operative imaging using PET- CT.

Material and Methods

We prospectively looked at three patients with chronic sternal wound infections and the benefit of using PET-CT imaging to pre-operatively delineate disease. Clinical examination and inflammatory markers were used during follow-up to assess for resolution of the wound infection.

Key results with supporting statistical analysis

Clinical resolution with normalisation of inflammatory markers was found in all three patients at a mean follow-up of 10 months.

Conclusion

Positron emission tomography combined with computerized tomography (PET-CT) imaging may be potentially useful in enabling accurate localization of disease sites, which guides adequate debridement prior to definitive reconstruction. It may also allow for disease surveillance and monitoring of the response to antimicrobial treatment.

Fingertip amputation replacement as a composite graft in a paediatric population: survival and long-term morbidity

Miss J Ruston, Mr L Murugesan, Mr D Butler, Mr A Woollard, Miss B Jemec
Royal Free Hospital

Introduction

Limited studies exist on the outcome of replacing an amputated fingertip as a composite graft. We report the outcomes and predictors for composite graft survival along with the long-term morbidity.

Methods

A retrospective medical notes review of all patients <16yrs who underwent composite graft replacement of an amputated fingertip between October 2006 and April 2013 was performed.

Long-term morbidity was evaluated through a standardised parental questionnaire. A Chi-square test was performed with $p < 0.05$ considered statistically significant.

Results

120 patients were identified of whom 97 were eligible for inclusion. Parental questionnaires were completed for 42 (43%) patients. Mean patient age = 4.3 years. Mean follow-up = 27 months.

There was a 10% complete and 34% partial graft survival rate. Patients aged ≤ 4 were significantly more likely to have complete graft take than those >4 (14% vs 3%, $p = 0.04$). Time from injury was not a predictive factor in graft survival, although no grafts completely survived if replaced after 10 hours ($n=12$). 17% required further surgery or developed a post-operative infection, but there was no difference in the complication rate between those with complete/partial/no graft survival.

In 67% patients the fingertip was reported as appearing 'abnormal' with 48% patients reporting a hook-nail deformity and 17% reporting cold intolerance. Only 5% of patients reported any functional difficulties long-term.

Conclusion

The rate of complete composite graft survival in a paediatric population is low, with hook nail deformities and cold intolerance common long-term complications. The likelihood of any functional deficit is, however, low.

Who wants plastic surgery?

Miss D Ryan, Mr T Hampton, Mr S Rahman

Brighton & Sussex Medical school

Health Education England is responsible for restructuring the Foundation Training Programme, requiring schools to reduce the number of surgical posts offered to trainees. With a limited choice of posts, would any trainee opt for highly specialised Plastic Surgery over a more common surgical post that might offer a broader range of skills?

Through questionnaires sent to personal email accounts and encouragement through private social media sites, students at various stages of their education and Foundation Year 1 doctors (FY1) were asked if they would consider a plastic surgery post as part of their Foundation Year 2 (FY2) and about the extent of their knowledge of the history of plastic and reconstructive surgery in England.

Results showed a decline in interest in the subspecialty as students progressed through their training. Enthusiasm was at its lowest in FY1s. Clearly follow-up as to why trainees lack interest in the field is of

paramount importance, however the results themselves highlight a lack of gusto that has not previously been documented. Will plastic surgery continue to attract the most able future clinicians if trainees and students are less exposed to the specialty? Self-motivated trainees will always seek opportunities such as taster weeks, conferences and meetings but the specialty may face limitations if drawing future trainees from a limited pool.

Perhaps for a specialty that prides itself on perception and aesthetics, there is some public relations work needed here. Another question is how an internationally renowned plastics centre with the heritage of Queen Victoria Hospital can be poorly known amongst its own trainees.

Cultural diversity and the use of porcine acellular dermal matrices

Mr A Shiatis, Miss H Lloyd-Hughes, Dr L Anastasia Abeywickrama, Mr S Hamilton
Royal Free Hospital,

Introduction

Acellular Dermal Matrices (ADMs) are utilized as adjuncts in both cosmetic and reconstructive breast surgery to improve the final aesthetic result and reduce various complications such as capsular contracture, surface irregularities and implant/ inflammatory fold malposition. Popular ADMs such as Strattice, are porcine biomaterials with multiple insinuations for patients of certain ethnic and religious backgrounds and to the consenting surgeon. We conducted a study to survey the perception of patients against biological implants based on whether they were listed for cosmetic or reconstructive surgery, and compared that to the general/healthy population.

Method

We designed a questionnaire to investigate the ideas, concerns and expectations of the three aforementioned groups as regards to ADMs, based on age, cultural background and religion. Fifty patients listed for surgery (25 reconstructive vs 25 cosmetic) filled a questionnaire in clinic while another fifty healthy individuals completed an online survey.

Result

Our results show a strong aversion to porcine ADMs for patients of Muslim and Jewish background, particularly if undergoing reconstructive breast surgery post-mastectomy. There is however variation amongst cosmetic and reconstructive surgery. Interestingly, 30% of the healthy population stated unlikely to consent for a porcine implant.

Conclusion

Knowledge of cultural preferences assists the consenting surgeon in obtaining a culturally sensitive informed consent.

Low versus high fluence parameters in the treatment of facial laceration scars with a 1,550-nm Fractional Erbium-Glass Laser

Dr H Shim

Uijeongbu St. Mary's Hospital

Purpose

Facial laceration is one of the most common traumas in outpatient plastic surgery. Early postoperative fractional laser treatment has been used to reduce scarring in many institutions, but the most effective energy parameters have not yet been established. This study sought to determine effective parameters in the treatment of facial laceration scars.

Methods

From September 2012 to September 2013, 57 patients were enrolled according to the study. To compare the low and high fluence parameters of 1,550-nm fractional erbium-glass laser treatment, we virtually divided the scar of each individual patient in half, and each half was treated with a high and low fluence setting, respectively. A total of four treatment sessions were performed at one-month intervals using the same parameters and clinical photographs were taken at every visit.

Results

Results were assessed using the Vancouver Scar Scale(VSS) and global assessment of the two portions of each individual scar. Statistical analyses were conducted using SAS software version 9.3(SAS institute, Cary, NC, USA). Final evaluation revealed that the portions treated with high fluence parameter showed greater difference compared to pre-treatment VSS scores and global assessment values, indicating favourable cosmetic results.

Conclusion

Laser therapy is a promising method of scar treatment. Our institution compared the effects of high fluence and low fluence 1,550-nm fractional erbium-glass laser treatment for facial scarring in the early postoperative period and revealed that the high fluence parameter was more effective for scar management. Future studies should investigate the optimal number of sessions or protocols for scars in different locations.

Lessons learnt from digital replantation at a UK hand unit

Mr A Smith, Mr D Nikkhah, Miss N Allan, Miss S Khoyratty, Mr M James, Miss N Nugent

University of Leeds

Objective

We audited digital replantation at the Queen Victoria Hospital, West Sussex. Patient demographics, operative details and post-operative recovery were investigated to identify any correlation with replant success and assess for service improvement.

Methods

All cases marked under replantation between May 2010 and April 2013 were identified on Computer Records (ORSOS) at QVH. 36 sets of case notes were analysed retrospectively, giving 42 replants overall.

Results

28 replantation attempts were successful giving a success rate of 67%. The majority of patients were male (88%), employed in a manual trade with an average age of 40. The mean length of stay was 3.5 days.

Of the failed cases 92% were crush or avulsion type injury; and only 4 of these cases were re-explored in theatre. Only 70 % of the failed cases had bony shortening before osteosynthesis. There was also no standardized protocol for anticoagulation in this group of patients.

The surgeon's grade did not have a significant impact on success rate and despite being a relative contraindication to replantation, single digit amputations proximal to the FDS were replanted with a 71% success rate.

Conclusions

The success rate of replants at QVH falls short of similar series. Lack of bone shortening could have contributed to the higher failure rate. This would have prevented a tensionless microsurgical anastomosis and in some cases avoided vein graft harvest. Those cases that failed had possibly not been anastomosed outside the zone of trauma.

Improving the handover and management of trauma lists in a plastic surgery Unit

Dr H Taylor, Mr F Urso-Baiarda

Wexham Park Hospital

Introduction

The process and safety around the doctors' shift handover process in a regional Plastic Surgery unit was evaluated. In addition, handling of medical trauma photography is an important aspect of patient care which requires medicolegal attention.

Method

Handover used to be an informal meeting in the doctors mess. An initial satisfaction survey was carried out looking at location, attendance, and opportunity to discuss cases. We therefore established a formal computer-based handover in a departmental office environment with the aid of printed patient lists. Liaising with IT and the Risk Management teams have enabled us to upload patient images directly to our intranet

network after patient consent. Additionally, web-based software has been designed to further improve our trauma patient database management & handover process.

Results

We now have 3 formal shift handover meetings per day, with satisfaction scores (out of 10) improving by 2.2 points for location, 4.3 points for attendance and 2.8 points for opportunity to discuss cases. This has enhanced patient safety with fewer rates of missed/cancelled patients. With patients' wound photography readily accessible at handover, senior reviews of wounds are now available in a team-based environment, which has further shown to satisfy team teaching and learning. The specialist bespoke software package has been designed, but not yet fully implemented.

Conclusion

Computer-based handover with accessible patient photography improves satisfaction of the handover process, decision making, provision of patient care and team learning. We hope a further re-evaluation after the implementation of a trauma software package will continue to improve handover and the delivery of care.

Departmental plastics mobile smartphone handbook

Dr H Taylor, Dr S Nooristani, Mr F Urso-Baiarda
Wexham Park Hospital

Introduction

With regular rotation of junior doctors through uncommon specialties, there is anecdotally a rapid steep learning curve for junior trainees when starting in plastic surgery. They often learn how to work in the department and manage conditions from their peers rather than from their seniors, leading to repeated mistakes and mismanagement.

Methods

A mobile smartphone application, "Wexham Plastic Surgery" has been compiled, compatible on Android and iOS devices. It has been written to contain details about the department staff, common contacts details, how the department and its' clinics run, how to manage trauma lists, and also outlines daily duties. In addition, a section on how to manage common conditions/presentations and perform basic procedures has been included.

Results

Prior to the introduction of the mobile app, new doctors stated an overall poor satisfaction with their job induction and poor confidence with management of injuries when on-call. In particular, more than 80% stated they have not had any plastic surgery experience in the past. More than two thirds stated they were not taught any basic management/procedural skills in their first week. After introducing the app, new doctors stated they felt more confident with their role, familiarity with the staff and clinical areas, and carrying out duties whilst on-call.

Conclusion

The use of a smartphone app provides portable access to an at-a-glance guide for new junior doctors starting in our plastic surgery unit, increasing confidence and providing a safer and more efficient service for patients. Having been written by the team, new doctors state they are willing to contribute, therefore keeping the guide constantly up to date.

A review of assault by chemical burn: a regional burn centre experience

Miss A Tan, Professor P Dziewulski, Mr M Nizamoglu, Mr D Barnes, Mr B Philp, Mr N El-Muttardi
St Andrew's Broomfield Hospital

Introduction

Acid attacks in third world countries have been well described in the literature. In the United Kingdom (UK), burn injuries from corrosive substances are often the result of industrial related work accidents. In recent years, the incidence of acid assaults has gained awareness through several high profile cases.

Aim

1. Review the demographics, incidence and patient outcomes
2. Evaluate the long term psychosocial support available
3. Review current criminal litigation proceedings and preventative legislations in the UK specific to assault by corrosive substances

Methodology

A 15 year retrospective review of all intentional burn injuries from corrosive substances that presented to a regional burn unit (n=20) was conducted using case notes. Data was collected on patient demographics, burn demographics, management and number of successful criminal charges.

Results

M:F ratio was 3:1. Mean age of victims = 27.2 years. 75% of these attacks occurred on the streets. Acid was used more than alkali. 4 victims required significant reconstruction surgery. Face was most common location of injury. In a third of the cases, perpetrators were known to the victims. Long term psychosocial effects are often not adequately followed up. The number of cases proceeding to criminal charges often diminishes for various reasons (lack of legal support, fear of safety).

Conclusion

Assault by means of corrosive substances results in long term devastating patient outcomes. Enforcing legislation restricting access to these substances and increasing severity of punishment is required. Better structured long term psychological support is also needed to help these victims reintegrate into society.

Photospectrometry in burn depth analysis: a potential aid memoir for the clinician

Miss A Tan, Professor P Dziejulski, Ms F A Pedrini, Mr Q Frew, Mr B Philp, Mr N El-Muttardi, Mr D Barnes
St Andrew Broomfield Hospital

Background

Assessment of burn depth is challenging even to the experienced burn clinician. Laser Doppler Imaging (LDi), thermography and indocyanine green video angiography are various imaging modalities advocated as useful clinical adjuncts. Tissue spectroscopy analysis with its corresponding software (ScanOSkin®) utilizes identifiable pigmented structures within the skin to correlate with wound depth and tissue perfusion. Its role in burn depth assessment is still developing. This pilot study aims to assess the potential of ScanOSkin® in aiding burn depth assessment in a clinical setting.

Method

Images of 54 burn wounds were collated. Using the ScanOSkin® software, three senior clinicians carried out retrospective blinded evaluation of burn depth, perfusion and pigmentation to arrive at likely management and outcome. We correlated prediction of wound healing potential with actual patient outcome. User feedback was also collected.

Results

M:F ratio = 33:13. Median age = 14.5 years (range 1 – 96 years). Mean TBSA = 2.8% (range 0.5% - 30%). Using ScanOSkin®, we found it has a sensitivity of 87% and a specificity of 86%. We measured Inter-rater Agreement (IRA) using Kappa model which showed variation in IRA not likely significant in influencing results.

Conclusion

Studies have shown reflectance spectrometry as useful aide memoir for burn depth assessment with accuracy quoted as high as 86% when validated against LDi. We feel it has potential as a clinical adjunct, although interpretation of haemosiderin and correlation with depth is not always clear. This is currently a prototype with budding prospective. Quantification of pixilation during image processing by ScanOSkin® will increase its value.

Trends in burns admissions in a tertiary burns centre over the last four decades

Ms J YM Tang, Mr O Tillo, Dr D Bance, Ms V Allgar, Mr U Anwar
Pinderfields General Hospital

Introduction

The National Burns Care Review Committee was set up to evaluate burns services and published their guidelines in 2001. This study aims to evaluate the patterns of admissions within a tertiary burns referral centre; looking at trends before restructuring burns services in the UK and how ongoing changes made reflect on our admission patterns.

Methods

This was a retrospective case note review where the years 1981, 1991, 2001 and 2011 were used as reference snapshot years. Data were collected on patient demographics, mode of injury, length of stay in hospital and inpatient mortality.

Results

The number of admissions have increased significantly over the last four decades from 35 in 1991 to 146 in 2011 (Chi-squared, $p < 0.05$). There is an apparent increase in the number of patients admitted for burns due to psychiatric illness, but this was not statistically significant. Flame burns accounted for the highest proportion of hospital admission in each reference year; 60% (1981), 66% (1991), 57% (2001), 37% (2011). However, the number of burns related to house fires has significantly decreased from 28.5% in 1981 to 6% in 2011 ($p < 0.05$). Similarly, the proportion of resuscitation burns admitted have decreased over the decades from 69% (1981) to 11% (2011). The average total body surface area (TBSA) burns was 36% in 1981, decreasing to 6% in 2011 ($p < 0.05$). Average length of stay in hospital has decreased. This was also the case in the average length of stay per percentage burns. Mortality rates have also decreased from 37% (1981) to 4% (2011).

Conclusion

There is a significant increase in the number of admissions of smaller percentage burns with an overall decrease in length of stay per percentage burn.

Our experience on 3D CT pre-planning for mandibular reconstruction with a free fibula flap

Ms J Y M Tang, Mr A Fitzgerald, Mr A McKechnie, Mr A Smith, Mr A Yousefpour
Sheffield Teaching Hospitals

Introduction

Accurate osteotomies for mandibular reconstruction can be tricky when done 'freehand'. Since 2014, we have been utilising 3-D CT pre-planning, Synthes prefabricated osteotomy jigs and pre-assembled mandibular reconstructive plates. We work with a two-team approach; one team performing the resection/neck dissection whilst the other harvest the free flap. We review our preliminary results following a change in practice from freehand to technology aided surgery.

Methods

This was a retrospective case note review comparing patients who had mandibular reconstruction with a free fibula flap done the traditional way ('before' group) to those to who had the aid of 3-D CT pre-planning ('after' group).

Results

We identified 5 patients who had reconstruction with the aid of 3-D CT pre-planning and 5 others prior to that. Four (80%) in the 'before' group underwent surgery for malignancy and one (20%) for a benign tumour. Those in the 'after' group had surgery for malignancy (20%), benign tumours (40%), osteoradionecrosis (20%) and gunshot trauma (20%). The average surgical time is decreased by 51 minutes with the aid of CT pre-planning. This was not significant. The median tourniquet time for flap harvest was similar. However, intraoperatively, the prefabricated osteotomy jigs result in a reconstruction with an accurate fit to the surgical defect. We report no flap loss. In the 'before' group, one patient had recontouring of the flap, a year after initial reconstruction and another had fractured through her reconstruction plate. There was one case of infection in the 'after' group.

Conclusion

As our experience increases, we are confident that CT pre-planning will help reduce surgical time and improve reconstructive outcomes.

Tranexamic acid in free flap surgery for the breast

Miss S Tay, Mr R Lambert, Dr A Fotopoulos-Mallioris, Mr M Jones
Royal Marsden Hospital

Introduction and Aims

Tranexamic acid (TXA) is a potent antifibrinolytic agent advocated to reduce peri-operative bleeding. There is hesitance in its use in free flap reconstruction due to the possible risk of persistent thrombosis within the anastomotic site and its use in free flap reconstruction of the breast has not been previously reported. The aims of the study were to determine the safety of TXA in free flap surgery for the breast and the effect of TXA on postoperative bleeding and drainage volumes and length of stay in hospital.

Method

This was a retrospective study based on a single operator series of 27 consecutive abdominal-based flap breast reconstructions with and without TXA.

Results

Total abdominal drainage was significantly reduced. There were no significant differences in length of stay, drop in haemoglobin, infection, seroma, dehiscence, wound break down or return to theatre in either group.

Conclusions

Our small study demonstrates a significant reduction in abdominal drainage, but did not demonstrate a statistical difference in length of stay and overall post-operative drainage. There were no other associated complications from the use of TXA. Further studies are warranted to investigate both the safety and benefits of TXA in free flap surgery.

Cutaneous cooling to manage botulinum toxin injection-associated pain in facial palsy patients: a randomised controlled trial

Miss A Thomas, Dr N Pucks, Mr M Hallam, Miss V Venables, Miss C Neville, Mr C Nduka
Imperial College London

Introduction

Botulinum toxin injections are an effective, well-established treatment to manage synkinesis secondary to chronic facial palsy but necessitate painful injections at multiple sites over the face up to four times per year. Cutaneous cooling has long been recognised to provide an analgesic effect for cutaneous procedures, but evidence to date has been anecdotal or weak. This randomised controlled trial aims to assess the analgesic efficacy of cutaneous cooling using a cold gel pack versus a room temperature Control.

Material and Methods

The analgesic efficacy of a one-minute application of a Treatment cold (3-5°C) gel pack versus a Control (room temperature) gel pack prior to Botulinum toxin injection into plastyoma was assessed via visual analogue scale (VAS) ratings of pain pre-, during and post-procedure.

Results

35 patients received both trial arms during two separate clinic appointments. Cold gel packs provided a statistically significant reduction in pain compared with a room temperature Control (from 26.4mm to 10.2mm VAS improvement ($p < 0.001$)), with no variance noted secondary to age, the hemi-facial side injected or the order in which the Treatment or Control gel packs were received.

Conclusion

Cryoanalgesia using a fridge-cooled gel pack provides an effective, safe and cheap method for reducing Botulinum toxin injection site pain for facial palsy patients.

EWTD and MMC: shifting focus. Are patients still the centre of our attention? Implementing MDT handover and electronic medical records in a unique environment

Ms R J Thomas, Mr S Rahman, Dr E Pickles
Queen Victoria Hospital

Introduction

The implementation of shift working with the introduction of the EWTD & MMC has resulted in new challenges to patient safety. More clinicians are responsible for individual patients. Clinical handover has never been more vital for patient safety. QVH represents a unique environment It is a tertiary referral center for plastic, maxillofacial, ophthalmological surgery and complex hand trauma, covering Kent, Surrey & Sussex, it remains a District General Hospital. Throughout the day specialties work in isolation but at night

there are no resident maxillofacial doctors despite, complex patients cared for in ITU, SDU, ward & burn unit environment. Plastics trauma and elective teams work in isolation. This is further complicated by the presence of a pediatric ward with no pediatricians. Handovers previously worked in a colloquial manner

Method

The aim of this audit was to improve Patient Safety by ensuring teams at QVH are achieving best practice in Clinical Handover, complying with Royal College Guidelines. A secondary aim was to assess current attitudes & experiences of clinicians working at QVH.

Results

Handover was a single specialty event and only made the full quota on 40% of occasions it was not MDT in nature.

There was great variation interdepartmentally and intradepartmentally, dissatisfaction included poor elective handover, inadequate induction, none MDT, and infrequency. Plastic surgical SHO's were the least satisfied, but took the greatest responsibility.

Conclusion

As a result of this audit the interdepartmental handover system was completely reorganized into a bidaily MDT event. An electronic medical record was instigated to improve elective handover and to ensure continuity of care and safety of patients

Elective carpal tunnel surgery: safe on warfarin and as day case

Miss J Torres-Grau, Miss S Houlton

Southmead Hospital

With one million people on warfarin, it is still the most common long-term anticoagulant given to patients at risk of thromboembolic events. Risks and benefits of this therapy are well established, however, it becomes more unclear when these patients are to undergo elective hand surgery. There are no clear guidelines to aid in the decision-making, which is left to different institution protocols and surgeons preference.

We describe our practice and results, aiming to emphasize the various advantages of continuing warfarin therapy and the benefits of open carpal tunnel release as a day case.

Methods

We conducted a retrospective study of patients undergoing elective open carpal tunnel release from January 2013 to January 2015. 40 patients were identified to be on warfarin, with a therapeutic INR (less than 3) on the day of surgery. All patients underwent the same procedure, by one of two senior surgeons; under LA and tourniquet control and stayed overnight in order to monitor for bleeding complications. Data was analysed for a further 40 patients, not on warfarin, for comparison.

Results

None of the patients on warfarin had bleeding complications, matching results in the comparison group.

Conclusion

Stopping or bridging warfarin therapy in these patients leads to a demonstrable increase in the risk of thromboembolic events.

Open carpal tunnel release on warfarinised patients should be done as a day case (British Association of Day Surgery Guidelines), under local anaesthetic and with the use of an arm tourniquet and conscientious haemostasis. This prevents the risk of thromboembolic events, has financial benefits for the trusts, reduces staff workload and patient inconvenience, with no evidence of increased risk of bleeding complications.

Breast Lipomodelling: current practice and guidelines in our unit

Dr P Valand, Dr V Aurora, Mr J Henton, Mr H Thirkettle, Mr W Bhat , Mr S G Rao, Mr P Longhi

University Hospital North Durham

I

Introduction and Aims

Lipomodelling has become firmly established over the past 20 years, however long term outcomes are uncertain and practices vary. BAPRAS guidelines suggest initial follow-up to assess immediate complications, a three monthly review to plan subsequent procedures and at a minimum one year review following the final procedure to determine medium term outcomes. NICE guidelines recommend post breast cancer lipomodelling procedures should be discussed in the MDT setting.

Methods

Breast lipomodelling cases (2010 to 2014) were identified from clinical coding records. The electronic patient record was used to collect patient data including: demographics, lipomodelling equipment, number of outpatient reviews, complications and any multidisciplinary team discussion.

Results

There was a general lack of documentation concerning equipment and methods used. Effects of lipomodelling were difficult to judge and there was variable followup, with few patients seen one year after last treatment. Our complication rate appeared comparable to the published data.

Conclusions

Retrospective data is hard to interpret and of limited use. We feel a prospective audit of lipomodelling, with a standardised data set would be useful to gain more information about our practice. We propose a regional audit and present a data collection proforma based on the selected points from the guidelines.

Estimation of surface area: comparison of subjective and objective assessments in a plastic surgery unit

Dr K Walsh, Mr I King, Mr MJ Hallam
Royal Albert Edward Infirmary

Background

Current burns guidance in the United Kingdom aims for 95% wound healing at 31 days requiring accurate subjective assessment of the burn wound. Few studies have investigated subjective assessment of skin graft take. Such studies included only small numbers of burn wounds and participants.

Aim

To compare the subjective assessment of surface area between different staff grades in a burns unit to a validated objective tool.

Method

15 digitally drawn images were constructed using (Drawing Desk) software, each containing an area which was shaded. The surface area of unshaded areas were calculated using a validated computerized tool (Image J). 36 members of staff (10 burns nurses, 6 trainee surgeons, 20 plastic surgeons of various grades) at a plastic surgery unit in the UK separately estimated the unshaded surface area of the images. The results were compared between different staff groups and to the objective tool.

Results

Nurses were the best group at interpreting surface area. However there was no statistical difference between staff groups. Subjective assessment of the images was not as accurate as the objective tool. 50% of participants were unable to calculate an area which contained 95% unshaded surface area.

Conclusion

Subjective assessment of surface area is an unreliable method to assess surface area. Objective tools are more accurate but are too cumbersome to use clinically. Burns surgeons should be aware that subjective assessment may mean wound healing is inaccurately reported and the requirement to report a fixed percentage of healing is unrealistic.

Peri-stomal abdominal wall augmentation: novel use of a pedicled antero-lateral thigh flap

Mr J Warbrick-Smith, Dr N Bowen, Mr P Drew

Welsh Centre for Burns and Plastic Surgery, Morriston

Introduction

The pedicled antero-lateral thigh (ALT) flap has proved a reliable means of covering groin, perineal, thigh and abdominal defects. We present what we believe to be the first case of its use in re-contouring the abdominal wall in the management of a troublesome abdominal stoma.

Case report

A thin 64 year-old female patient was referred with difficulties achieving a seal around her urostomy. Her abdominal wall was abnormally contoured due to multiple laparotomies and stoma revisions following a complicated cystectomy. Leaks occurred from an area of subcutaneous tissue deficiency below and lateral to the stoma, where the stoma appliance did not adhere adequately to the skin. Dense intra-abdominal adhesions and a short small bowel precluded further stoma revision or re-siting. Revision of her midline abdominal scars and local lipo-filling resulted in a transient reduction in urine leakage; thus a more permanent means of subcutaneous tissue augmentation was sought. An ipsilateral pedicled de-epithelialised fasciocutaneous ALT flap was raised sub-fascially and delivered via a subcutaneous tunnel into a pocket inferior to her urostomy. The flap was folded along its long axis to create a 'croissant'-shaped flap, augmenting the abdominal wall in areas required. At 4 months, the frequency of urine leakage has dramatically reduced.

Discussion

Troublesome abdominal wall stomas can usually be managed non-operatively but in difficult cases, surgery may be required to correct local contour defects. In our patient, the novel use of a pedicled ALT flap to augment the abdominal wall dramatically reduced urine leak from ill-fitting stoma appliances. We advocate this approach in patients presenting with this unusual problem in future.

Do UK soft tissue sarcoma referral guidelines work?

Dr T Webb, Mr C Powell, Mr P Wilson

Southmead Hospital

Introduction

Current national guidelines for the management of soft tissue sarcoma in the United Kingdom recommend that patients presenting with a palpable lump should be referred urgently to a specialist soft tissue sarcoma service if it satisfies one of a set of specific criteria. These criteria being if the lump is greater than 5 cm in diameter, deep to the fascia, fixed or immobile, painful, increasing in size and/or a recurrence after previous excision.

These referrals should be made to a diagnostic clinic clearly affiliated with a Sarcoma multidisciplinary team for combined clinical, radiological and histological assessment

Methods

Data was collected regarding all electronic and faxed referrals to our specialist soft tissue sarcoma service over a 3 month period (Oct –Dec 2013). Referrals were assessed for their adherence to the national guidelines.

Results

134 Referrals were received of which 59 were electronic or faxed. 26 were female, 33 were male. Median age of referral was 55. 11% of referrals were subsequently proven to be soft tissue sarcomas. 93% of patients referred met the criteria outlined above. However 63% of those that met the criteria had had imaging prior to referral and the report had a recommendation to refer to the patient to The Bristol Sarcoma Service.

Conclusion

It is clear that patients are not being referred to the Sarcoma service as per the National Institute for Health and Care Excellence (NICE) guidelines. The majority of the referrals were suggested by the reporting Radiologist. Further guidance needs to be disseminated highlighting the importance of rapid referral as per the guidelines. Failure to adhere to referral guidance can lead to costly and unnecessary imaging as well delays in appropriate management.

Evaluating YouTube as a source of patient information: treatment options for Dupuytren's Disease

Mr A Wiberg, Dr M Jones
Southmead Hospital

Introduction and Aims

The aim of this study was to ascertain the content and educational quality of videos uploaded to YouTube on the topic of Dupuytren's Disease.

Method

A total of 55 videos were selected and analysed independently by two doctors who assessed the source, content and educational quality of each video.

Key results

55% of videos were deemed "useful to patients", with the majority uploaded by medical professionals. Of these, only 27% provided a comprehensive overview of all treatment options. 15% of videos were deemed "misleading", and were more likely to suggest alternative treatments lacking an evidence base. The videos most viewed and "liked" were uploaded by patients/public, and were more likely to be misleading. 35% of

videos were deemed to be advertisements by medical practitioners, and the vast majority of these (93%) focused on 'office-based' treatments - needle aponeurotomy and collagenase injections.

Conclusion

Useful patient education videos are available on YouTube but are interspersed between ones that are potentially misleading. There appears to be a disproportionate amount of information focusing on needle aponeurotomy and collagenase injections. Patients should be aware of the source and intent of the video, and put preference on viewing those produced by medical professionals.

Lentigo Maligna treated with CO₂ laser ablation: a case series of 15 patients

Mr N Wickham, Mr K Kok, Mr J Bond, Miss B O'Leary, Miss S Hemington-Gorse, Mr M Murison
Lister Hospital

Introduction and Aims

Lentigo maligna (LM) is a premalignant skin lesion involving atypical melanocytes. All LM may progress to Lentigo Maligna Melanoma (LMM) but the rate of transformation unclear. Current UK guidelines recommend surgical excision with clear histological margins. This may result in large excisions and unacceptable morbidity. Several non-excisional treatments are available with variable results. CO₂ laser is one such modality.

Material and Methods

Selected patients between 2008–2013 with biopsy proven LM were included in this study. The Lumenis UltraPulse CO₂ laser was used in all patients with the number of passes ranging from 1 to 5. The end point was clearance as observed by clinical examination.

Key Results

At follow up five of the 15 patients had complete clearance and nine patients had some repigmentation requiring further ablation. The mean number of ablations required in this group was 2.8. The mean follow up for all patients was 32.7 months (range 4 - 163).

Conclusion

In our series repigmentation appearing as lentigo simplex was seen to some extent in nearly all patients. It is hypothesised that atypical melanocytes within deep adnexal skin structures was a possible focus of recurrence for LM. This case series suggests that CO₂ laser ablation is a safe, well tolerated treatment when surgical excision is not possible. It achieves excellent cosmesis and may have a useful role in selected patients with persistent or recurrent disease. Close follow up should be undertaken for recurrence or progression to LMM. Caution should be exercised when treating lesions extending into deeper adnexal structures. In these patients surgical excision may be more appropriate. Larger studies including long-term data are indicated.

The free gracilis muscle flap: 92 flaps over 3-years - a single unit's experience

Miss G Williams, Miss R Khundkar, Mr A Ramsden

Oxford University Hospitals Trust

Introduction

The gracilis muscle flap is a versatile flap used in acute and elective settings to reconstruct a variety of defects. Advantages of this muscle flap include expendability, consistent vascular anatomy, vessel calibre, ease of raising and training others.

The gracilis flap is one of the workhorse flaps in our unit. Here we describe the experience and use of this flap in our unit over a 3-year period.

Methods

All clinical details were collected from the prospectively-maintained Oxford Free Flap database. All patients who received a free gracilis flap reconstruction between 2011 and 2014 were included in the study. This included reconstructions for both acute and elective conditions for any part of the body.

Results

Ninety-two gracilis muscle free flaps were performed for a total of ninety-one patients. All but six reconstructions were for lower limb defects. Three were myocutaneous flaps and the remainder were muscle only. 52% were elective cases (osteomyelitis, infected prostheses, sarcoma) and the rest were trauma cases. The return to theatre rate was 14.1% with a total flap loss rate of 5.4%. Other complications included partial flap loss (1.1%), flap site haematoma (1.1%), donor site haematoma (1.1%) and seroma (1.1%).

Conclusions

We have found the free gracilis flap a useful workhorse flap for small to medium sized defects with a complication rate in-line with published literature. It is a robust flap with consistent results achieved by different grades of surgeons.

Reducing the risk of needlestick injuries in the operating theatre: a survey of suture needle handling

Miss G Williams, Mr M Nicolaou, Professor T Athanasiou, Mr David Coleman

Oxford University Hospitals Trust

Introduction

Suture needle handling methods vary extensively. Locking the needle tip against the needle holders shaft prior to transfer (protected method) is recommended to improve safety, although this is not evidence based. Some prefer to transfer the needle mounted perpendicularly to the needle holders with the tip exposed (unprotected method).

We investigated scrub nurses' preferred method of transfer and the safety of each by investigating their experience of needlestick injuries.

Method

Scrub nurses from Chelsea and Westminster, Wexham Park and Oxford University Hospitals were surveyed between November 2013 and August 2014. Nurses selected their preferred method (protected, unprotected or either) and indicated previous needlestick injuries with each technique. Multinomial regression analysis and chi-square with Yates correction were used to assess associations.

Results

107 scrub nurses were surveyed across 12 specialties. 80/107 (75%) preferred protected transfer, 20/107 (19%) preferred unprotected transfer and 7/107 (6%) had no preference. There was no significant association between needle mounting preference and years of scrub experience or specialty. Significant differences were seen between preferences and 4/6 hospitals.

9/107 (8%) nurses reported needlestick injuries in the protected group compared with 40/107 (37%) in the unprotected group, this difference being statistically significant ($p < 0.001$ chi-square=25.17). 5/107 (5%) reported needlestick injuries with both methods.

Conclusion

Protected needle transfer seems safer than unprotected transfer. Effective communication between nurses and surgeons to establish the preferred method of sharps handling is essential to improve safety.

Reconstructive outcomes following soft tissue sarcoma resection: a tertiary unit's experience

Miss G Williams, Mr A Khan, Miss B Osman, Miss M Wilkinson, Mr K W D Ramsey, Mr P A Harris, Mr A E Searle, Mr D Strauss, Mr S James
Royal Marsden Hospital

Aim

We report the Royal Marsden experience of reconstruction following soft tissue sarcoma resection over 14 years.

Method

Retrospective, case-note review of all patients undergoing sarcoma resection and reconstruction between 1999 and 2013 was performed. Data analysis was performed using GraphPad Prism 6.0.

Results

136 patients were identified with follow-up data available for 122.

Primary resection was performed at The Royal Marsden in 79/122 (65%) of cases, and most reconstructions (57%) were performed at this time. Seventy-three patients (60%) had excision and reconstruction alone (S),

14/122(11%) underwent radiotherapy before resection and reconstruction (Pre-RT) and 35/122(27%) had radiotherapy following resection and reconstruction (Post-RT). Five-year disease-free survival was 63% and 57% for overall survival.

128 reconstructive procedures were performed (8 skin grafts, 14 local, 71 regional and 35 free flaps). Reconstructions were performed for large tumours (54%), recurrent disease (27%) or following re-excision of an incompletely excised tumour (13%). The overall flap failure rate was 7% (8/120; 7 partial failures (6%), 1 total failure (<1%)), There was a trend suggestive of increased flap failure in the Post-RT group.

Conclusions

Reconstructions were indicated for large primary tumours or recurrent/incompletely excised disease. Reconstructive failure was uncommon and may be affected by radiotherapy status.

Generating a profit from nipple areolar complex reconstruction in the UK

Miss A Wilson, Dr C A Powell, Mr S M Wilson

University of Bristol

Introduction

Reconstruction of the nipple areolar complex (NAC) is widely practiced as the final surgical phase of breast reconstruction following mastectomy. This study aimed to determine the financial implications of performing NAC reconstruction as detailed costing data for individual operations is not currently available in the UK.

Method

We conducted a prospective cost analysis exercise of ten unilateral NAC reconstructions performed under local anaesthetic by a single surgeon at Southmead Hospital, Bristol. Our micro-costing valuation was compared to both hospital Finance Department estimates of patient level costs and to tariff payments received under the Payment by Results scheme for 17 similar cases performed by the same surgeon.

Results

The average patient level cost, as calculated by the Finance Department, was £1,419.22 (\pm £300.44 SD). The cost of performing a unilateral NAC reconstruction as calculated by micro-costing was £409.42. This compared to an average tariff payment of £1,967.24 (\pm £796.89 SD). There was an average net income of £1,557.82, net income was positive in all 17 cases. In 23.5% of cases the operation was coded incorrectly resulting in a loss of potential income per case of £1,380.00–£2,035.

Conclusions

This study demonstrates that it is possible to generate a substantial income from unilateral NAC reconstruction in the UK. This study also highlights errors in financial costings and clinical coding which has implications on health care finances.

Emergency readmissions in a plastic surgery department

Mr K Y Wong

Cambridge University Hospitals NHS Foundation Trust

Aims

A no-payment rule for emergency readmissions was proposed by the Department of Health in 2011. This was to reduce the level of emergency readmissions and to improve accountability of hospitals to patients for the 30 days after discharge. During the 2010-11 financial year, our hospital had 2930 emergency readmissions equating to a potential income loss of £7 million.

The aim of this audit was to identify the cause of emergency readmissions in our plastic surgery department to improve the quality of care.

Methods

Data was retrospectively collected from the finance department, coding department and case notes for the first six months of the 2010-11 financial year. The audit was repeated for the first six months of the 2011-12 financial year.

Results

A total of 69 emergency readmissions were identified from the plastic surgery department, equating to a potential income loss of £134,000. Only 51% were true emergency readmissions with others arising due to coding errors. The audit also highlighted inadequate exclusion criteria. These findings helped inform the hospital on negotiating with the Primary Care Trust new exclusion criteria and emergency readmission thresholds.

With the implemented changes in place, a re-audit in 2011 found that over six months we had decreased our emergency readmission rate by 60%. This equated to potential cost savings of more than 90% or £130,000 compared to the year before.

Conclusions

Performance measures alone may not be particularly useful unless combined with knowledge of how they relate to patient outcomes and delivery of care.

Accurate coding is vital to ensure correct financial reimbursement and is something that healthcare professionals need to be actively involved with.

A survey of paediatric extravasation injury management

Mr K Y Wong, Dr D L H Ching

Queen Alexandra Hospital

Introduction

Extravasation injury occurs in up to 70% of neonates in hospital. Although most remain localised and heal spontaneously with conservative management, the sequelae of extravasation are often underestimated.

Methods

The management of paediatric extravasation injury was compared at 10 hospitals. Healthcare professionals including nurses and doctors working in neonatal intensive care, paediatric intensive care and general paediatric units were interviewed via telephone. Questions included awareness of protocols or guidelines, extravasation management, complications, use of extravasation kits and whether any training was received. Extravasation protocols or guidelines obtained from each hospital were also compared.

Results

Fifty healthcare professionals were interviewed from 25 units based at 10 hospitals. All were aware of hospital protocols or guidelines, but only 16% were familiar with the content. Less than 50% of extravasation injuries were suggested to be referred to the plastic surgery team with great variation in referral criteria and time. The majority (70%) were unsure about the availability of extravasation kits and only 1 hospital was reported to have it on all relevant wards. None of the hospitals were reported to regularly audit extravasation injuries and 76% of healthcare professionals did not receive any training for extravasation management.

Conclusion

There needs to be more awareness of the potential significant morbidity associated with extravasation injury. The lack of national guidelines in the United Kingdom has led to varying extravasation management within and across hospitals. Further investigation is required to establish best practice.

Management of Subcutaneous Fat Necrosis of the Newborn (SCFN) Secondary to Neonatal Cooling: a case report

Ms R Zarb Adami, Mr J Dunne, Ms C Milroy

St George's Hospital

Introduction and Aims

Perinatal asphyxia affects 5 per 1000 births in high income countries. Hypoxic ischaemic encephalopathy (HIE) treated by infant total body cooling on a blanket may reduce mortality and neurodevelopmental disability.

Our aim is to highlight the risk of cold thermal injury secondary to neonatal cooling and its management.

Materials and Methods

A male of Afro-Caribbean origin was born at term by emergency Caesarean section with no respiratory effort. The infant was resuscitated and moderate HIE diagnosed. Total body cooling was commenced at 4 hours.

Results

Re-warming was commenced on day 3. At 2 weeks, Plastic Surgery review of hard, erythematous and tender subcutaneous nodules associated with indurated plaques on the back, affecting 5% TBSA, was requested. Intravenous antibiotics for suspected sepsis were commenced (CRP = 230 mg/L), and ultrasound did not demonstrate spinal communication. Fluid culture had no growth, and a diagnosis of subcutaneous fat necrosis of the newborn (SCFN) was made.

A conservative approach was adopted, with regular turning and skin inspections. Nodules and plaque size reduced over a 2 week period, without deformity secondary to fat atrophy. At 6 weeks, the infant developed a mild hypercalcaemia managed with intravenous fluids to produce hypervolaemia.

Conclusions

SCFN is a panniculitis and usually self-limiting. It can be associated with ulceration and large calcifications requiring excision. It is a rare referral to Plastic Surgeons, however with increased use of neonatal cooling, there should be awareness of SCFN and its complications. The principles of management are meticulous skin and wound care, regular turning, and prompt management of metabolic complications.