Winter Scientific Meeting 2014- Poster Abstracts

(listed in alphabetical order by presenter surname)

Versatility of the alice band onlay graft in remodeling of the orbital bandeau

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Introduction

Remodeling of the orbital bandeau in the very young presents a surgical challenge. The aims are to remove the stigmata of disease from the bandeau, mould it into an acceptable shape and finally to maintain or reinforce its structural integrity. Reshaping of the deformed soft bandeau in the younger child may compromise its strength and appearance.

Methods

Frontoorbital remodeling depends on the suture affected by craniosynostosis. In bicoronal and metopic synostosis, a full 'Alice Band' onlay bone graft harvested from the parietal calvarium is used to reinforce and augment the bandeau. In unicoronal synostosis, only one side of the bandeau needs to be augmented. Surgical technique for each type of craniosynostosis and long term (>10 years) follow up are presented.

Results

Post operative appearance was acceptable in each case presented, with minimal countour irregularity. Long term follow up confirmed longevity of the onlay graft. There were no complications related to the procedure and all donor sites re-ossified.

Conclusions

The philosophy of the Australian Craniofacial Unit is to treat craniosynostosis within the first six months, to minimise the deforming sequelae on the skull base and thus the face. This requires the soft orbital bandeau to be reinforced and minimal remodeling is required. Long term outcomes confirm the usefulness of this technique.

Patient reported outcome measures for ear reconstruction

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Introduction and Aims

The aim of this study was to assess satisfaction rates and areas for improvement in patients who underwent ear reconstruction using autologus costal cartilage.

Material and Methods
Forty six patients between the ages of ten and seventeen returned fully completed questionnaires. Twenty one of the respondents were male and 25 respondents were female. The questionnaire assessed surgical outcome including integration of the ear with the patient's face, aesthetic auricular units, and donor site costal reconstruction. These were recorded on a five-point ordinal scale (one= poor andfive = excellent)and are presented as mean scores of a total of five.

Results
With regards to aesthetic unit reconstruction, skin colour matching had the highest overall mean score of 4.47. The extent to which the ears stick out received the lowest score (3.95). Of the individual aesthetic units, the lobule scored the highest (4.19) and tragus/antitragus scored the lowest (3.73). The mean satisfaction score for the appearance of the new ears was 4.23. Donor site costal reconstruction scored highest in the appearance of the scar (4.23) and lowest in the amount the ribs 'bulge' outwards (2.56). Seventy percent of all children would recommend this procedure. Those who would not recommend the procedure to others reported reasons such as complications of the donor site, ribs 'sticking out' and pain after surgery.

Conclusions
Ear reconstruction with autologous cartilage results in a high satisfaction rate in children. However, their experience of the surgery can be improved by focusing on their post operative care immediately in hospital and ensuring a robust follow up takes place.

Leprosy: the role of plastic and reconstructive surgeons

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Leprosy also known as Hansen's disease is a debilitating disease which was declared by the world health organisation as eradicated. However, in many countries in the world where the disease has been forgotten people continue to develop leprosy and the disabilities which result from it. Unfortunately, as the disease has now 'gone out of fashion' so has the knowledge and therefore patients seek medical advice much later on once their disease has progressed and they have developed disabilities such as foot drop and claw hand. These problems can cause significant socioeconomic problems for patients in poorer countries particularly for those work in agriculture and farming.

To assess these problems first hand the author undertook a surgical camp in a rural hospital in Bangladesh in May 2014. The aim of the camp was to assess patients who developed disabilities from leprosy that could benefit from surgical reconstruction and subsequently perform these surgeries. Sixteen patients were selected from various districts within Bangladesh to be considered for surgery. Ten patients attended for surgery and six were unable to attend. Out of 10 patients four patients were not suitable for reconstructive surgery and were referred for pre-op. physiotherapy to minimize joint contracture.

The following procedures were performed, foot drop correction, lasso procedure for claw hand and tarsorraphy. The procedures will be discussed followed by a discussion regarding the role of plastic and reconstructive surgeons in leprosy.

Assessment of burn injuries in the accident & emergency department: are they under-referred to specialised burn services?

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Introduction
Burn injuries commonly present to all Accident & Emergency (A&E) departments; referrals should be compliant with national burn care guidance. We aim to raise awareness amongst burn services of potential deficiencies in referrals made to regional units, by presenting a snapshot of burn injuries assessed in a local A&E department.

Methods
We undertook a retrospective audit of 103 burn injuries presenting to Lincoln County Hospital A&E department, over a 6-month period. This included all burns in adults and paediatrics. Data were collected on mechanism of injury, area and severity of burn, initial treatment, referrals made to specialised burn services, and any follow-up arranged. Standards were set against the Midlands burn care network referral guidelines.

Results
Fifty two patients required referral, of which 35% were referred. 40% of those requiring referral but were not, had local follow-up, and 25% were discharged without any follow-up. No patients were referred to the regional burns unit inappropriately. Assessment of chemical burns was found to be inadequate. Electrical burns had appropriate initial management, but none were referred to a burns service, nor had any follow-up. A deficiency in pictorial evidence of burn severity, and use of up-to-date terminology was identified.

Conclusions
Burn injuries are potentially being under-referred to specialised services. Optimal burn care may be compromised by lack of up-to-date knowledge and awareness of referral guidelines. We propose that burns services address this with regional burns educational days.

Assessing burn resuscitation skills of plastic surgery registrars using an OSCE

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Introduction
In the UK, plastic surgery trainees gain experience in burn surgery as part of their training rotations, and assessment is limited to logbook numbers, workplace based assessments and the exit FRCS examination. As part of a wider pilot of objective assessment of trainees, we examined skills in burns resuscitation in an Objective Structured Clinical Examination (OSCE).

Methods
In this 10-station OSCE, one written station (no examiner present) concerned burn injury. Candidates received a photograph of a toddler with a truncal scald. They were given nine minutes to estimate TBSA, calculate resuscitation and maintenance fluid requirements, and prescribe these on a standard prescription.

Results
Nineteen pre-FRCS trainees participated. 11 (58%) candidates passed the OSCE overall, 12 (63%) passed the burn assessment station. 18 (95%) correctly calculated TBSA. 10 (53%) started the resuscitation at 3ml/Kg/hr and 12 (63%) accounted for time of injury. Prescriptions were generally poor; only seven (37%) would have been acceptable in clinical practice. Generally, but not exclusively, poor performers overall and in this station were more junior trainees. Judged on proportion passing the station, this was of middle difficulty. The burn injury station was found to be a good predictor of overall performance in the exam (Spearman's r=0.62, p=0.006).

Conclusion
To maintain high standards of care it is essential that our plastic surgeons are adequately trained and objectively assessed. OSCEs have advantages over traditional in-training assessment of being more objective, and are able to test a wide range of skills in a short time. We recommend further use and evaluation of OSCEs to assess higher surgical trainees.

Audit of the management of open lower limb fractures at a UK Major Trauma Centre according to BOAST 4 guidelines

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Introduction
The British Orthopaedic Association Standards for Trauma (BOAST 4) guidelines offer specific recommendations for the management of severe open fractures of the lower limb.

Our centre incorporates the Regional Plastic Surgery Unit, so is well-placed to deliver a service that is compliant with guidelines. However, an audit of data from 2007-11 found low levels of orthoplastic planning, long delays to soft-tissue cover, and high rates of complications.

Following designation of our hospital as a Major Trauma Centre (the only one in our network with a plastic surgery unit), we audited compliance with the guidelines.

Methods
We performed a retrospective case note review of open lower limb fractures from Jan 2012 to Jun 2014. We collected data to determine compliance with the BOAST 4 standards.

Results
Fifty one patients were identified for inclusion in this audit. One was excluded as they died before any surgical fracture treatment (N=50). There were low levels of joint surgical treatment, vascular status was not documented clearly, and antibiotics were not given in a timely manner. The average time to definitive skeletal fixation was 20.6h, and to soft tissue coverage was 181.9h. There were longer delays for patients presenting initially at other centres requiring transfer to our unit. Joint orthoplastic planning improved, and overall time to treatment is now comparable to other published studies.

Conclusions
These results suggest the designation of Major Trauma Centres is only part of the solution to meeting the BOAST 4 guideline. We are now embarking on a programme of work to increase regional awareness of the of our trauma network pathway and to develop a computerised system for the tracking and prioritisation of emergency trauma cases.

Contact and scald risk of insulated high street takeaway coffee - an increasing trend

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Introduction and Aims
In our unit we are experiencing an increasing incidence of scalds secondary to spillage of hot coffee from high street coffee shops in both paediatric and adult populations. Previous studies have only taken a single measurement from takeaway coffee in an insulated container with the lid on. No study has looked at the range of temperatures at receipt of the coffee, the contact temperature of the container, or the cooling properties of an insulated cup without the lid. This study aims to establish the contact and immersion temperatures of high street coffee in a lidless insulated cup to ascertain whether the greater spill risk without a lid is offset by a faster temperature drop.

Methods
The temperature of 10 Lattes in lidless, insulated cardboard containers from a high street coffee retailer were recorded from receiving the coffee and at 30 second intervals thereafter using digital immersion (liquid) and contact (container) thermometers. These were plotted over time until a 'safe' temperature was achieved.

Key Results
Initial temperatures ranged from 60.6 - 68.4°C and the rate of cooling demonstrated a linear relationship. The average time taken for a medium Latte to cool to a safe temperature was 25mins 39s (range 10 - 30mins 30s). The contact temperature never reached over 50°C.

Conclusion
Our study shows that a linear and delayed drop in temperature of takeaway coffee still occurs when the lid is removed, but with an associated increased risk of spills. We also confirm the findings of the previous study that insulated cups result in prolonged scald risk. These findings are important both medico-legally, but also to further support the use of a secure lid to reduce the spill risk, especially to the paediatric population.

Blood product usage in resuscitation burns in a major UK burn centre

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Introduction
Judicious use of blood products is recommended for both clinical and financial purposes. Although risk of transfusion transmitted infection rates are low, the risk can be minimised by only using blood products when strictly necessary.

The first aim of this study was to review blood product usage in resuscitation burns (›15% TBSA) treated in our unit, in order to predict blood requirements for major burns.

Methods
A retrospective study was undertaken in which data from all resuscitation burns over a two-year period were collected. The date of patients' first surgical excision % TBSA was sought from the electronic medical records. This was then cross-referenced with the number of blood products administered over the following 72 hours.

Results
In the two-year period from Jan 2011 – Dec 2012, 67 resuscitation burns were treated in our institution. Of these patients 44 required burn excision. Thirty two patients were debrided and subsequently transfused.

Of these 32 eligible patients mean initial burn excision was 21% TBSA. The total initial burn excision from all patients was 679% - this figure enabled a mean number of products (packed cells, platelets, FFP and cryoprecipitate) to be calculated per %TBSA of burn excised.

	Packed Cells	Platelets	FFP	Cryo
Total products used	80	9	48	2
Mean u/%TBSA	0.117	0.013	0.071	0.003
Mean vol (mls)/%TBSA	35	3.25	10.65	0.09

Conclusions

Based on our figures we can provide an estimate of blood product requirements for a specific size of burn. Predicting blood product usage is beneficial both for blood banks in Level one trauma centres and the clinicians treating the burn patient.

Subjectively it appears that there is approximately 50% less blood loss compared to US practice based on literature from prominent American units.

The breast reconstruction awareness group at St Andrew's Centre for Plastic Surgery: 2004 to present

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St Andrews' Centre for Plastic Surgery and Burns

Background

Breast reconstruction following mastectomy improves patients' quality of life and their socio-psychological well-being. Autologous tissue free flap has become a popular choice for breast reconstruction following mastectomy. St Andrew's Centre, Chelmsford, UK, is one of the largest centres for breast reconstruction nationally.

In 2004, the Breast Reconstruction Awareness (BRA) group was established with the aim to promote breast reconstruction awareness to the public and to provide a supportive network for patients. This multidisciplinary team involves Clinical nurse specialists and Plastic surgeons. Regular meetings are held to give patients the opportunity before their operation to meet others who had been through the same operation, to see the outcome of their surgery and to share their experiences of the reconstruction journey.

Method

100 randomly selected patients who had completed the whole reconstruction journey from mastectomy, autologous free flap reconstruction to nipple reconstruction in the St Andrew's Centre for Plastic Surgery were asked to fill in questionnaires about their experience of the reconstruction journey.

Results

75% of patients (75 out of 100) responded to the questionnaire. Overall, the patients were highly satisfied (mean Likert score) with the information given about the surgery prior to their operation, expectations after surgery

and recovery (3.7 out of 4), the outcomes from the surgery (2.9 out of 3) and the care from the medical team (3.9 out of 4).

Conclusion
Here we have illustrated the importance of a specialist networking group in breast reconstruction surgery, which can fully prepare patients for their surgery and enhance their experience of the reconstruction journey.

A national survey on venous thromboembolism prophylaxis for abdominal free tissue breast reconstruction

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Background
The current National Institute for Health and Clinical Excellence (NICE) guidelines for venous thromboembolism (VTE) prophylaxis in surgery are designed for generic use and stratifies patients into high or low VTE risk, however these guidelines may not be appropriate for microsurgical breast reconstruction specifically. Abdominal-based free flap breast reconstruction carries a high risk of bleeding which can result in significant morbidity and need for re-operation. The aim of our study was to investigate which VTE prophylaxis regimens were used by surgeons in the UK who perform this surgery.

Method
Fifty four plastic surgeons from the British Association of Plastic Reconstructive and Aesthetic Surgeons who perform abdominal-based free tissue breast reconstruction were invited to complete an online survey. Questions were asked regarding pre-operative, intra-operative and post-operative VTE prophylaxis regimes, as well as haematoma, deep vein thrombosis (DVT) and pulmonary embolism (PE) rates (‹5, ↗5 cases or unknown).

Results
70% of the invited plastic surgeons (38 out of 54) responded to the survey. Pre-operatively, most surgeons (66%, 25 out of 38) provided subcutaneous low molecular weight heparin, including enoxaparin, dalteparin and tinzaparin. Intra-operatively, thromboembolic-prevention stockings together with Flowtron intermittent pneumatic compression devices was most commonly used, (81.6%, 31 out of 38). Most plastic surgeons gave enoxaparin 40 mg in the evening following the surgery (63.2%, 24 out of 38). All surgeons who responded, regardless of VTE prophylaxis regime, encountered ‹5 DVTs or PEs in their practice. Of the surgeons who gave VTE prophylaxis pre-operative, 2 of 24 (8.3%) reported ›5 post-operative haematoma (one surgeon using enoxaparin 20mg and one surgeon using 40mg).

Conclusion
This study highlights the most commonly used VTE prophylaxis protocols used for abdominal-based free tissue breast reconstruction surgery in the UK, and also demonstrates that there is no overall consensus opinion as

to what the optimal VTE prophylaxis regime is. Our results therefore may be helpful for establishing a much-needed national consensus opinion on this issue.

The prevalence of abnormal coagulation tests in patients undergoing abdominal based free flap surgery for breast reconstruction

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Background
Undiagnosed haematological disorders including hypercoagulopathies and haemophilia in free flap breast reconstruction surgery can result in anastomotic thrombosis, excessive bleeding, and haematoma formation. These complications may lead to significant consequences such as re-operation or flap failure. The aim of this audit was to determine whether coagulation screen blood tests were routinely performed prior to surgery and to investigate the prevalence of abnormal findings in these tests.

Methods
A retrospective analysis was performed of all patients who underwent abdominal-based free flap breast reconstruction in the St Andrew's Centre for Plastic Surgery between July 2012 to September 2013. Pre-operation coagulation blood test results were recorded (PT, INR, APTT, APTR, platelets, haemoglobin).

Results
180 patients were identified. Mean age was 51.2. No patients had pre-existing known coagulopathies. 36% (64 out of 180) did not have coagulation screening blood test pre-operatively. 6% (10 out of 180) patients had abnormal clotting results. Of those, two patients required return to theatre; one for evacuation of breast haematoma and one for re-do thrombosed anastomosis.

Conclusion
Our results suggest that large number of patients did not have a coagulation screen test prior to their abdominal-based free flap surgery. This audit highlights the importance of routine screening for clotting abnormalities prior to surgery to reduce risk of complications development as a result of coagulopathies.

Body art in breast reconstruction

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Background
Tattoo is a form of body art, which marks a unique identification to a person. Tattooing has been performed since 10,200 BC Stone Age period and has become popularised globally in nowadays fashion.

Methods
We present three interesting cases of tattoos on the abdomen in patients who underwent deep inferior epigastric perforator flap (DIEP) breast reconstruction. Following consultation with the patients, the plan was to preserve the tattoo with consideration of their aesthetic properties.

Clinical Case
CASE one: DIEP flaps were harvest from the abdomen with the present of a 'dolphin' tattoo on the flap. The flaps were then rotated, stacked to reconstruct right breast defect. CASE two: The DIEP flap was raised preserving the 'rose' tattoo on the flap. This was transplanted to form the new breast. CASE three: The DIEP flap was designed so that it was skewed, leaving the 'shark' tattoo in the proximal abdominal flap. On closure of the abdominal wound, the left sided tissue was pulled inward toward the centre. This allowed closure of the abdomen with preservation of the tattoo at its original site.

Conclusion
There are situations where tattoos are present on the incisional site. We demonstrate here, with some creative thinking, patients' tattoos can be preserved or modified to enhance patients' satisfaction and aesthetic outcomes of the procedure.

A retrospective analysis of free tissue transfer at an East African hospital

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Background
Free tissue transfer is often a last resort for the reconstruction of the most complex defects. Despite the success of surgical missions, the feasibility of achieving regular free tissue transfer has yet to be demonstrated in the low resource African setting. This study will analyse outcomes of 73 consecutive cases of free tissue transfer over five years at a single plastic surgery unit in Uganda. It aims to demonstrate that free tissue transfer can be performed with a reasonable success rate in East Africa.

Methods and Patients
The notes of 73 consecutive patients who underwent free tissue transfer between 01/01/2009 and 01/11/2013 at CoRSU Hospital, Uganda were analysed.

Results
Seventy Three patients underwent free tissue transfer which included 24 free fibula transfers, 18 ALT, eight gracillis, seven radial forearm and six lat dorsi free flaps and 10 other cases of free tissue transfer.

The most common indications for surgery were head and neck cancer (36), trauma (11), burns (8), osteomyelitis (6). There was an overall 67% survival of the flaps with marked variability between flap types. There were 23 other minor complications.

Conclusion
Despite its lower success rates, this is the first study to demonstrate the feasibility of regular free tissue transfer at an East African centre. This study can serve as a benchmark for improvement and discussion about free tissue transfer in the region. More expertise, resources and system improvements are needed to achieve success rates comparable to those in more developed countries.

10 year follow up of a successful artery-only total nasal replantation in an 18-month-old with full sensory recovery: a case report

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Introduction
The nose performs important physiological functions as well as being a critical facial aesthetic subunit. Nasal reconstruction is amongst the oldest of surgical procedures dating back to 600BC, however the advent of microsurgery offers elegant methods of reconstruction with excellent long-term results.

Case Presentation
An 18-month old boy presented with total nasal amputation at the piriform aperture following a dog bite. Following lateral nasal vein to supratrochlear artery anastomosis using 10/0 Ethilon™, medicinal leeches (Hirudo medicinalis) were applied post-operatively. No nerve repair was possible.

Results
The patient was discharged on day 14 and followed up annually over the next 10 years. Full facial sensory assessment, including threshold pressure, two-point discrimination and hot and cold identification was performed10 years following the injury by an advanced practitioner occupational therapist. Threshold pressure sensation testing showed a normal response (0.07g) to all but a small area (1 x 1.5cm) of the replanted skin, which was positive to 0.4g of pressure. Two-point discrimination and temperature sensation were normal. There were no symptoms of hypersensitivity or cold intolerance. Cosmesis was excellent without the need of revision.

Conclusion
We present the youngest paediatric single vessel (artery to vein) nasal replant along with the longest follow up in the literature showing full sensory recovery despite no primary neurorrhaphy.

The U-shaped modification of the atasoy flap for fingertip reconstruction

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Introduction and Aim
The VY advancement flap for fingertip reconstruction was initially described by Atasoy in 1970 as a modification of the neurovascular Tranquilli-leali flap. The VY flap preserves digital length and is ideal for transverse or dorsal oblique amputations. However many surgeons feel that the traditional VY flap yields very little advancement and instead opt for terminalisation.

Material and Methods
We describe a U-shaped modification of the Atasoy flap, which we have performed in over 30 patients at our institution. There was no evidence of flap loss and all patients recovered sensibility. We have found that modifying the V into a more curved and delicate U better recreates the natural fingertip profile. Furthermore this simple modification has better aesthetic outcomes at follow up, with patients having the curvilinear shape of the fingertip restored.

Unlike the traditional VY flap the U-shaped flap allows for greater advancement and also a more robust blood supply to the flap avoiding problems with flap ischaemia. The donor site is left open to heal by secondary intention and covered with non-adhesive dressings. Furthermore sutures are kept to a minimum to avoid congestion.

Conclusions
The U-shaped advancement flap is a simple and safe solution for fingertip amputations commonly seen in plastic surgery departments.

Chondrosarcomatous differentiation in a large malignant melanoma of the scalp

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Background
Divergent differentiation in malignant melanoma is a rare phenomenon which can lead to delayed diagnosis or misdiagnosis, impacting upon patient treatment and outcome and the understanding of tumour behaviour.

Case
We present the case of a large longstanding tumour on the scalp of a 72 year old female patient, which when excised and examined histologically was revealed to be a nodular malignant melanoma displaying chonodrosarcomatous differentiation. Foci suggestive of lentigo maligna were also present. Rapid metastatic spread of the tumour was observed shortly after the primary resection.

Discussion
To our knowledge this is the first reported case in the literature of chondrosarcomatous differentiation in a lentigo maligna melanoma. The clinical and histopathological details and images of this case are presented alongside a discussion of current literature regarding such tumours and patterns of similar tumour behaviour.

International, open-label, multicentre STEVIE study of the hedgehog pathway inhibitor vismodegib in patients with advanced basal cell carcinoma: interim analysis of global study data and UK patient case studies

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Introduction and Aims
Therapies are limited for aBCC. Aberrant hedgehog signalling is the key driver in BCC pathogenesis. Vismodegib, a first-in-class hedgehog pathway inhibitor (HPI), is licensed in the UK for aBCC inappropriate for surgery or radiotherapy. STEVIE, the largest ever aBCC study, is investigating vismodegib safety. We present details from selected UK patients alongside key data from the third interim analysis of the global STEVIE study (data cutoff: 19 Oct 2012).

Materials and Methods
Adults with advanced basal cell carcinoma (aBCC) received vismodegib 150 mg QD until progressive disease, unacceptable toxicity, or withdrawal. Safety is assessed with CTCAE v4.0. Efficacy is a secondary endpoint.

Key results with supporting statistical analysis
Global interim analysis was from 300 aBCC patients from 11 countries, including the UK, with potential for ↗3-month follow-up. Median treatment duration, including vismodegib interruption, was 176.5 days (range 1–455). Common treatment-emergent AEs (TEAEs) were muscle spasm (59.3%), alopecia (49.3%) and dysgeusia (41.0%). Serious TEAEs occurred in 53 patients. Treatment was discontinued due to patient or investigator request (n=41), AEs (n=35), disease progression (n=18) or death (n=13). Best overall response in patients with available tumour assessments (n=251): complete response (17.5%), partial response (39.8%), stable disease (39.0%), progressive disease (2.8%). Safety and efficacy outcomes from UK patients will be presented.

Conclusions
The latest global interim analysis of STEVIE confirmed the vismodegib safety profile and provides further

information about the high rate of tumour control with vismodegib in a large aBCC patient population. Data from UK patients further support vismodegib for the treatment of aBCC.

Osseous reconstruction of complex defects of the lumbar spine: point of technique

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Vascularised reconstruction of the lumbar spine is a rare procedure. Due to recent improvements in quality of life achieved by spinal stabilization procedures after en bloc tumor excisions, the incidence of complex defects of the lumbar spine is likely to increase. Pre-operative planning is paramount to decide on the optimal choice of donor tissue and recipient vessels for free flap transfer, the most appropriate approach and the staging of any bone grafting procedures combined with anterior and / or posterior instrumentation. A collaborative, multi-disciplinary approach is the key to safe and effective reconstruction of this challenging region.

Distally-based osteocutaneous dorsal metatarsal artery flap for hallux reconstruction:a case report

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Reconstruction of complex defects of the distal portion of the foot remains a challenging problem for plastic surgeons. A traumatic case is presented where reconstruction of a complex plantar defect of the hallux was achieved using a distally-based osteocutaneous metatarsal artery flap based on the second dorsal metatarsal artery. Local flap repair is a viable reconstructive option for complex defects of the plantar surface of the forefoot.

Lipomodelling in wound healing after breast cancer therapy- a little bit of fat can transform your life

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Case Report
At the age of 43, a patient developed right breast cancer and underwent a wide local excision of the tumour with adjuvant radiotherapy. Twenty years on, having survived the cancer, she presented for consideration of breast reconstruction because of the considerable morbidity she suffered from her treatment. She was left

with chronic lymphoedema and wound breakdown with constant excoriation, bleeding and discomfort over an area of 20 cm2.She also had breast asymmetry.

The treatment plan was an autologous breast reconstruction with pre-treatment fat transfer (lipomodelling) over a couple of sessions in order to improve the condition of her local tissues.

The first and only lipomodelling session (11 mls, Coleman's technique) was performed in one hour under local anaesthetic.

A dramatic improvement was achieved within two months, with improved quality of her radiotherapy damaged skin and complete resolution of excoriation, bleeding and pain. At nine months review, her tissues had softened further. The patient declared that her quality of life had improved immeasurably. She decided against any further treatment, including reconstruction, since the aesthetic appearance had not been the prime consideration for her.

Conclusion

Autologous fat transfer is a versatile tool with countless application in reconstructive surgery to improve the quality of soft tissues. The beneficial effect is mainly ascribed to stem cells illustrated in this case. It has been part of our armamentarium for the past 9 years in reconstructive breast surgery.

Joseph Carpue's secret experiment: melding art and science at the dawn of modern plastic surgery

Dr M F Freshwater

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While many modern plastic surgeons consider ourselves asartists, most of us do not know that the melding of art with surgical science was integral to the origin of modern plastic surgery at the beginning of the 19th century. A cadre of fellows of the Royal Academy of Art including Benjamin West, Richard Cosway and Thomas Banks enlisted the aid of Joseph Carpue, the father of modern plastic surgery, to perform a secret anatomic experiment. Their motives were neither purely artistic nor intellectual. Rather, these Royal Academicians sought to protect their personal reputations and fortunes. They were worried that there was a major flaw in the art created for the renovations of St. George's Chapel at Windsor Castle for George III – the most expensive artistic project commissioned in Britain up to its time. Had the secret experiment's results been revealed, then the Royal Academy's leaders could have faced professional and financial ruin particularly because they had barely escaped the 1797 art scandal, the Venetian Secret, which made them objects of public scorn and ridicule largely through work of James Gillray, the great caricaturist.

Carpue's experiment remained secret until his handwritten notes were found after his death in 1846. However, his notes only describe the barest facts of his experimental method not his results. The experiment's role in another scandal and its basis for placing plastic surgery on firm scientific footing will be shown through primary source material never before displayed in the same venue that was discovered at the Royal Academy

of Arts, the Old Bailey Courts, the Morgan Library, the Lewis Walpole Library and the Yale Center for British Arts.

The use of oxandrolone in severe burn injuries

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Introduction

Oxandrolone (OX) is an anabolic steroid used in the treatment of severe burn injuries where it has been shown to decrease the length of hospital stay. Despite this there are concerns surrounding the potential to cause hepatic damage so in practice, including in our unit, it is stopped and restarted due to enzyme derangement. However a recent literature search has shown that the elevation of hepatic enzymes is asymptomatic, reversible and does not result in clinically significant liver injury.

Methodology

We aimed to investigate the prescribing patterns of OX in the National Burn Centre of New Zealand by performing a retrospective analysis of patients prescribed OX to identify whether there is need for change in light of the recent literature search.

Results

Between 2009 and 2014, 42 patients in the unit received OX. The mean age was 32 years and the mean %TBSA was 46.5%. OX was started on average 13.8 days after admission. In 42.9% patients, OX was stopped and restarted, occurring a mean of 2.06 times during their stay. In 11.9% this was due to increased LFTs. OX was stopped completely in 19% of patients due to deranged LFTs and on discharge in 71.4% of patients.

Conclusion

OX was stopped and restarted in fewer patients than initially thought. However OX was still being stopped due to concerns around LFTs. Another concern was that OX was not being started within the recommended 5-7 days after admission and was stopped on discharge due to a lack of funding in the community.

Flame burns and hair relaxers : should we be so relaxed?

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Background and Aims

Hair relaxers - widely available cosmetic products which chemically facilitate hair straightening – have been associated with several health risks but at present, there is no reported evidence to support the link between flame burns and relaxer use. Our unit has noted a new phenomenon of head and necks burns following the use of these products. We describe a case series and research into the frequency and severity of such burn injuries and the potential public health risk hair relaxers may pose.

Methods
The available literature was searched. A retrospective analysis of all patients presenting to a large central London burns unit over a two year period was performed to identify cases pertaining to burn injuries and hair relaxer use. A review of hair relaxer products, ingredients and stated safety warnings was also performed.

Results
No previously reported cases were identified in the literature. Out of 328 patients presenting with flame burns to our burns unit, 142 had burns to the head and neck area and seven (4.9%) of these were identified as having sustained the injuries following the use of a hair relaxer. All hair relaxer home-kits reviewed failed to display a flammability warning.

Conclusions and Recommendations
This unique case series identifies the burns risk associated with commonly used hair products. Furthermore, such products are inadequately regulated and lack flammability warnings. We propose to heighten professional and public awareness to decrease the occurrence of potentially serious but preventable morbidity.

The rate of incomplete excision in surgically treated cutaneous squamous cell carcinoma

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Pinderfield general hospital

Introduction
Squamous cell carcinoma is the second most common skin cancer with a potential risk of metastasis if not treated. It can be treated in different ways but surgical excision is the gold standard.

Aim
The aim of this study is to find out the incomplete excision rate of SCC following surgical excision and identify the factors that may contribute to this.

Materials and Methods
A retrospective study including 106 patients with 134 SCC excision in 2012. These excisions were done in different hospitals of County Durham and Darlington Foundation Trust and performed by different grades of surgeons. Punch and incision biopsies are excluded in this study but wide local excisions (WLEs) are included. Narrow excision margin (<1mm) is counted as incompletely excised and required further excision. Data was analyzed in Excel.

Results
Most of the patients are aged 60 and over.
Males are nearly double in number than female.
Head and neck is the most common site for SCC (59%).

Nose is the single most common incomplete excision site (50%).
Excision was done by various specialities (eg plastics, dermatologists, GP). Total 23% of excised specimens were reported as incompletely excised, in which 15% were involved margin and 8% were narrow margin. Dermatologist had the highest incomplete excision rate 28% (15+13), GP 19% (16+3), and plastics 18% (12+6). Deep margin involvement was nearly double than peripheral margin. Tumour size, numbers, excision margins and grade of surgeons have significant effect on incomplete excision rate.

Conclusion
Certain factors found related to incomplete excision. So, patient selection according to those factors and appropriate operative margin may give us better excision rates in SCC surgery.

Theatre time utilization in plastic surgery
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Pinderfield general hospital

Introduction
Operating theatre services are expensive to run so the operating theatre time 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 three 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

•Anaestheticroom to theatre 16 minutes (GA 19, LA 7 minutes)
•Prep and drape five 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.

Ethical issues in the treatment of advanced laryngeal cancer in limited English proficiency patients

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The management and care of patients with advanced oropharyngeal (laryngeal) cancer is complicated due to the serious consequences on their physical and psychological health. Current treatment options are multifaceted and varied. Advances in cancer care have resulted in improved survival rates, although this does not necessarily equate to better quality of life. To the patient, distress starts from the point of diagnosis, through the complex treatment course, visible disfigurement, and functional impairment due to the loss of delicate anatomical structures vital for phonation, swallowing and taste. Therefore questions could be raised whether such treatment is beneficial to the patient suffering with advanced oropharyngeal cancer. As healthcare professionals, we follow four prima facie principles - respect for autonomy, beneficence, non-maleficence, and justice. Good communication is vital to enable the healthcare provider to exercise the four principles irrespective of cultural and linguistic barriers. We discuss three cases of limited English proficiency speakers diagnosed with advanced laryngeal carcinoma. All the patients underwent pharygno-laryngectomy with reconstruction of the pharynx followed by concurrent chemo-radiotherapy. We discuss the difficulties in treatment and care arising from language problems, the ethical issues faced in planning treatment, and the resulting difficulties in delivering appropriate care and support in the post-operative period.

Protecting flexor tendon repair in preschool children

Miss S Jing, Mr S Iyer
Royal Preston Hospital

Introduction and Aim
Protecting flexor tendon repairs in preschool children is a challenge. Several immobilization techniques are described. We present a new method of splinting flexor tendon repairs negating the use of a plaster cast, which is bulky, heavy and weakens with saliva or from physical activities.

Methods and Materials
At the end of surgery, gauze is placed into the palm of the operated hand. Two long strips of the tape is cut to length with each tape split longitudinally midway into two slips as a "Y" pattern. The tapes are placed under tension from the dorsum to the volar forearm, with the point of division of each tape aligned to the web spaces between the fingers. The fingers are held as tightly as possible into the palm. A crepe bandage is then applied.

Results
The senior author has used this technique on 13 preschool children following flexor tendon repairs over the last five years in a general plastic surgery unit. Children are reviewed at regular intervals in the paediatric dressing clinic. We have not experienced re-rupture of tendons, infection or other complication. Patients are more compliant with this method than with other dressings that we have previous tried.

Conclusions
We consider this to be a simple, safe and effective alternative to the plaster cast in preschool children with flexor tendon injuries and repairs.

Intramedullary fixation of metacarpal shaft fractures without external splint

Miss S Jing, Mr S Houshian
Royal Preston Hospital

Introduction and Aims
We present a new technique of three-point percutaneous fixation with two intramedullary K wires in the treatment of displaced transverse and short oblique metacarpal shaft fractures.

Methods and Materials
Between September 2004 and December 2010, 29 metacarpal shaft fractures were treated using this technique with minimal soft tissue injury or fracture comminution. The majority of the patients were males, with a mean age of 25 years (range 17-42 years). There. The average time from injury to surgery was five days. The decision to operate was made based on clinical needs and following a discussion with patients. A three-point fixation was achieved at: 1) the point of K wire insertion, 2) the point of contact between the wire and inner surface of the medullary canal and 3) at the base of the metacarpus.

Results

Post-operatively, patients were allowed to mobilize their fingers immediately without the need for an external splint or formal hand therapy. All patients achieved fracture union and a near full range of movement at the six months follow-up. All but one patient was pain free on the final follow-up. There were two cases of pin site infection.

Conclusions
In our experience, this percutaneous technique is simple and effective in managing a subset of non-complicated metacarpal fractures.

Keystone to fishtail: advancing reconstructions following cutaneous malignancy

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Royal Preston Hospital

Introduction and Aims
Reconstruction following wide local excision (WLE) of cutaneous malignancies can be challenging, particularly in anatomical areas with little skin laxity. Key stone flaps can be an option. We describe a new local flap, which is versatile, simple and overcomes some of the drawbacks of the keystone flap.

Methods and Materials
Geometrically resembling a fishtail, the flap is based on two V-Y advancement fasciocutaneous flaps, either joint or disconnected. Once raised is able to "fan out" borrowing the maximal skin laxity around a cutaneous defect and thereby maintains the nature contour of the anatomical region. Five patients had this reconstruction following WLE of melanomas of the lower limb.

Results
All but one patient had good aesthetic and function outcomes. One active male patient had wound dehiscence following a 3cm WLE on the posterior thigh. This was treated conservatively.

Conclusions
This geometrical advantage makes the flap extremely versatile. Furthermore, the longitudinal alignment of the flap allows for preservation of the surrounding neurovasculatures, thereby reducing the risk of lympho-venous congestions or neuroma formation and avoids constricting scars particularly across limbs. We recommend this reconstruction as an alternative to the keystone flap.

Benefits of electronic operation note in plastic surgery

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Royal Preston Hospital

Introduction
A clear, accurate and legible operation note is a GMC requirement for clinical and medico-legal purposes and a good medical practice for all doctors. Compared to some surgical discipline such as Orthopaedic surgery, electronic operation note is not uniformly adopted by Plastic Surgery Units nationally. We review the benefits of using electronic operation notes in Plastic Surgery.

Methods
We audited the documentation of operation notes in a tertiary plastic surgery unit against the Royal College of Surgeons of England guidelines based on 100 randomly selected notes before and after the introduction of electronic templates between March to July 2014. Further, we evaluated the benefits of incorporating diagrams and listing comorbidities for coding purpose.

Results
Our initial average compliance rate was 74% (range: 43-100%). Commonly missed information included the site of surgery (32%), details for tissue investigations (49%) and the responsible consultant (50%). The re-audit following training and the introduction of electronic templates have shown a great improvement. All met the college recommendations. Templates created for common procedures had allowed faster documentation and clearer interpretation. Pictures and diagrams allow faster enhanced the readers understanding particularly in trauma settings. Recorded comorbidities has aided in generating a more accurate income.

Conclusion
Electronic notes with tits multi-facets eliminate the risks of illegible handwriting, improves clinical interpretations, broaden accessibility and marry well with the national drive towards electronic patient record initiative.

Eleven year review of surgical management of Merkel cell carcinoma in the Royal Devon and Exeter hospital

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Royal Devon and Exeter Hospital

Background and Aims
Merkel cell carcinoma (MCC) is a rare but serious skin cancer with a propensity to spread early to regional lymph nodes.

Methods
All cases of MCC identified by the pathology department between 2001-2012, a total of 27 cases were included in this study.

Results
Of these 27 patients, 15 were female (56%) with a mean age of 78 years old (range 52-90). The majority of lesions affected sun exposed areas. Twenty five patients were managed surgically with 20 having simple wide local excision (WLE) with the remaining five requiring more complex procedures due to more advanced disease. Two patients were managed non-surgically, one with primary radiotherapy one spontaneous remission. Thirteen patients underwent adjuvant radiotherapy, two chemo-radiotherapy and one chemotherapy. Sentinel Lymph Node Biopsy (SLNB) was positive in three out of seven cases.
In total 12 of the 27 patients had further disease following initial treatment at the RD&E, a figure that likely reflects the higher proportion of difficult and advanced disease that is referred to us.

Conclusion
MCC is a rare but serious condition. Whilst surgical management is still the mainstay of management there is a role for adjuvant radio and chemo therapy in preventing further disease.

DIEP breast reconstruction incorporating vascularised lymph node transfer improves symptoms for patients with upper limb lymphoedema

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Introduction
Lymphoedema following axillary lymph node dissection can significantly impact a patient's quality of life. We present patient-reported outcomes for DIEP breast reconstruction incorporating vascularised lymph node transfer for the treatment of lymphoedema.

Methods
Ten patients with lymphoedema who were undergoing DIEP breast reconstruction had superficial inguinal lymph nodes incorporated into their flap and positioned within the axilla. Patients completed questionnaires rating pre- and post-operative symptoms to give a severity score. Statistical analysis was performed using the Wilcoxon signed-rank test.

Results
The most significant pre-operative symptom was swelling followed by heaviness, aching, altered sensation, functional problems, pain and skin problems, with pre-operative mean severity scores (MSS) of 7.9, 7.8, 7.3, 7.1, 6.2, 4.6, and 1.9 respectively. Post-operative MSS were reduced for all symptoms: swelling (MSS 2.7; $p<0.01$), heaviness (MSS 1.8; $p=0.01$), aching (MSS 1.5; $p<0.01$), altered sensation (MSS 1.9; $p<0.01$), functional problems (MSS 1.6; $p<0.01$), pain (MSS 1.1; $p=0.063$) and skin problems (MSS 0.1; $p=0.25$). The improvement in symptoms was reflected in a reduction in arm circumference.

Conclusion

Our results suggest incorporating vascularised lymph node transfer into DIEP breast reconstructions reduces the symptoms experienced by patients suffering from lymphoedema.

Generation of induced pluripotent stem cell-derived endothelial cells (iPS-ECs) from adult human fibroblasts and potential for clinical use

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Introduction
After injury, timely restoration of integumental integrity is essential. Revascularisation is a critical process in wound healing. Conditions associated with defective endothelial function and repair, such as diabetes, are associated with impaired healing. Studies have shown that endothelial progenitor cells (EPCs) have an important role in tissue repair and regeneration, but these cells can be difficult to isolate, and therefore translation to clinical use may be problematic. Finding a novel method to produce these cells in therapeutic quantities is a challenge.

Materials & Methods
Induced pluripotent stem cells (iPSCs) were generated from human fibroblasts via a DNA-free integration method over a period of 28 days. Endothelial differentiation was achieved by seeding cells on collagen IV-coated dishes in EGM-2 medium supplemented with vascular endothelial growth factor, following which cells were selected for either CD34 or KDR - known vascular progenitor markers. Three-dimensional cultures were performed in collagen scaffolds to investigate the potential to produce implantable microvascular networks.

Results
iPSCs were successfully generated from human fibroblasts and subsequently differentiated into proliferative, endothelial-like cells capable of forming microtubular networks in collagen scaffolds *in vitro*. In addition, a number of novel genes implicated in the processes of endothelial differentiation and angiogenesis were found to be upregulated.

Conclusion
This work demonstrates that it is possible to generate iPS-ECs from adult human fibroblasts. iPS-ECs had similar characteristics to EPCs and have considerable potential for clinical use as personalised, cell-based therapy.

Assessment of time to healing of split skin grafts

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Introduction
Deeper burns are commonly managed through the procedure of excision and skin grafting. Although there have been numerous advances increasing the success of this procedure, not much evidence has been published with regards to their healing time. Much of what is currently understood about influential factors affecting this process involves transposing knowledge from general wound care.

Aims
This study aimed to identify factors that may have an impact on the time it takes for a split skin graft to heal.

Methods
A retrospective study of patients having received split skin grafts of ‹10% total burn surface area at the UHSM Burns Centre was conducted (April 2013 to April 2014). Data was collected regarding their demographics, time to presentation, mechanism of injury, operative information, and post-operative care.

Results
Twenty five patients were identified as having received 30 grafts. The mean time to healing was 41 days (SD ± 20). Grafts healed quicker when secured with vicryl rapide sutures and staples together (p 0.02). There was a positive correlation between the total burn surface area grafted and the time it took to heal (p 0.026). Unexpectedly, obese patients (BMI ›30) healed an average of 21 days quicker.

Conclusion
Although some level of significance was found for certain factors, this study was limited by its small sample size. Regardless, this encourages discussion and provides the basis for the need of a larger, prospective study with objective measures of wound and graft assessment in place.

Alcohol in plastic surgery trauma clinics

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Introduction
The NHS spends £2.9bn per year on patients with alcohol related harm. These patients account for 20% of A&E admissions. In a Meta-analysis, targeted brief interventions reduced intake by five units per week, potentially reducing this burden. In 2013/14, our local commissioners set a quality requirement to screen A&E patients for alcohol use. If at risk, they were given a brief intervention and referred to their GP or Alcohol Liaison Nurse. As patients present to our trauma clinic we wanted to identify hazardous or harmful drinking and to provide support. Aims one. To audit alcohol use in Plastic Surgery trauma patients. two. To ensure patients with alcohol related injuries are asked about their consumption and advice is given.

Methods
We performed a prospective audit of all new trauma clinic patients over two weeks. We identified patients with alcohol related injuries. These patients should have been questioned using the AUDIT C questionaire and then if high risk, be given support with regards to their drinking. We presented our findings to the department and then closed the loop with a repeat audit. Standards for both audits: 100% of patients with an alcohol related injury should have the AUDIT C questionaire. 100% of medium and high risk patients should be given guidance.

Results
Incidence of alcohol related trauma was 7-10%. Having educated the trauma team about the questionnaires and available support, we achieved 100% compliance with the audit standards on re-audit, from 0% initially.

Conclusion
As a first point of contact for many trauma patients, our acute clinics should be assessing patients for alcohol related injuries. This gives an opportunity to identify those at risk of harmful drinking and initate the first steps of intervention.

Dermal anchor studs: a burning trend

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Introduction
Cosmetic body piercing shows a growing trend in modern culture; the modification of piercings has led to the introduction of dermal anchor studs. These are two part implants with an anchor placed under the skin and a protruding part over the skin; giving the appearance of a piercing. These are gaining popularity due to the less invasive piercing technique involved, however, a question of surgical safety is raised when using surgical diathermy in patients with implanted metal under the skin.

Methods
A questionnaire was sent out to all plastic surgery doctors, pre-assessment nursing staff and theatre staff at our unit to assess awareness of these piercings and safety with surgical diathermy.

Results
The total response rate was 90.5%, 63.4% were aware of use of dermal anchor studs; however 62% are not familiar with any complications associated with their use. In terms of surgical safety 11% state that no preoperative protection against diathermy is required. 76.5% are happy to allow use of bipolar diathermy although 42% were unsure of safety in use of surgical diathermy.

Conclusion
Traditionally all jewellery is removed before surgery, including body piercings thus minimising the risk of thermal injury from surgical diathermy. Although rare, current literature does contain reports of thermal injury secondary to aberrant current formation in implanted metal. Our survey shows lack of awareness

amongst health care staff when dealing with these studs as they are different from the more commonly used piercing, as surgeons we feel it is important to raise awareness and prevent unintentional thermal injury. In addition, complications such as infection, migration of implant and abcess formation need to be highlighted.

Characterising the role of muscle connective tissue in limb muscle morphogenesis. A novel approach

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Introduction
Radial longitudinal deficiency (RLD) represents a spectrum of upper limb abnormalities. Affected children suffer functionally and aesthetically as the hands adopt a radially deviated, flexed and pronated position at the distal ends of shortened forearms. Occurring in 1:30,000 to 1:80,000 live births, RLD results from either spontaneous mutation, in response to teratogenic drugs, or as part of a syndrome, as in Holt-Oram (HOS), caused by mutations in the TBX5 gene. TBX5, expressed in muscle connective tissue (MCT), regulates connective tissue organisation essential for patterning limb muscles and other soft tissues at embryonic stages. We have studied the role of the MCT in limb muscle morphogenesis.

Methods
MCT cells were isolated from mouse limb buds by FACS at embryonic day (E11.5) and their behaviour and activity analysed when put in co-culture with myoblasts directly derived from mouse embryonic stem cells (ESCs).

Results
MCT cells can be efficiently isolated up to 98% purity and co-cultured with ESC-derived myoblasts for at least 72 hours *in vitro*. In co-culture with MCT myoblasts differentiate into organised arrays of muscle fibres compared to random disordered patterns seen in cultures devoid of MCT cells or myoblasts cultured alone.

Discussion
Abnormal TBX5 activity results in skeletal and soft tissue defects seen in HOS. Skeletal abnormalities arise through an early failure to recruit sufficient osteoprogenitors. Late disruption of TBX5 contrarily results in muscle and tendon hypoplasias or dysplasias by its cell-autonomous action in adjacent MCT. In isolating MCT cells and co-culturing in vitro with ESC-derived myoblasts, we have established a novel assay for MCT activity on soft tissue precursors such as myocytes and this forms the basis for developing soft tissue engineering techniques. Adapting this assay to analyse MCT activity on tenocytes and extrapolation into 3D cultures will open new strategies in limb soft tissue engineering and makes clinical application conceivable.

Use of laterally-based dermo-glandular flaps in a vertical-scar skin pattern in immediate, single-stage, implant-breast reconstruction following risk-reducing skin-sparing mastectomy in macromastia

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Introduction
Immediate breast reconstruction following mastectomy has become increasingly common. Furthermore, numbers of skin-sparing mastectomies (SSM) have increased owing to increased evidence of safety of SSM in early breast cancer and small tumour disease, and increased numbers of risk-reducing (RR)-SSM in genetically-high risk patients. In SSM larger, single-stage immediate breast reconstructions are achievable owing to preservation of skin flaps.

To provide lower-pole coverage of sub-muscular implants, use of dermal slings, typically as inferior-pedicled dermal flaps or acellular dermal matrices have been described.

In this case, we used laterally-based dermo-glandular flaps in a vertical-scar pattern in immediate, single-stage breast reconstructions following RR-SSM in a surgically high-risk patient with macromastia.

Method
Our 47-year-old patient had a strong family history of breast cancer, BMI of 40 and two previous DVTs. Her pre-operative bra size was 42F, with grade 3 ptosis.

A vertical-scar technique using laterally-based dermo-glandular flaps was adopted to provide cover of 800cc round subcutaneous implants as a single-stage, immediate breast reconstruction procedure.

Discussion
This technique enabled complete coverage of large, subcutaneous implants with good immediate cosmetic results. Whilst further follow-up and trial is warranted, this case demonstrates an alternative reconstructive technique for large-breasted patients undergoing skin-sparing mastectomy with implant reconstruction.

The effects of locally administered acetylsalicylic acid on wound healing

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Introduction
Acetylsalicylic acid is widely used for its anti-inflammatory and antiplatelet aggregation properties. It is known that systemic administration of acetylsalicylate negatively impacts wound repair due to its anti-inflammatory actions. However, the effect of locally administered acetylsalicylic acid on wound pH and healing has not been investigated yet.

Methods
A laparotomy wound was modelled in 3 groups of 25 rats. The first control group received no treatment, the second control group had their wound treated superficially with 1mL of 2% hydrogen peroxide (H_2O_2) and the

third experimental group had the whole depth of the wound infiltrated with 1mL of 0.1% acetylsalicylic acid. The wound was then assessed biomechanically, histologically and using Bioelectrical Impedance Analysis (BIA).

Results

Throughout the healing process the elasticity and the breaking strength of the wound granulation tissue in the acetylsalicylate group were significantly higher ($p<0.05$) than in both the natural healing and H_2O_2 groups. This was further supported by the BIA which showed a significant difference ($p<0.05$) in the experimental group values when compared to the two control groups. The histological analysis showed that acetylsalicylic acid promoted wound collagenation and epithelisation whilst reducing the extent of local oedema.

Conclusion

The results demonstrate that local wound infiltration with acetylsalicylic acid improves the strength and elasticity of granulation tissue and accelerates the wound healing process in rats. A potential explanation for this phenomenon is the acetylsalicylate lowering the wound pH. The above described treatment could be used intraoperatively to speed up the postoperative healing process.

Parallelogram excision: A new rung to the reconstructive ladder

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Introduction

The traditional method of skin lesion excision is planned as an elliptical excision with direct closure however in some instances this may be prevented by the size of the excision area and the perceived wound tension at the closure site. The reconstructive ladder, a well established Plastic Surgery concept, offers further options for wound closure such as skin grafting or loco-regional flaps. The caveat with such techniques is that it may require larger areas of tissue mobilisation, larger scars within relaxed skin tension lines or multiple scars, donor site morbidity and may even risk graft or flap failure.

We describe an innovative technique for a simple and time-efficient direct wound closure in cases where this appears unachievable allowing minimal area of skin excised and a shorter resultant scar within aesthetical relaxed skin tension lines - the 'Paralleogram Excision Technique'.

Material & Methods

We present a short case series of five patients with skin lesions excised with this technique. Each patient had pre and post operative photographs. Excision was carried out under local anaesthetic as a day case procedure.

Key results

Geometrical analysis of the parallelogram shape allowed optimal pre-operative planning of skin lesion excision. Follow up results showed a) good scar healing b) total excision of lesions and c) patient acceptance

and satisfaction from usage of this technique. Further analysis of geometrical characteristics of the standard elliptical versus parallelogram excision supports the parallelogram excision technique.

Conclusion

In conclusion the parallelogram excision of skin lesions proves to be a unique new wound closure technique that is a new rung of the reconstructive ladder.

The intra-operative use of indocyanine green dye to assist excision of a lymphatic malformation

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Excision of lymphatic malformations is a notoriously problematic procedure. Due to difficulty in assessing the lesion margins, incomplete excision rates and reoccurrence rates can be frequent. We have outlined a new, simple, intra-operative technique, which we have used to achieve complete excision of a lymphatic lesion.

We used the properties of indocynanine green, a dye with near infra-red fluorescence, in combination with a near infra-red imaging system, to visualise a lymphatic lesion of the lower limb intra-operatively. This allowed us to identify and delineate the indistinct lesion, avoid sacrifice of normal neighbouring tissue and comfirm complete clearance at the time of excision.

The use of dyes to mark anatomical and pathological structures, aiding dissection and excision is well described. However, to our knowledge, the use of indocyanine green dye to identify and so aid the dissection and excision of a lymphatic malformation is a new technique. We feel this technique a useful adjunct to the armamentarium of surgeons who perform excisional procedures on lymphatic lesions.

One muscle, two functions: reconstructing a complex facial defect and providing facial re-animation with split latissimus dorsi functional myocutaneous flap

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St. Andrew's Centre for Plastic Surgery and Burns

A staged approach is the usual preferred management strategy for reconstruction of complex facial defects, especially with facial nerve involvement, whereby re-animation is also desired.

We are presenting a novel, single-staged approach to the management of a large facial defect and subsequent right-sided facial paralysis, in a 55-year-old women, secondary to odontogenic mandibular osteomyelitis and cervicofacial necrotizing fasciitis that caused necrosis of the parotid gland.

We managed the extensive facial defect following hemimandibulectomy and substantial soft tissue debridement, with a split latissimus dorsi functional myocutaneous flap. Splitting the muscle into two segments; the superior portion, neurotized with the thoracodorsal nerve, provided re-animation at the upper lip after coaptation with the buccal branch of the unaffected side. The remaining denervated, inferior segment acted as a mandibular spacer, bearing the skin paddle for skin coverage.

In this single-staged procedure we achieved both satisfactory reconstruction of the osseocutanous defect and single-stage facial reanimation of the left side of the face, encountering no residual infection and no donor site morbidity. At two years the patient has an aesthetically pleasing and functional outcome. To our knowledge this is an original and effective single-stage strategy, achieving successful reconstruction following a rare presentation of necrotizing fasciitis.

A case of NG feed oesophageal bezoar in a burns patient

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Introduction

Oesophageal bezoars are rare and even more so are cases of bezoars caused by congealed nasogastric (NG) feeding substance. Until 2010 only 42 cases worldwide were reported.

Case presentation

We present a case of an obese 52 year old female patient cared for on the burns ITU for a 28% TBSA full thickness burns and inhalational injury following self-immolation with petrol set alight. Medical history included oesophageal reflux and hiatus hernia. Enteral feeding via an NG tube was started on the first day of admission following initial debridement of her burns. Feeding formula used in this patient was Fresubin HP Energy.

On the 54th post-burn day the patient was found to have a 20 cm long bezoar formed of congealed NG feed in the distal part of her oesophagus. Removal of the bezoar was successful using a mixture of pancreatic enzymes and Sodium Bicarbonate. The events are demonstrated photographically.

Conclusions

We successfully used an anecdotally described technique of dissolving an NG feed bezoar with pancreatic enzymes mixed with Sodium Bicarbonate. This enabled for the patient to be fed enterally throughout her admission with only a short course of total parenteral nutrition to compensate for the period of malabsorption.

Variation in the provision and practice of implant-based breast reconstruction in the UK: early results from the iBRA national practice survey

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Introduction

The introduction of lower-pole sling procedures has revolutionised the practice of implant-based breast reconstruction (IBBR), but data regarding the availability and practice of these procedures across the UK is limited.

The first phase of the iBRA study, a national prospective audit of the practice and outcomes of IBBR, is to comprehensively describe current national practice.

We report the early results of iBRA Phase one, the National Practice Questionnaire (NPQ).

Methods

A questionnaire developed to comprehensively evaluate current practice by the iBRA Steering Group was completed by trainee and consultant leads at breast and plastic surgical units across the UK. Simple summary statistics were calculated for each survey item to evaluate variations in service provision, practice and adherence to guidelines.

Results

To date, 25 units have contributed data to the NPQ. Variation was demonstrated in the provision of novel techniques for IBBR and in patient selection criteria for these procedures. There was lack of consistency regarding peri and post-operative management such as antibiotic and drain use with few units having written protocols or guidelines. Specific written information for women undergoing new techniques was limited. Retrospective audit of clinical outcomes was common, but patient-reported and cosmetic outcomes were less frequently assessed.

Conclusions

Early analysis of the iBRA NPQ has demonstrated marked variation in the provision and practice of IBBR. The prospective audit phase of the iBRA study will determine the safety and efficacy of different approaches to IBBR and allow evidence-based best practice to be explored.

The use of photodynamic therapy with intravenous sensitiser for the management of perineal extramammary Paget's disease: the experience of a tertiary oncological centre

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Introduction
Perineal Extramammary Paget's Disease (PEMPD) is rare, tends to occur in the elderly with debilitating symptoms. Photodynamic Therapy (PDT) is a recognised treatment for PEMPD. We aim to present our experience.

Methods
A retrospective analysis of 14 consecutive cases, referred from throughout the UK, treated since 2005 at the PDT service at the Christie Hospital NHS Foundation Trust has been conducted (Four cases currently continuing treatment were excluded from the analysis).

Results
Average age was 73 years (range 49-92). 71 % were female. IV Photophorin was used as a sensitiser. Initially a red light was used but in recent cases an equivalent blue light has been used as it is tolerated better by patients. Average follow up is 11 months (range 4-25). Average number of treatments required was three (range1-5). A dermal ultrasound was used throughout the treatment in the assessment (pre, during, and post treatment). There was a dramatic improvement in patients' symptoms and all analysed cases completely resolved clinically and on ultrasound following the final treatment.

Conclusion
Our series shows a promising role for PDT with IV photosensitisers in the management of PEMPD. However, long term follow up and comparative studies of the other modalities are required.

After a decade of Facebook, has the plastic surgery community embraced social media?

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Background

Social media has revolutionized the way we communicate yet although there has been proven interest within the plastic surgery community there has been a paucity of evidence describing the current extent of usage. The purpose of this study was to perform a detailed analysis of the use of social media by plastic surgery journals and organizations, and to compare North American versus European trends.

Methods

Using Thomson Reuters Web of Science the top five journals as per impact factor in both Europe and North America were found. The top plastic surgery organisations were then also identified through association with the highest impact journals. By viewing each of their respective website homepages, social media presence and then degree of usage was analysed.

Results

A social media presence online was recorded in 3/5 of the top North American journals compared with 0/5 of the top European journals. Of the 15 plastic surgery organisations researched 10 were linked with social media, with the majority of these being North American organisations. A huge disparity existed between the number of interactive users connected with the different journals and organisation. These figures ranged from 15,291 people linked with the American Society of Plastic Surgery on Facebook to 130 with the British Association of Plastic, Reconstructive and Aesthetic Surgeons.

Conclusion

This study shows that the plastic surgery community as a whole has been slow to embrace social media, particularly in Europe. We have developed a simple guide on how to manage a profile on social media platforms which incorporates the key characteristics of the top functioning sites.

Ultrasound guided percutaneous annular pulley release for trigger finger: a feasible alternative to open release

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Introduction

Trigger digit is a common cause of hand pain and loss of function. Treatment consists of hand therapy, splints, corticosteroid injections and finally open release of the constricting annular pulley. Our department piloted the use of ultrasound guided percutaneous annular pulley release, using a standard hypodermic needle bent at two points. Published by the senior authors in 2009, this technique allows visualization of the tendon and neurovascular bundle, and in a pilot study was found to be promising. This study aimed to evaluate the long-term use of this technique.

Methods

Retrospective case note review of all patients undergoing ultrasound guided A1 pulley release for trigger digit, between 2009 and 2014. All patients had first trialled conservative and corticosteroid treatments within the hand surgery department. Presenting symptoms, ultrasound findings and outcomes were evaluated.

Results
Following the published pilot study of 35 patients, 120 percutaneous A1 pulley releases have since been performed. In concordance with the original paper, most patients had complete resolution of symptoms (assessed by grading of severity I-IV), with minimal complications and high patient satisfaction.

Conclusion
We support that A1 pulley release under ultrasound guidance for the treatment of severe triggering of the digit is a safe and effective procedure, well tolerated by patients and performed in an outpatient setting.

A new role for OASIS wound matrix: sandwich grafting of full-thickness burn wounds in immuncompromised patients (case report)

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Introduction
OASIS Wound Matrix (Smith & Nephew) is an acellular porcine small intestinal mucosa extracellular matrix (ECM), which has been shown to promote healing in chronic wounds. Like existing dermal ECM products, OASIS retains bioactive components important for epithelial cell proliferation, healing and wound remodelling. Although not currently indicated for use in full thickness burns, this case demonstrates the utility of OASIS as the superficial layer in 'sandwich' grafting.

Case
A 59 year-old male with a background of chronic alcohol excess, multiple sclerosis and poor nutrition was admitted with a 12% total body surface area (TBSA) scald to the back and buttocks. After debridement of the full thickness burn, all wounds were grafted with 3:1 meshed autograft. OASIS was applied over the autograft on the mid and upper back whilst allograft was used to sandwich the remaining area. The OASIS was easily removed after six days and the underlying autograft had completely taken. The allograft sandwich layer, however, had become integrated into the wound and that area required further debridement and grafting.

Discussion
This illustrated case demonstrates a novel use of OASIS wound matrix to sandwich autograft. OASIS may have a role in protecting the interstices of widely meshed autograft for other immunocompromised patients at risk of allograft integration.

Is mesh really necessary in DIEP flap abdominal wound closure?

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Introduction and Aims
Although the rate of abdominal complications following DIEP flap breast reconstruction is significantly lower than following TRAM flap reconstruction, these complications can still cause ongoing morbidity for patients. We looked to assess the extent of donor-site morbidity in 106 patients undergoing a DIEP procedure performed by a single surgeon in Bristol.

Material and Methods
A retrospective review of patient case notes was performed and data collected included patient demographics, co-morbidities, oncologic history, details of the operative procedure and abdominal complications.

Results
106 patients underwent a DIEP flap breast reconstruction (85 unilateral; 21 bilateral) between March 2012 and March 2014.Twenty eight were immediate reconstructions, 70 were delayed and eight were immediate/ delayed procedures. 73/106 (69%) patients received chemotherapy pre-operatively and 71/106 (67%) patients received radiotherapy before their reconstruction. Onlay mesh was not used in any patients as part of their abdominal closure.

Major abdominal complications occurred in 4/106 (3.8%) patients; 1 (0.94%) haematoma required surgical evacuation, two (1.89%) abdominal bulges required onlay mesh and one (0.94%) wound infection returned to theatre. 7/106 (6.6%) patients developed abdominal swelling that resolved with core-strengthening exercises.

Conclusion
Abdominal complications occurred in this cohort at a lower rate than other cohorts reported in the literature. Despite the low incidence or bulge or hernia the use of synthetic mesh in DIEP abdominal wound closure may become obligatory to eradicate such complications.

The rare entity of palmaris profundus and a bifid median nerve: a case report

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Palmaris profundus, initially described in the literature as a variant of palmaris longus, is now respected as a separate entity. It is an aberrant muscle with a course closely related to the median nerve.

Of all anomalous muscles described within the carpal tunnel, the presence of palmaris longus is one most commonly found to be compressing the median nerve.

We observed a rare variation in relation to the median nerve within the carpal tunnel of a 42 year old female whilst exploring a median nerve for trauma. The palmaris profundus tendon was seen to pass through a bifid median nerve within the carpal tunnel. This muscle originated in the distal forearm, and its tendon passed through the median nerve before inserting on the deep surface of the palmar aponeurosis.

Given the rarity of this entity, we feel this variation highlights an interesting anomaly which clinicians should be aware of when operating on the median nerve.

PROMs-directed breast reconstruction: using patient related outcome measures to deliver service improvements

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Introduction

Recently there has been an emphasis on the importance of assessing Patient Reported Outcomes (PROs) within plastic surgery, as well as surgical outcomes relating to complications. We aimed to determine whether autologous versus implant based breast reconstruction has an impact on patient reported satisfaction and Quality of Life (QoL).

Methods

Patients undergoing breast reconstruction were eligible and were asked to complete the European Organisation for Research and Treatment of Cancer QoL Questionnaire (EORTC QLQC30) as well as the Breast Reconstruction module supplement (BR23) at their outpatient follow up visit 6 weeks post surgery. Scoring was undertaken in accordance with the EORTC QLQC30 Scoring Manual.

Results

Twenty eight patients (mean age 48 +/-13) completed the questionnaire and were included in the study. Ten patients (36%) underwent implant-based reconstruction and 18 (64%) underwent autologous reconstruction with either a DIEP (n=13), LD (n=4) or ICAP (n=1) flap. Patients in the autologous group had significantly less arm (mean score 51 vs 21, $p<0.01$) and breast symptoms (48 vs 15, $p=0.02$), with a trend towards improved body image (77 vs 50, $p=0.11$). There were no significant differences between immediate and delayed reconstruction or age group. Patients who suffered a complication (2 seromas, 1 delayed wound healing) reported a significant reduction in Global Health QoL (score 58 vs 73, $p=0.04$).

Conclusion

We found that patients who underwent autologous reconstruction appeared to have increased satisfaction compared to the implant reconstruction group. PROs are essential and sensitive tools to provide information about the impact and effectiveness of breast reconstruction from the patient's perspective.

How does keloid disease affect quality of life in patients and how can this help focus future research?

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Introduction
Current research and treatment options for keloid disease do not provide adequate outcomes for patients and patient perspectives on the disease are not well understood. The aim of the study was to understand patients perspectives on their scars in order to guide future research.

Materials and Methods
Thirty four patients (average age 34 years) yielding 126 scars completed questionnaires about their disease during scar clinics in Manchester and Barbados.

Results
The disease had significant impact on quality of life in 32 patients (94%). Aspects of daily life affected by individual scars were dress (50%), makeup (11%), hair (11%), sleep (8%), hobbies (3%), mobility (3%), mental health (2%). All patients reported flattening of scars, reduced pigmentation and reduced visibility were important outcomes of treatment. Scars meeting these criteria no longer affected quality of life in all cases. Reduced symptoms was reported as important by 74%. 74% of patients were aware their scars would never completely resolve.

Conclusion
Patients place great importance on appearance of their keloids, and aspects of daily life related to appearance are most likely to be adversely affected. The majority of patients understand their scars will never fully resolve. Future research may be best focussed on reducing the aesthetic and symptomatic burden of the scars to improve quality of life rather than focussing on complete resolution of the scars.

A comparison of post-operative outcomes following axillary and groin dissections in a tertiary unit between 2010 and 2013

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Lancashire Teaching Hospitals Foundation Trust

Introduction and Aims

Regional lymph node dissections are associated with high rates of post-operative morbidities. It is postulated that groin dissections fair worse than axillary dissections, however, the evidence remains limited. This study aims to compare the post-operative outcomes of the two types of dissections in the treatment of metastatic cutaneous malignancies.

Materials and Methods

A cohort of 100 patients who had undergone axillary (n=50) or groin (n=50) dissections in a tertiary unit between the years 2010 and 2013 were reviewed. Post-operative outcomes, including complications such as wound infections, return to theatre and readmissions were recorded.

Results

The mean age of patients within the cohort was 59 years and is comparable between the two groups. Significantly higher rates of wound infections (axillary: 6/50, groin 27/50; p=‹0.0001) and readmissions (axillary: 1/50, groin: 12/50; p=0.0018) were found in patients who underwent groin dissections. A prolonged elective in-patient stay was also observed following groin dissections (axillary 7 days, groin: 13 days, p=0.0002). Furthermore, returns to theatre were twice as high following groin dissections (axillary: 5/50, groin: 11/50; p= 0.1714).

Conclusions

Our results support the hypothesis that groin dissections are associated with greater post-operative complications when compared to axillary dissections. Patients should be better informed and service providers should aim to improve care including stipulating enhanced recovery programs, particularly for groin dissections.

A decade gone, an enlarging tumour, a finger lost: a case report of metastatic chondrosarcoma and a literature review

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Introduction

Malignant tumours of the hand are rare, accounting for only 1.5% of all cases found in the body. Large hyperchromatic bi- or trinucleated cartilage cells on histology are pathognomonic. Radiological features include osteolytic lesions, with or without calcification, commonly affecting the proximal phaland or metacarpal head but can extend to soft tissue.

Chondrosarcoma presenting in the hand are usually low grade with low risk of metastasis. To our knowledge and following literature review, there are nine reported cases of metastatic chondrosarcoma of the hand world-wide in the English literature, with only two reported cases of axillary lymphadenopathy.

Aims

The aims of this case report are:

1) To describe a case of an unusual presentation of chondrosarcoma of the left little finger with distant axillary and pulmonary metastases
2) Describe surgical techniques and considerations
3) Review the management and ways of improving aspects of care for this particular patient

Methodology
The discussion of the case is done in the format of a case report. Intra-operative photography illustratingstepwise surgical approach in dealing with a large tumour on the hand is also used, with patient consent. We carried out a literature search of reported metastatic chondrosarcoma of the hand using keywords "chondrosarcoma", "malignant hand tumours", "metastatic chondrosarcoma disease of the hand" on Pubmed, Medline and Science Direct.

Conclusion
Chondrosarcoma affecting phalanges of the hand is rare and slow growing with low very low reported rates of metastasis. Our patient could have a satisfactory outcome if treated early. We recommend referral of suspicious hand lesions to specialist hand surgeon for early assessment and management.

Tissue spectroscopy analysis: a promising aide memoire for the assessment of burn depth? A case series of fifty patients and correlation with clinical outcomes

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Background
Assessment of burn depth can be challenging even to the experienced burn clinician. Laser Doppler Imaging, thermography, tissue biopsies and Indocyanine green video angiography are amongst various methods which have been advocated as clinical adjuncts for burn depth assessment. The hand held non-contact tissue spectroscopy analysis (ScanOSkin®) utilizes identifiable pigmented structures within the skin to correlate with wound depth and presence of tissue perfusion. In comparison to previously mentioned imaging modalities, 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 the clinical setting.

Methodology
Fifty patients with acute burn injuries had images taken within 48 hours of their injuries. Images were blinded to three independent experienced assessors who used ScanOSkin® to assess burn depth. We correlated outcomes of these burn wounds with the burn depth estimation obtained from ScanOSkin®.

Results
ScanOSkin® was particularly useful in differentiating superficial partial thickness from varying degrees of dermal burns. Presence of haemoglobin and reduced melanin indicated superficial partial thickness burns. Where there is lack of haemoglobin and increased haemosiderin, this represented deep dermal burns.

Conclusion

ScanOSkin® is a portable device with the potential to be a convenient clinical adjunct in the assessment of burn depth. Furthermore, it is a relatively inexpensive imaging modality which could easily be incorporated into Medical Photography services within trusts. Like other imaging modalities, interpretation of images of ScanOSkin® still requires clinical correlation and user training.

Distal phalangeal fractures: patterns of injury, management and outcomes in a regional hand unit

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Introduction

Distal phalangeal (DP) injuries occur commonly. Patients with DP fractures have been anecdotally observed to require less frequent follow up and secondary intervention than patients with other phalangeal injuries. Based on this, we wanted to evaluate whether these injuries had a low impact on hand functionality once healed and to review long term outcomes in order to facilitate pre-operative consent.

Method

Patient records, hand therapy notes and x-rays of 56 adolescents and adults who sustained DP fractures over a 12 month period were retrospectively reviewed to obtain data on demographics, common injury patterns, management and post injury outcomes.

Results

The mean age was 40.1 years (Range =12-87), 78% were male and 22% female. 43% were manual workers. 5% were diabetic and 22% smoked. Injuries included 85% crush, 13% lacerations, 2% avulsions. Tendon injury was seen in 10% (75% involving extensors) with the middle finger being most commonly injured (39%). Most fractures were open (97.5%) and patterns included: Tuft (44%); Transverse (37%); Comminuted (12%); Intra-articular (5%). Treatment was conservative in 61% and required K-wires in 39%. The average injury to operation time was 1.3 days (Range = 0-4). 90% of cases were performed by a Fellow/SpR. At follow up (6 -100 weeks, with 17% non-attendance) 5% reported hypersensitivity/cold intolerance, 9% had nail deformities, 9% reduced ROM and 3% had mal-union. By time of discharge from clinic, 96% of patients had returned to work and 91% had full ROM.

Conclusion

Distal phalangeal fractures exhibit good overall functional outcome, however, functional and aesthetic limitations are not entirely uncommon. This should be communicated to patients in the informed consent process.

The psychological impact of multidisciplinary facial palsy care: changes in HADS score at 18 months post initiation of care

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Introduction
The negative impact of facial palsy (FP) on psychological health is well known, with increased prevalence of both anxiety and depression. We previously assessed 126 FP patients' psychological health using Hospital Anxiety and Depression Scores (HADS), demonstrating a significantly increased prevalence of anxiety and/or depression. This follow-up study assessed the impact of multidisciplinary team (MDT) care on FP patient HADS following 18 months of MDT care.

Methods
The MDT (comprising psychological, speech and physio-therapies, with plastic surgery) delivered patient-centric specialist care, offering treatments including: neuromuscular retraining, symmetrising botulinum toxin injections, static suspension surgery and dynamic facial reanimation. 126 previously studied patient records were retrospectively reviewed and 18-month HADS noted.

Results
Fifty six FP patients completed 18-month follow-up (mean age 51.8; age range 17-79yr; M:F 1:2.1). Mean anxiety ($p=0.03$) and depression ($p=0.06$) scores significantly decreased: Anxiety improved in 61% and worsened in 12%, depression improved in 59% and worsened in 11%. Regression analysis showed neuromuscular retraining and surgery were equally effective in improving HAD scores. Male patients demonstrated significantly improved depression scores, older patients showed improvements in both anxiety and depression.

Conclusion
This study demonstrates that the MDT approach improves psychological outcomes, especially in male and older FP patients. This approach is currently provided in a minority of UK units. Measurable improvements in psychological outcomes can be achieved with this approach, supporting greater MDT care provision across all UK FP units.

A novel technique for nipple reduction in female to male gender reassignment chest reconstruction

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Introduction and Aims
Female to male gender reassignment chest reconstruction provides a unique aesthetic challenge in breast surgery. Whilst techniques for nipple reduction in hypertrophic nipples for both male and female patients have

been described previously, surgical techniques for "masculinising" the female nipple have not. Male nipples are typically of smaller circumference, projection and are more tapered. These key differences in the nipple combined with the smaller areola must be addressed in order to achieve a satisfactory aesthetic outcome in these patients. We describe a novel technique for masculinising the female nipple in gender reassignment chest reconstruction.

Surgical Technique

After standard skin preparation and draping, a wedge is marked on the nipple from the centre extending radially into the nipple areola junction at a varying angle depending on the desired shape of the new nipple. The wedge is excised taking skin and a small cuff of subcutaneous tissue. Traction is applied to the centre of the nipple at the apex of the wedge excision using a skin hook or forceps and the nipple defect closed using absorbable polyfilament interrupted sutures. Circumferential excision of the areola is then undertaken if required.

Discussion

By varying the size of the wedge excision, position of the apex and angle of the incision along the shaft of the nipple adjustments to circumference, projection and taper can be made. We have found this technique a useful and effective method of masculinising the female nipple with excellent aesthetic outcomes. This technique could also be used for aesthetic adjustments to the nipple areola complex in non-gender reassignment patients.

The "chicken hand" – a training model for hand surgery

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Background

In the current training climate, operative experience is significantly time limited. To reduce patient risk and improve outcome, training simulations are becoming increasingly popular. These simulators rely on their likeness to reality and cost effectiveness to gain popularity. Although there are well-trusted training bone substitutes, these are expensive and tend not to respond in the same way as actual bone. We have designed a low cost simulation model that uses chicken bone to better represent metacarpals for use in hand fracture teaching courses.

Methods

Chicken thighbones were used to simulate metacarpals, with plastic piping to represent soft-tissue spacers, and galvanised wire to articulate the individual bones. Transparent silicone sealant was used to cover the bones and represent periosteum. The Chicken Hand models were used as part of a regional plastic surgery trainee hand teaching day and validated through a feedback survey of eleven trainees.

Results

Candidates were asked to score The Chicken Hand for individual elements including ease of inserting screws, similarity of drilling into real metacarpal, the silicone periosteum, similarity to metacarpal shape and size, and

overall use as a training simulator. The overall average score was 3.22 out of a maximum of 4. Trainees felt The Chicken Hand was similar, better or much better in comparison to existing plaster/foam teaching models.

Conclusion

The Chicken Hand is a good simulation model with estimated cost savings in the region of £450 for a similar sized course, when compared with the leading bone substitute teaching product.

Outcomes of parentral nutrition in burns patients with gastrointestinal failure

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Introduction

Nutritional support plays a key role in treatment strategy with severe burns. When gastrointestinal(GI) function permits, enteral nutrition is superior to parenteral. Where calorific intake is suboptimal, parentral nutrition (TPN) supplementation has no benefit.

Accepted practice, and that within our unit, has been to withhold TPN use except for those patients demonstrating GI failure. As there are no published outcomes of TPN in burn patients with GI failure, we undertook a retrospectively review (all adult burn patients 2008-2013).

Results

During the study period, 571 patients were admitted. All patients had attempted enteral feeding prior to TPN and all had prokinetics. Fifteen patients had GI failure managed with TPN, with 4/15 deaths. Indications included one case with ileus from perforated abdominal viscus (polytrauma including burn). Fourteen cases were indicated for prolonged ileus (12 with proven sepsis).

	Total Admissions		TPN Survivors	TPN Mortalities
Number	571		11	4
Mean TBSA	8.5		33	42
Modified Baux	55.3		76	103
Mean number Septic Episodes	<0.1		1.8	1.7
Mean Duration Ventilation	5.0		21	22
Days of GI failure prior to TPN	n/a		3.8	3.7
Mean Duration TPN (days)	0		7.6	7
Predicted to Actual Mortality	0.85		(total TPN group = 0.80)	

Discussion

Nutritional support is key to survival in major burn injury. Whilst parenteral nutrition may result in intestinal mucosa atrophy, bacteria translocation and immuno down regulation, outcomes of TPN use in burn patients with GI failure has not been examined. This review demonstrates survival allowing for nutritional support during periods of sepsis.

Conclusion

Our data does not suggest a higher mortality in this group than would be predicted when TPN is used as a supportive treatment for GI failure.