

British Society for Dermatological Surgery: Summaries of Papers

**DS-1**
Nonmelanoma skin cancer: the cutaneous surgeon’s guide to radiotherapy
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The majority of dermatologists perform some excisional surgery for nonmelanoma skin cancers (NMSC). The main alternative to surgical treatment is radiotherapy. The rate of recurrence of NMSC after radiotherapy is 5–10% which compares well with 4–6% for simple excisional surgery. The therapeutic effects of radiation result from damage to DNA. This can be from direct interaction with the cell nucleus or via the production of free radicals secondary to interactions with other molecules within the cell that can subsequently damage chemical bonds. It is only when cell division takes place that the biological effects are expressed. Clearly the clinical response of a given nonmelanoma tumour relies on the biological properties of the tissue treated; the so-called ‘5 Rs’ of radiobiology. **Radiosensitivity** is an intrinsic property of the cell population in question. The ability of given cells to **repair** themselves after radiation exposure is usually more pronounced in nonproliferating tissues while **repopulation** of malignant cells becomes more marked once treatment has begun. **Reoxygenation** of tissues improves as radiation exposure proceeds, hypoxic cells are relatively radioresistant, so longer treatment times allow for an improved response. Similarly the **redistribution** of cells to more radiosensitive parts of the cell cycle occurs as treatment progresses. The practicalities of radiotherapy mean it is given daily, each fraction taking around 10 min. There are no systemic side-effects but the unwanted local features are erythema, soreness and slow healing which takes approximately 6–8 weeks after cessation of treatment. The two main modalities of radiotherapy used to treat skin cancers are orthovoltage, sometimes called superficial radiotherapy (SXR), and electron beam. As implied by the name the former cannot treat deep lesions but it is relatively easy to plan and is useful for small tumours particularly close to the eyes because it needs a smaller margin than electron beam. It can, however, cause significant damage to any underlying cartilaginous structures. Electron based treatments are more complex to arrange and plan but because the energy involved can be tightly controlled it is possible to be much more precise with the depth of tissue treated and the distribution of the radiation dose within such tissues. The possibility of a further NMSC developing within a radiation field is perhaps overstated and occurs in at most 5% of cases with a latent period from 10 to 40 years. If we are to have a meaningful dialogue with our patients with NMSC about their treatment options it is important that we have a good basic understanding of the different modes of treatment our oncology colleagues have available to offer as well as the biological effects both wanted and unwanted that can be expected.

**DS-2**
Incomplete excision rates of basal cell carcinomas in primary care and dermatology: a multicentre audit
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Pressure on U.K. general practitioners (GPs) to reduce dermatology referrals, and financial incentives to perform surgery in the community, may increase basal cell carcinoma (BCC) surgery in primary care. We audited the adequacy of BCC excision rates from nine hospitals and two primary care trusts in two U.K. counties. In one county all histology reports of BCC in October 2006 were examined, punch biopsies and curetage were excluded. Out of 261 BCC reports, 199 were attempted excisions. 105 (53%) were performed in the dermatology department and 10 (5%) were performed in primary care. Of the remaining 42%, 33% were performed by plastic surgery and the other excisions (9%) were performed in other hospital departments or in the private sector. Incomplete excision was defined as a histological involvement of any margin. Of these, 6 of 105 (6%) of the dermatology BCCs were incompletely excised, compared with 2 of 10 in primary care. Inadequate excisions that were complete but with a histological excision margin <1 mm were also identified. Nine per cent, 9 of 99, of dermatology complete excisions fell within this category, compared with 5 of 8 (62%) in primary care. Audits were undertaken in the second county at two time periods. In the first period (Nov 06 – Mar 07), 19 of 76 (25%) primary care excisions were incomplete, compared with 28 of 203 (14%) dermatology department excisions. In the second period (May 07 – Jul 07) the incomplete excision rate was 9 of 49 (18%) in primary care and 8 of 175 (5%) in dermatology. Pooling data from all 618 patients in the three audits showed 42 of 483 (9%) incomplete excisions in dermatology departments and 30 of 135 (22%) incompletely excised in primary care. Patients operated on in primary care are likely to need technically easier procedures, as GPs

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Dermatofibrosarcoma protuberans (DFSP) is a rare tumour associated with a high local recurrence rate after surgery and a potential to metastasize. We present the results of a questionnaire distributed electronically to all BSDS members (consultants and trainees) to determine specific details of the management of DFSP. In total, 36 replies were received. Twenty-four of these were known to be from consultant members, representing a response of 32%. The vast majority of respondents (94%) do not routinely carry out specific preoperative investigations for patients with DFSP. Of these 25, 16 stated that this was done by plastic surgeons in their area, four of 25 by Mohs surgeons, three of five by a plastic or Mohs surgeon, one was arranged by a sarcoma MDT, and one didn’t know. Eleven of 36 respondents stated that they personally manage the surgical treatment of DFSP. Six of 36 would perform wide local excision. Margins used were 1 cm (one member), 2 cm (two members), 3 cm (two members), and 4 cm (one member). Five of 36 perform Mohs micrographic surgery (MMS) for DFSP, (three use either frozen or paraffin sections, one frozen only, and one paraffin only). Of those that perform MMS, 3 of 5 routinely excise a margin of clinically normal tissue around the tumour with the debulking procedure, before taking the first Mohs layer. This margin was 4 mm, 5 mm or 10 mm. The approximate width of tissue taken for each subsequent Mohs layer was 3 mm (three members), > 4 mm (one member), and 5–10 mm (one member). CD34 staining is sometimes used by all four who use paraffin sections, and by one member when using frozen sections. Four Mohs surgeons always read the Mohs sections along with a dermatopathologist, and one Mohs surgeon sometimes does this. Follow-up schedules varied widely for those who personally managed the surgical treatment. Most followed up for 2 or 3 years. Only three recommended lifelong follow-up. We reviewed the literature on the management of DFSP and present recommendations in light of this and the survey of members’ experience.

DS-3
Questionnaire results of BSDS members and review of the literature, regarding the management of dermatofibrosarcoma protuberans
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Dermatofibrosarcoma protuberans (DFSP) is a rare tumour associated with a high local recurrence rate after surgery and with a potential to metastasize. We present the results of a questionnaire distributed electronically to all BSDS members (consultants and trainees) to determine specific details of the management of DFSP. In total, 36 replies were received. Twenty-four of these were known to be from consultant members, representing a response of 32%. The vast majority of respondents (94%) do not routinely carry out specific preoperative investigations for patients with DFSP. Twenty-five respondents of 36 stated that they did not personally manage DFSP surgically. Of these 25, 16 stated that this was done by plastic surgeons in their area, four of 25 by Mohs surgeons, three by either a plastic or Mohs surgeon, one was arranged by a sarcoma MDT, and one didn’t know. Eleven of 36 respondents stated that they personally manage the surgical treatment of DFSP. Six of 36 would perform wide local excision. Margins used were 1 cm (one member), 2 cm (two members), 3 cm (two members), and 4 cm (one member). Five of 36 perform Mohs micrographic surgery (MMS) for DFSP, (three use either frozen or paraffin sections, one frozen only, and one paraffin only). Of those that perform MMS, 3 of 5 routinely excise a margin of clinically normal tissue around the tumour with the debulking procedure, before taking the first Mohs layer. This margin was 4 mm, 5 mm or 10 mm. The approximate width of tissue taken for each subsequent Mohs layer was 3 mm (three members), > 4 mm (one member), and 5–10 mm (one member). CD34 staining is sometimes used by all four who use paraffin sections, and by one member when using frozen sections. Four Mohs surgeons always read the Mohs sections along with a dermatopathologist, and one Mohs surgeon sometimes does this. Follow-up schedules varied widely for those who personally managed the surgical treatment. Most followed up for 2 or 3 years. Only three recommended lifelong follow-up. We reviewed the literature on the management of DFSP and present recommendations in light of this and the survey of members’ experience.

DS-4
Do doctors-in-training have an obligation to inform their patients of their level of training before performing a practical procedure?
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The aims of our study were to assess if doctors fully informed their patients of their level of training in skin surgery and to determine patients’ views on a doctor-in-training performing their operation. Our study consisted of a questionnaire-based survey which was conducted from September to December 2007 in the Skin Surgery Unit of a teaching hospital. Only patients undergoing day-case surgery performed by a doctor-in-training were recruited. A definition of a ‘doctor-in-training’ was included in the questionnaires as a doctor who has qualified for over 3 years. Participation was voluntary. Questionnaires were completed postoperatively and divided into three sections: (A) demographic information, (B) assessing whether doctors informed their patients preoperatively of their training level, and (C) patients’ views on a doctor-in-training doing their operation. Eighty-six patients completed the survey, representing a 100% response rate. Of these, 52% were female and 74% were aged over 50 years. Twenty-two per cent of patients were told during consent that their operation might be performed by a doctor-in-training. Only 27% of patients were told by their operating doctor of the latter’s training level. On the other hand, 66% of patients think it is important to know the training level of the doctor performing their operation. Eighty-five per cent of patients would not mind a doctor-in-training performing their operation, unsupervised, if the doctor has sufficient relevant experience. In addition, 86% of patients would not mind their operation being done by a doctor-in-training for the first time, provided that doctor is a doctor-in-training performing a practical procedure?
conclusion, about 75% of patients were not informed of their operating doctor’s training level, whether in outpatient clinic when obtaining informed consent or on the day of surgery. But a similar majority of patients believed it is important to be given such information by their doctor. Reassuringly, the vast majority of patients were favourable to allowing a doctor-in-training perform their operation, whether supervised or not, depending on the doctor’s experience. Therefore, these results highlight the obligations of a doctor-in-training to inform patients of their level of experience when performing a procedure. Although beyond the scope of our survey, we also believe that for medico-legal reasons, all doctors, whether in training or not, should inform their patients when carrying out a new procedure. We have no financial disclosure.

**DS-5**

**Managing squamous cell carcinomas: auditing the mode of referral to secondary care and adequacy of surgical excision**

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Squamous cell carcinomas (SCC) are the second most common type of skin cancer, and its incidence is increasing. The 2006 NICE guidelines (Improving Outcomes for People with Skin Tumours including Melanoma. February 2006, http://www.nice.org.uk/nicemedia/pdf/CSG_Skin_Manual.pdf [accessed 3 Mar 08]) advocate that patients with suspected SCC (and melanoma) should be referred urgently to secondary care for further evaluation and specialist treatment. This retrospective audit identified 100 patients with SCC diagnosed between January and June 2007. Of these, 74% were male, and the average age at diagnosis was 82 years. Case-note review provided information on the mode of referral, specialty referred to, date of referral, site of lesion, date of surgical procedures, histological subtypes and peripheral and deep excision margins. Twenty cases were referred to dermatology via the two-week wait (TWW) urgent route for suspected cancerous lesions. Of these, a quarter of patients had undergone a diagnostic surgical procedure in primary care prior to referral. The average time to complete surgical excision from initial surgery in primary care was 80 days compared with 36 days in patients referred immediately to secondary care. One hundred and forty-six procedures (including excision, biopsy and curettage) were undertaken during this 6-month period, of which 15 occurred in general practice. Audit data from NICE have suggested that between 0-7 and 10% of SCC are biopsied in primary care; 10% were biopsied in our audit, suggesting that surgery in primary care does occur frequently. Of the 101 excisions undertaken, the incomplete excision rate was 57% (4 of 7 excisions) for primary care excisions. In comparison, the incomplete excision rate by hospital specialists was 8% (8% in dermatology; 10% in plastic surgery). NICE guidance suggests that only doctors and nurses with accredited training and who are members of a skin cancer MDT should perform surgery for skin cancers. Given the significantly higher incomplete excision rate of SCC attempted in primary care, the increasing frequency of such excisions, and the subsequent delay in achieving complete surgical excision compared with lesions not biopsied in primary care, GPs should be encouraged to excising suspected cancers. Those who do undertake surgery for skin cancer should be trained in diagnosis and skin surgery techniques and attend a skin cancer MDT regularly. As set out in the NICE guidelines, we suggest that all suspected SCC should be urgently referred to a specialist for appropriate treatment.

**DS-6**

**The surgical challenge of multiple post-psoralen ultraviolet-A (PUVA) cutaneous squamous cell carcinomas**

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A 53-year-old man with psoriasis and Fitzpatrick skin type 2 was treated with a combination of bath and systemic high-dose PUVA from 1980 to 1993. His total cumulative dose was approximately 4200 J cm⁻². Between October 1992 and December 2007 he developed a total of 156 cutaneous squamous cell carcinomas (SCC) and one basal cell carcinoma. Most of the SCCs were histologically well differentiated. Of the SCCs, 130 were located on the lower legs, 21 were on the thighs and five lesions occurred on the fingers and trunk. Apart from PUVA, his treatment for psoriasis included a 4-month course of ciclosporin in 1995. He received no other immunosuppressants and has no further risk factors for the development of SCC. Management: 130 SCCs were excised from his legs with healing by secondary intention with or without purse-string partial closure. Healing was uncomplicated and took 6–8 weeks depending on the size and location of the lesion. He had 2–12 lesions excised per surgical session, all performed under local anaesthetic as outpatient procedures in the dermatology department. Despite numerous surgical procedures he has been able to function well and continues to play tennis regularly. In addition, he was treated with long-intermittent periods of oral retinoids (acitretin) from 1993 with doses between 10 mg and 35 mg daily. When he was on acitretin the rate at which he developed SCCs diminished dramatically to an average of 0.5 SCCs per month (developed 56 tumours over a total of 122 months on treatment). When he was off treatment this rate more than tripled to 1.7 SCCs per month (100 tumours over 59 months). There is a paucity of published information on the surgical management of patients with multiple SCCs after PUVA. Retinoids are used prophylactically for the suppression of cutaneous SCCs in solid organ transplant recipients and have shown a 30% reduction in the
Use of Mini Monoka silicone monocanalicular lacrimal stent to preserve patency of the lacrimal duct system

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Surgery in close proximity to the lacrimal canaliculus can result in damage and obstruction of the canaliculus or lacrimal duct. We describe a patient who underwent Mohs excision of a BCC at the left inner canthus. In the course of surgery the upper lacrimal duct was removed and the anterior surface of lower lacrimal duct at the inner canthus was exposed. We chose to use a Mini Monoka silicone stent to keep the duct patent during the healing process. The stent was placed under direct visualization into the punctum proceeding through the lacrimal duct, lacrimal sac, nasolacrimal duct and nasal cavity. The Mohs postoperative defect was repaired with a full-thickness skin graft. The stent was removed after 6 weeks. At 3 months follow-up, the lacrimal duct was patent, the graft healed well and there was no evidence of epiphora. We present this as a simple technique to preserve the lacrimal duct system when there is the possibility that it will otherwise become occluded following surgery.

‘Tol blue or not tol blue: that is the question’: two Mohs cases of morphoeic basal cell carcinoma histologically apparent with toluidene blue but not with haematoxylin and eosin stains

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Both toluidene blue and haematoxylin and eosin (H & E) are used for staining frozen sections for Mohs micrographic surgery. Most Mohs surgeons use either one or other of the stains, but infrequently both, perhaps out of familiarity for the stain which they are comfortable interpreting. At our centre both toluidene blue and H & E are used routinely for the staining of the Mohs sections. We report two cases of morphoeic basal cell carcinoma treated with Mohs micrographic surgery where the tumours are much more apparent histologically on the toluidene blue stains than with the H & E stains. In these two cases there would have been a definite risk of incomplete excision had H & E alone been used. We propose that using both stains is indicated to ensure complete excision of basal cell carcinomas, particularly morphoeic basal cell carcinomas.

The role of cortical bone fenestration in the management of Mohs surgical scalp wounds devoid of periosteum

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Mohs micrographic surgery may result in large, full-thickness scalp wounds (including periosteum) with resultant exposure of underlying bone. The inelasticity of scalp skin may preclude primary or flap closure. Grafts placed on exposed bone without a periosteal covering will not survive. Secondary intention healing is a well-recognized, simple, relatively pain-free wound management technique for scalp defects. However, wounds containing exposed bone devoid of periosteum heal slowly, or not at all, due to a lack of granulation. Fenestration of the exposed bone is a technique which can facilitate granulation in poorly healing bone-exposed wounds. The bones of the skull are flat bones composed of an inner and outer table of compact bone and an intervening layer of spongy bone called the diploe. The diploe contains red bone marrow and is a reservoir of both differentiated and undifferentiated cells. Bone fenestration enables migratory fibroblasts to pass from the diploe into the base of the exposed bone wound via multiple shallow pits which are drilled into the outer table of the skull. These migratory diploic fibroblasts can then lay down a matrix of granulation tissue on the exposed bone wound surface which facilitates re-epithelialisation (Vanderveen EE, Stoner JG, Swanson NA. Chiseling of exposed bone to stimulate granulation tissue after Mohs surgery. J Dermatol Surg Oncol 1983; 9: 925–8). Fenestration can be performed in theatre as a local anaesthetic day-care procedure. Aseptic technique is of paramount importance. Sedation is rarely required. We use a compact high-powered (90 000 cycles min$^{-1}$) Micro E hand-held electric bone drill (Hall", Timperley, Cheshire, U.K.) (Latenser J, Snow SN, Mohs FE, Weltman R et al. Power drills to fenestrate exposed bone to stimulate wound healing. J Dermatol Surg Oncol 1991; 17: 265–70) with 1–5 mm wire pass open-ended drill tips. Multiple small shallow pits are drilled into the diploe via the outer bony table at 5–10 mm intervals. Sterile saline is trickled onto the bone during the fenestration procedure to prevent heating and thermal injury. Small bleeding points indicate that the correct depth has been attained. When sufficient pits have been created, the wound is covered with a topical antibiotic ointment and a hydrocolloid occlusive dressing.
Peripheral nerve blockade for plantar skin biopsy

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Biopsy of plantar skin is particularly challenging because of the pain associated with direct infiltration of local anaesthetic of this site. There is therefore a need for alternative methods of anaesthesia. We assessed the usefulness of posterior tibial nerve block with or without saphenous nerve block in biopsying plantar skin, in an attempt to develop a protocol for biopsying this difficult site. Sixteen patients with inherited palmoplantar keratodermas were recruited for research purposes, and plantar skin biopsy was initially performed using posterior tibial nerve block alone (PTNB, five subjects). Due to an incomplete effect, a combined posterior tibial and saphenous nerve block (PT/SNB) was used for the remaining 11 subjects. Nerve blocks were applied by standard methods (Doty R Jr, Sukhani R, Kendall MC et al. Evaluation of a proximal block site and the use of nerve-stimulator-guided needle placement for posterior tibial nerve block. Anesth Analg 2006; 103: 1300–5; Benzon HT, Sharma S, Calimaran A. Comparison of the different approaches to saphenous nerve block. Anesthesiology 2005; 102: 633–8) using 3% mepivacaine. Subjects were evaluated for adequate anaesthesia at the planned surgical site by pinprick test. The mean time to loss of sensation to pinprick was noted, as was the requirement for supplementary local anaesthetic. Visual analogue (10 cm) and verbal pain scores were used to assess pain control. In five patients treated by PTNB, only two achieved complete loss of pinprick sensation and three required additional local infiltration of anaesthetic at the biopsy site. In all remaining 11 patients treated by PT/SNB, full loss of pinprick sensation was achieved, although five patients also needed some additional direct infiltration of local anaesthetic for a deeper biopsy. Median time to loss of pinprick sensation was 10 min (range 3–30). Median pain scores (VAS) associated with delivery of both blocks were low (0, ranges 0–5 and 0–7, respectively). Verbal pain scores also confirmed that the delivery of the blocks was associated with no pain by the majority of patients. Postoperative pain was also minimal. In conclusion, a combined posterior tibial and saphenous nerve blockade was an effective method of anaesthetizing plantar skin for biopsy, but some additional local infiltration was nonetheless necessary. Full plantar nerve block may be required for complete anaesthesia.

Shave biopsy without local anaesthetic to diagnose basal cell carcinoma and other skin tumours prior to definitive treatment: analysis of 102 lesions

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Diagnostic biopsy of basal cell carcinoma and other skin tumours is often necessary prior to definitive treatment, especially if a destructive modality such as radiotherapy or photodynamic therapy (PDT) is planned. We have routinely used shave biopsy sampling of basal cell carcinoma (BCC) and some other tumours without local anaesthetic as an outpatient clinic procedure, and have analysed 102 sequential samples to confirm that this technique provides adequate tissue to make an accurate histological diagnosis. We have also routinely asked patients if any discomfort is associated with the technique to confirm that it is acceptable. One hundred and two
lesions from 92 patients were considered. The histological diagnosis was compared against the clinically suspected diagnosis. A high correlation was found between histological diagnosis and initial clinical suspicion. Seventy-five of 88 clinical diagnoses of BCC were confirmed (85%); of the others, two were found to be squamous cell carcinomas (SCCs), one granulation tissue and nine other diagnoses were made. Two of two clinical SCCs were confirmed, and two of three granulation tissue samples (the other was a BCC). Most importantly, in 101 of the 102 lesions sampled, sufficient tissue was obtained to make an accurate histological diagnosis, validating this technique as being effective and accurate. In only six of the 102 procedures was any discomfort reported and in all cases this was rated as minor. This in part reflects choice of lesions – essentially flat lesions in which there is likely to be a significant portion of dermis in the shave (e.g. superficial BCC). SCC or keratoacanthoma (in which the architecture of the histology specimen is important for diagnosis) are less suitable for this technique. Shave biopsy without local anaesthetic is a simple, relatively pain-free method of obtaining satisfactory tissue samples for histological diagnosis in appropriate tumours. It is quick, easy to perform, and avoids discomfort from local anaesthetic or, potentially, additional appointments for a formal biopsy.

**DS-13**

Outcomes of treatment of hidradenitis suppurativa with the carbon dioxide laser: a case series  
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Hidradenitis suppurativa (HS) is a chronic inflammatory disease usually affecting the apocrine glands in the axillae, groin and submammary areas; more common in women. Treatment is typically with topical or systemic antibiotics and antiseptics. Systemic isotretinoin, acitretin and ciclosporin have also been used but the medical management of HS remains difficult. Surgical excision, drainage and the laying open of sinus tracts followed by healing with secondary intention is sometimes used but the medical management of HS remains difficult.

Surgical excision, drainage and the laying open of sinus tracts followed by healing with secondary intention is sometimes used but the medical management of HS remains difficult.

Surgical excision, drainage and the laying open of sinus tracts followed by healing with secondary intention is sometimes employed in therapy-resistant cases. We present a series of nine patients with longstanding and recalcitrant HS who were treated with the carbon dioxide (CO\(_2\)) laser. Previous treatments included multiple courses of oral antibiotics including rifampicin and cindamycin, isotretinoin, prednisolone, cyproterone acetate and spironolactone. Two patients additionally had surgical excision of HS and one had failed treatment with infliximab. The CO\(_2\) laser was used to excise involved areas of skin and explore tracts and sinuses until healthy avascular subcutaneous fat was reached. This ensured that no anatomical foci for recurrent inflammation remained. Laser cauterization of blood vessels during excision ensures a relatively bloodless field and offers an advantage over traditional surgical excision. The wounds were closed by primary intent where possible and left to granulate otherwise. Some cases were performed under local anaesthesia, general anaesthesia was used for more extensive cases or multiple sites. All patients tolerated the procedure and rated the postoperative discomfort as less than that of active HS. The main complications were scar contracture and the resultant limitation of arm movement after axillary procedures. One patient had delayed healing of the axillary wound, which had dehisced in the postoperative period. Some patients required more than one procedure, usually for different anatomical sites. A high satisfaction rate was achieved in all patients with this procedure.

**DS-14**

Carbon dioxide laser treatment of steatocystoma multiplex  
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Steatocystoma multiplex (SM) is a rare autosomal dominant or sporadic disorder characterized by localized or widespread, multiple, asymptomatic or inflamed discharging dermal cysts, which poses a therapeutic challenge. We present a patient with SM treated with a novel technique using a CO\(_2\) laser. A 32-year-old woman was referred with multiple asymptomatic lesions on her trunk, which had been present since her teens. Some of the lesions had become infected and discharged pus, healing in unsightly varicelliform scars. She had been diagnosed with polycystic ovarian syndrome and was commenced on oral contraceptives, which had worsened her skin condition. Examination showed multiple, nontender, skin-coloured to yellowish, cystic papules and nodules on her back, chest and abdomen. A skin biopsy confirmed the clinical diagnosis of SM. Based on the previous reports of failure of treatment of SM with cryotherapy and the impracticality of surgical excision of such numerous lesions, we employed a novel technique to treat these lesions. We used a CO\(_2\) laser (Sharplan\(^{\text{®}}\) 40C, 5–10 W, 2–4 pulses in focus, 0.05 s pulse width) to create a tiny perforation in the cyst. The contents and cyst wall were thoroughly avulsed using a small Volkmann’s spoon inserted thorough the perforation. The resultant wound is allowed to heal by secondary intention. The procedure was performed under local anaesthesia and in multiple sessions resulting in a good postoperative cosmetic outcome. As new lesions continued to evolve, the patient has been maintained on oral isotretinoin 20 mg daily for the past 8 months, during which time no new lesions have developed. Head to head comparison of treatment options for this rare disorder is difficult. However, we are encouraged by the good cosmetic results obtained with this minimally invasive ‘perforation and extirpation’ technique using CO\(_2\) laser.
DS-15
Tumescent liposuction for axillary hyperhidrosis: a safe, well-tolerated and effective treatment
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A 38-year-old man presented in 2002 with significant axillary hyperhidrosis that had bothered him since his teenage years. The patient was finding this both socially embarrassing and inconvenient. There was also a family history of this condition, with several members being affected in a similar way. A 5-min paper sweat gravimetry was carried out at rest, and this yielded over 500 mg sweat produced in each axilla. The patient was initially treated with three botulinum toxin injections to the axillae yearly, resulting in a moderate improvement, lasting approximately 6 months. Subsequently, bilateral axillary tumescent liposuction was performed using 0.1% lignocaine with 1 : 500 000 epinephrine (adrenaline). The two entry points in each axilla were small, and were left to heal by second intention. The patient tolerated the 45-min procedure relatively well and reported an excellent result at 1 month follow-up. At the most recent follow-up, 3 years after the liposuction, the patient still continues to enjoy the full benefit of this treatment. Axillary hyperhidrosis can be socially debilitating, causing a significant impairment of quality of life. Tumescent axillary liposuction is a safe, effective and well-tolerated outpatient procedure for this condition.

DS-16
Our experience with the helical rim advancement flap
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The ear is a common site for skin tumours, particularly in elderly males. Helical rim defects can be difficult to repair with a satisfactory cosmetic result. Helical rim advancement flaps were first described over 30 years ago and provide an alternative to wedge excision. We describe the technique as used in our department on 10 male patients (mean age 82 years, range 52–92) over a 6-month period (July 2007 to January 2008). Appropriate patient selection is crucial for the successful outcome of any helical rim advancement flap. Nonsmokers are preferred. The tumour should be located on the middle third of the helical rim. Tumour size and earlobe size are also important considerations. The size of excision feasible is determined by the amount of earlobe it is possible to advance along the helical rim. The tumour is excised with cartilage and appropriate margins as a rectangle. A full-thickness incision is made inferiorly through cartilage where present, down to the earlobe and this vascular flap is advanced superiorto fill the helical rim defect. If necessary a back-cut is made to increase mobility of the flap. Advancement of such a long flap is made possible by the blood supply of the ear that runs along the periphery. Closure is obtained using a subcutaneous suture through the cartilage at the cut edge of the helical rim and the free end of the advancement flap. Surface sutures are used on the posterior surface initially followed by completion of closure on the anterior surface. Sutures are removed after 1 week. We have used this technique predominantly in the management of basal cell and squamous cell carcinomas. One patient developed a postoperative complication. This 91-year-old man developed partial tip necrosis. He had a thin helical rim and the flap was advanced under tension. In addition this may have been exacerbated by wound infection. No other complications were observed. We feel the helical rim advancement flap is a superior repair method compared with the wedge excision that is commonly used to manage helical rim tumours. Initially helical rim advancement flaps may take more time to carry out but the technique is easily learned and there are several benefits for patients. These include less disruption to the original anatomy of the ear; patients have no problems wearing their original glasses or hearing aids after helical rim advancement flap repair and the overall cosmetic outcome achieved is superior.

DS-17
Symmetric bilateral double transposition flap for reconstruction of defects of the head and neck
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The repair of wounds resulting from the excision of voluminous tumours of the face has proven to be one of the most difficult tasks to perform in surgical dermatology. For large wounds, the usual ellipse is often not an option, and grafting or second intention healing do not have ideal cosmetic outcomes either, all this before even taking into consideration lengthy healing times. A number of flaps have been proposed in past years but sometimes the most traditional techniques, which may grant better outcomes in terms of healing time and cosmetic results, mean difficult, long and complex operations. We designed a novel flap which is created by transposing two different symmetrical lobes, incised on the sides of the wound intended for repair, and with opposite fulcra centred on two corners of the surgical wound. The two lobes are usually marked following an imaginary line which represents the ideal continuation of one of the sides of the wound, where the skin is more abundant and the harvesting from the donor areas most convenient. The two flaps are then moved together into position side by side and sutured to the sides of the surgical wound, and finally together, with a longitudinal suture that follows the perpendicular axis of the wound. We have used this particular flap for repair of full-thickness defects of up to 5 cm in diameter on the forehead, postauricular areas, nose and temples. The procedure is easy in its simplicity, but more importantly both short- and long-term results have been
excellent in all the cases treated. No complications whatsoever have resulted and there have been extremely rapid healing times in all the cases treated. From the cosmetic viewpoint scars were barely visible after 6–7 weeks maximum, and changes due to overstretching or other deformities have never been recorded. This type of reconstruction technique has become one of the most popular amongst the spectrum of flaps we currently use for reconstruction following the excision of tumours of the head and neck.

DS-18
Spiral flap reconstruction following Mohs’ micrographic surgery of a basal cell carcinoma within a mature port wine stain of the ala nasi
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A 48-year-old man presented with a 10-month history of a crusted nodule in the right alar crease. This was within a mature port wine stain which occupied the centrofacial and right facial regions. A diagnostic biopsy of the 7 x 5 mm nodule confirmed the presence of a nodular basal cell carcinoma. Past medical history was otherwise unremarkable and he was not taking any regular medication. There was no history of previous radiotherapy to the port wine stain. The tumour was resected by Mohs’ micrographic surgery in one stage and two blocks. The resulting 8 x 8 mm defect was reconstructed with a spiral flap. Excessive intraoperative bleeding was not noted. The wound healed without complication and resulted in a good cosmetic outcome. The development of a basal cell carcinoma within a port wine stain is rare. Most of the reported cases give a history of previous radiotherapy to the port wine stain. The tumour was resected by Mohs’ micrographic surgery in one stage and two blocks. The resulting 8 x 8 mm defect was reconstructed with a spiral flap. Excessive intraoperative bleeding was not noted. The wound healed without complication and resulted in a good cosmetic outcome. The development of a basal cell carcinoma within a port wine stain is rare. Most of the reported cases give a history of previous radiotherapy to the port wine stain. The tumour was resected by Mohs’ micrographic surgery in one stage and two blocks. The resulting 8 x 8 mm defect was reconstructed with a spiral flap. Excessive intraoperative bleeding was not noted. The wound healed without complication and resulted in a good cosmetic outcome. The development of a basal cell carcinoma within a port wine stain is rare. Most of the reported cases give a history of previous radiotherapy to the port wine stain.

DS-19
‘Axillary web syndrome’ or ‘cording’: an unusual postsurgical complication and localized variant of Mondor’s disease
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A 26-year-old woman presented to her GP with a small papule in the left axilla thought to represent an ingrowing hair. After excision at the surgery, histology revealed an incompletely excised low-grade microcystic adnexal carcinoma and she was referred to the dermatology department for further management. After discussion at the multidisciplinary team meeting, she proceeded to wide local excision of the scar. Two weeks following removal of her skin sutures she complained of being unable to straighten her arm, associated with a pulling sensation in the axilla. Examination revealed two palpable, firm subcutaneous cords in the lateral axilla, with a similar appearance at the left antecubital fossa. She was referred to the breast surgeon who recognized this as ‘cording’, a transient phlebitis or thrombosis of small veins/lymphatic vessels. She was reassured and recommended some gentle exercises. Two months later the cording had resolved spontaneously. References to ‘cording’ occur mainly in the breast and plastics literature, where it is recognized as a transient, self-limiting complication of axillary surgery (Leidenius M, Leppanen E, Krogerus L, von Smitten K. Motion restriction and axillary web syndrome after sentinel node biopsy and axillary clearance in breast cancer. Am J Surgery 2003; 185: 127–30). Mondor in 1939 described a thrombophlebitis of the subcutaneous veins of the anterolateral thoracoabdominal wall (Mondor’s disease) (Oldfield MC. Mondor’s disease: a superficial phlebitis of the breast. Lancet 1962; 1: 994–6). About 200 cases have been reported, with trauma to the breast tissue, surgery or an inflammatory process all recorded as precipitating factors. A similar condition has been described affecting the penis. Less common sites include the groin, antecubital fossa and axilla, where it has been termed ‘axillary string phlebitis’. It seems likely these are all variants of the same pathological process. Dermatologists, particularly those performing cutaneous surgery, should be aware of this entity, which usually occurs 2–4 weeks after surgery. Axillary web syndrome characteristically presents with restriction of movement associated with one or more firm, subcutaneous cords, palpable on limb extension as raised strands that may be beaded or forked. Tenderness is rarely reported. Pathological findings consist of a sclerosing endophlebitis with obliteration of the lumen by organized thrombus and inflammatory cells (Oldfield 1962). As the condition resolves spontaneously, no treatment is necessary, but gentle exercise may be helpful. Occasional cases have been associated with hypercoagulable states and a thrombophilia screen should be considered. Patients should be reassured as to its benign and self-limiting nature.


**Posters**

**DS-20**
**Sequential treatment of giant basal cell carcinomas**

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Treatment of giant basal cell carcinomas (GBCC) can pose several challenges. In such instances, use of routine and recommended treatments for sporadic, average size BCC is suboptimal, impractical and often leads to treatment failure. Surgical excision of such large lesions results in marked intra- and postoperative morbidity. While individually, photodynamic therapy, topical imiquimod and surgical excision are all established treatments for BCC, their combined use in the treatment of GBCC has not been explored. Three patients with histologically proven GBCC were sequentially treated with three cycles of Metvix (Galderma Australia, NSW, Australia) photodynamic therapy followed by a 6-week course of topical imiquimod. This led to a reduction in the size of these lesions which were subsequently excised.

**DS-21**
**Topical imiquimod used to prevent cutaneous malignant melanoma metastases**

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There are a small number of previous reports of topical imiquimod used in the treatment of established melanoma metastases (Wolf IH, Smolle J, Binder B et al. Topical imiquimod in the treatment of metastatic melanoma to skin. Arch Dermatol 2003; 139: 273–6). However, we present a 49-year-old woman in whose case imiquimod appears to prevent melanoma metastases from developing. The patient initially had a superficial spreading malignant melanoma 1-2 mm in depth excised from the anterior left lower leg in August 2003. Wide local excision and sentinel node biopsy were subsequently performed, which revealed micrometastases within the sentinel node. Seven in-transit local cutaneous metastases then developed between October 2004 and April 2007, all on the anterior lower leg, and were treated by surgical excision. In an attempt to halt the metastases, imiquimod 5% cream (Alldara®; 3M, Loughborough, U.K.) was started in January 2007 but was not used consistently until April 2007 because two further metastases developed and were excised in February and April 2007. From April 2007 onwards imiquimod was applied consistently to the whole anterior lower leg 6 days per week. To date, after 9 months of regular imiquimod treatment, no further melanoma metastases have been identified. Therefore we propose that the use of topical imiquimod has prevented further development of melanoma metastases. The exact mode of action for treatment, or in this case prevention of melanoma metastases, is not fully understood. Imiquimod induces the production of proinflammatory cytokines including interferon-γ, enhances antigen presentation and promotes a shift to predominantly type 1 T-cell immune responses. It has been suggested imiquimod may induce melanoma-specific cytotoxic T cells via melanoma antigen presentation (Steinmann A, Funk JO, Schuler G, von den Driesch P. Topical imiquimod treatment of a cutaneous melanoma metastasis. J Am Acad Dermatol 2000; 43: 555–6). Imiquimod is generally a well-tolerated, noninvasive treatment. Based on our case, we recommend studies of the potential use of imiquimod to prevent cutaneous melanoma metastases.

**DS-22**
**Malignant melanoma arising in a naevus spilus**

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Naevi spili are usually benign with malignant transformation rarely reported. We report a case in which a malignant melanoma was identified within a naevus spilus. A 39-year-old Caucasian woman presented with a changing pigmented area within a longstanding pigmented lesion. Physical examination revealed a giant hyperpigmented macular area measuring 30 x 18 cm on her left anterolateral thigh. Multiple darker macules and papules were scattered in an irregular fashion within the lesion consistent with a diagnosis of naevus spilus. One papule within the lesion was darker than surrounding areas. Excisional biopsy revealed a superficial spreading malignant melanoma, Clark level III, Breslow thickness 1.06 mm. Three clinically atypical areas within the remaining lesion were subsequently sampled. Histopathology showed a range of features from lentigines with mild melanocytic atypia to junctional naevi with melanocytic atypia ranging from mild to moderate dysplasia with prominent atypical single melanocytes consistent with a dysplastic naevus spilus. Following a multidisciplinary team meeting a decision was made to excise the entire lesion due to the level of dysplasia scattered within the lesion and the potential risk of malignant transformation. Histopathology showed a spectrum of melanocytic proliferation ranging from lentigo with mild cytological atypia to dysplastic naevus with moderate to severe atypia. No invasive melanoma was identified. Despite the high prevalence of naevus spilus we found just 27 previous cases of an association with malignant melanoma. It has been suggested that the risk of malignant transformation may be associated with congenital lesions,
large lesions, zosteriform lesions, those with large numbers of superimposed melanocytic naevi and those with atypical cytological features. In summary we present a rare case of melanoma arising within a dysplastic naevus spilus. A decision to excise the lesion in its entirety was made, despite the significant cosmetic consequences, due to the level of cytological atypia within the lesion. (Abecassis S, Spatz A, Cazenave C et al. Melanoma within naevus spilus: 5 cases. Ann Dermatol Venereol 2006; 133: 323–8; Rhodes AR, Mihm, MC Jr. Origin of cutaneous melanoma in a congenital dysplastic nevus spilus. Arch Dermatol 1990; 126: 500–5.)

DS-23 Chemical tattoo removal resulting in hypertrophic scarring

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Marking the skin with pigment to create a tattoo dates back at least 5000 years and is still practised today. It is estimated that 80 million people in the Western world have a tattoo and as many as 17% of people strongly consider tattoo removal. The current gold standard for tattoo removal is the Q-switched laser, yet various other modalities have been reported, including surgical excision, cryosurgery, dermabrasion and chemical applications. No treatment is without potential side-effects. We report two patients who developed hypertrophic scars after chemical tattoo removal. A 27-year-old man presented to clinic requesting treatment for scars following use of the ‘Rejuvi Tattoo Removal System’ (Rejuvi Laboratory Inc., San Francisco, CA, U.S.A.) for a tattoo on his right lower leg. He had received seven once-weekly treatments 2 years previously. Treatment was continued despite a strong inflammatory response 1–2 days after each treatment session. The resulting hypertrophic scars were later treated with intralesional steroids with some improvement. Examination revealed a 24 x 10 cm blue and black pigmented tattoo with large areas of atrophic and hypertrophic scarring. Around 60% of the affected area was without pigment. The second patient had a tattoo on her left shoulder treated with the ‘Rejuvi Tattoo Removal System’ twice, 1 month apart. The patient noted significant lightening of the tattoo but developed hypertrophic scars 4 weeks after the second treatment. Intralesional triamcinolone injections resulted in marked cosmetic improvement. Several chemical tattoo removal systems are currently available. The ‘Rejuvi Tattoo Removal System’ is a chemical extraction method consisting of a paste, delivered into the skin using needles, similar to regular tattooing. The paste contains chemicals that are said to break up and mobilize the tattoo pigment, although histological evidence is not available. The manufacturers claim a low rate of adverse events but there have been reports of scarring in the literature, especially following treatment of nonfungal sites. Facial cosmetic tattoos are often more superficial and treatment may therefore result in fewer complications. Treatment of tattoos with chemical tattoo removal systems is relatively cheap and therefore an attractive option for patients. Dermatologists should be aware of chemical tattoo removal systems to be able to counsel patients about their risks and benefits.

DS-24 Eccrine porocarcinoma: case report and overview of the literature

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Eccrine porocarcinoma (malignant eccrine poroma; EPC) is a rare skin appendage tumour, originating from the intraepidermal and upper dermal eccrine ducts. It may develop de novo or in a pre-existing benign eccrine poroma. The lesions are reported to occur most commonly on the lower extremity with variable prognosis. The accurate distinction between eccrine porocarcinoma and a squamous cell carcinoma (SCC) may be impossible on a small biopsy specimen. Thus it is important for clinicians to recognize it and formulate treatment accordingly. We present our findings and an overview of the literature regarding eccrine porocarcinomas by presenting a case report of a 91-year-old woman with a lesion on the buttock, which typifies the pitfalls in the diagnosis of this neoplasm in relation to SCC. Also presented are the similarities to SCC, diagnosing the lesion both clinically and histologically, and an overview of the treatment modalities.

DS-25 Audit of excision rates of basal cell carcinomas in primary and secondary care in a county over 1 year

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The publication of the NICE improving outcomes guidance for management of patients with skin cancer provides a template for designing and commissioning skin cancer services. In particular there is an emphasis on patients being managed by appropriately trained specialists. We have performed a countywide audit of the annual complete excision rates for basal cell carcinoma (BCC) as a means of establishing baseline information on where patients receive treatment and how well they are treated (with complete histological excision used as the gold standard). All histopathology reports relating to BCCs from 1 January to 31 December 2006 were accessed from a county district general hospital pathology database. The specialty of the clinician, type of surgical procedure, high or low risk site, histological confirmation of complete excision and clinical diagnosis were recorded. In total 1693 BCCs were recorded in the database during 2006. Most (38%) were
excised from a high-risk site, 25% were excised from a low-risk site. Sixteen per cent were incisional biopsies. Seven per cent were curetted as a definitive procedure from a high-risk site and 14% were curetted as a definitive procedure from a low-risk site. Dermatologists performed 1219 (72%) of all procedures, GPs performed 22% with the remainder being managed by other surgical specialties (mainly ophthalmological and maxillofacial surgeons). The complete excision rate for high-risk BCCs in primary care was 46% and in secondary care was 89%. The complete excision rate for high-risk BCCs for dermatological surgeons was 96%. The complete excision rate for low-risk BCCs in primary care was 80% and in secondary care was 93%. One hundred per cent of dermatologists, 94% of surgeons and 78% of GPs entered a possible clinical diagnosis of skin cancer on the request form.

In conclusion, dermatologists in the county are performing the majority of surgical procedures and incomplete excision rates compare favourably with previously published rates of 4–17% (Farhi D, Dupin N, Palangié A et al. Incomplete excision of basal cell carcinoma: rate and associated factors among 362 consecutive cases. Dermatol Surg 2007; 33: 1207–14), and are particularly favourable in the case of the dermatological surgeons. The incomplete excision rates for patients with high-risk BCC managed by GPs is unacceptably high at 54%. This audit validates some of the key recommendations of the NICE guidelines and poses the question of how to manage the large number of patients with BCC who are currently being treated by their GPs.