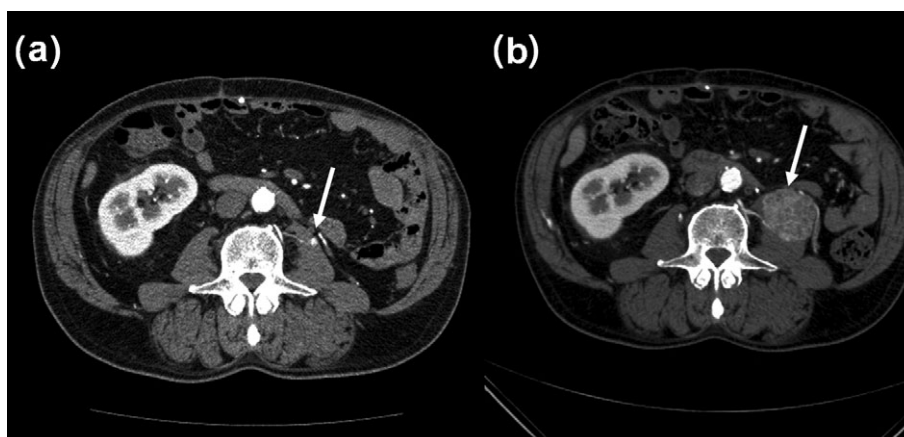


Fig. 1. Contrast-enhanced CT scan showing a hypervascular lesion of 1.8 cm (arrow) located in the left psoas muscle (a). The same lesion 18 months later (arrow) demonstrated a notable increase in dimension (7 cm) and appeared highly vascularized with areas of necrosis (b).



unpredictable behaviour of metastatic RCC, the absence of curative adjuvant therapies and the poor response of muscular metastases to immunotherapy, the main cure for this lesions is surgical resection with adequate margins.

References

1. Bennington JL, Kradjian RM. Sites of metastases a autopsy in 523 cases of renal cell carcinoma. In: Bennington JL, Kradjian RM (eds). *Renal Carcinoma*. Philadelphia, PA: WB Saunders, 1967; 156–69.
2. McNichols DW, Segura JW, DeWeerd JH. Renal cell carcinoma: long-term survival and late recurrence. *J. Urol.* 1981; **126**: 17–23.
3. Linn JF, Fichtner J, Voges G, Schweden F, Storkel S, Hohenfellner R. Solitary contralateral psoas metastasis 14 years after radical nephrectomy for organ confined renal cell carcinoma. *J. Urol.* 1996; **156**: 173.

Francesco Camnasio,† MD

Celeste Scotti,*† MD

Anna Borri,‡ MD

Francesca Fontana,† MD

Gianfranco Frascini,† MD

*Department of Orthopaedics and Traumatology, San Raffaele Scientific Institute, Milan, Italy, †Residency Program in Orthopaedics and Traumatology, University of Milan, Italy and

‡ Department of Oncology, San Raffaele Scientific Institute, Milan, Italy

doi: 10.1111/j.1445-2197.2009.05195.x

Dear Editor,

Noise in the operating theatre: how much is too much?

We sought to measure sound levels in the operating theatre and assess consequences for the theatre staff. Operating theatre sound levels were recorded at both an adult's and children's teaching hospital. Sound level measurements were performed by an Audiologist and Surgeon with both analogue (calibrated Brüel & Kjaer 2205) and digital (IEC 651 Type II) sound level meters. The sound levels were measured in A-weighted decibels dB(A) and were taken on several occasions during procedures to ensure accurate, consistent and reproducible results.

Sound levels produced by the pneumatic drill and oscillating saw exceeded 85 dB(A) at the head of the scrub nurse, surgeon and assistant. Kracht *et al.*¹ reported that for neurosurgery and orthopaedic surgery, peak sound levels exceeded 100 dB over 40% of the time. The highest peak levels routinely seen during surgery were well in excess of 120 dB. The Australian national standard for exposure to noise in the occupational environment is 85 dB. This is consistent with scientific evidence that indicates that exposure levels above 85 dB represent an unacceptable risk.² The sound level in the operating theatre may also affect the staff's ability to concentrate.³ Sound levels of 77 dB(A) result in reduced mental efficiency and short-term memory. Background sound levels may also negatively impact on the speech discrimination.⁴ A background sound level of 77 dB(A) or greater leads to a considerable decline in cognitive functions, mental efficiency, short-term memory and speech discrimination.^{3,4}

There are an increasing number of devices used in the operating theatre that produce noise above recommended safe levels. We recommend that sound levels in the operating theatre should be monitored where appropriate. The noise output levels of surgical equipment should be taken into consideration by manufacturers. The use of lightweight noise reduction earplugs may cut down on excessive noise, but also allow communication. We seek to promote further discussion in this area that will become increasingly important as specialties such as Neurosurgery, Orthopaedic Surgery and Otolaryngology undertake prolonged procedures with powered instrumentation.

References

1. Kracht JM, Busch-Vishniac IJ, West JE. Noise in the operating rooms of Johns Hopkins Hospital. *J. Acoust. Soc. Am.* 2007; **121**: 2673–80.
2. National Occupational Health and Safety Commission. *National Code of Practice for Noise Management and Protection of Hearing at Work [NOHSC: 2009(2004)]*, 3rd edn. Canberra: National Occupational Health and Safety Commission, 2004.
3. Murthy VS, Malhotra SK, Bala I, Raghunathan M. Detrimental effects of noise on anaesthetists. *Can. J. Anaesth.* 1995; **42**: 608–11.
4. Murthy VS, Malhotra SK, Bala I, Raghunathan M. Auditory functions in anaesthesia residents during exposure to operating room noise. *Indian J. Med. Res.* 1995; **101**: 213–6.

Michael Barakate,* MS FRACS

Ian Jacobson,** MB BCh FRACS

Andrew Geyl,† B.Chem Eng (Hons), Grad Dip Aud

Monica Wilkinson,† OAM, BA, MA(Aud), MAudSA(CCP)

Thomas Havas,** FRCSE, FRACS, FACS

Departments of *Otolaryngology, Head and Neck Surgery, The University of Michigan Hospital, Ann Arbor, MI, USA,

**Otolaryngology, Head and Neck Surgery, and

†Audiology, The University of New South Wales, The Prince of Wales and Sydney Children's Hospitals, Sydney, Australia

doi: 10.1111/j.1445-2197.2010.05320.x

Philip Hammond, FRCSEd (Paed Surg)

James Hamill, FRACS (Paed Surg)

Philip Morreau, FRACS (Paed Surg)

Vipul Upadhyay, FRACS (Paed Surg) FRCSEd (Paed Surg)

Department of Paediatric Surgery, Starship Children's Hospital Auckland, New Zealand

doi: 10.1111/j.1445-2197.2010.05321.x

Dear Editor,

Burning issues in laparoscopy

A recent case at our unit has heightened our awareness of the potential complication of laparoscopy-related skin burns. While a 12-year-old girl was undergoing laparoscopic cholecystectomy, the optical light cable was briefly disconnected from the telescope and laid on the drapes. Within a few seconds a burn was noted on the polypropylene drapes, and when they were withdrawn a 5-mm diameter superficial burn was noted on the patient's arm. This healed without scarring within 2 weeks.

Mean temperatures at the distal end of the fibre-optic cable from a 300-W 'cold' light source have been found to be 190.6°C ($\pm 3.2^\circ\text{C}$) while the temperature at the end of the attached scope has been noted to be 41.9–95°C.^{1–4} Human skin burns may be sustained at 44°C after 6 h exposure, but at 70°C in less than 1 s, and hence a significant risk of skin burns exists for patients in contact with a light cable.

Previously suggested avoidance strategies include ensuring that the light source is on standby whenever the telescope is detached or placing the cable/telescope in a kidney dish whenever not in use.^{1–3} However, rather than relying on the avoidance of human error we advocate a more 'fail-safe' mechanism to prevent these injuries. We have measured the temperature at the end of the light cable (up to 157.2°C) and also with the addition of the 'female' coupling normally attached to the telescope and found that the temperature is reduced to a relatively safe maximum of 48.2°C. If the light cable is disconnected from the telescope intra-operatively, we advocate that, to reduce the risk of burn injury, the shielding 'female' coupling attachment is left on the cable rather than the existing proud 'male' coupling employed on most laparoscopic light cables at present.

References

1. Sandhu H, Turner R, Pozo JL. No smoke without fire – simple recommendations to avoid arthroscopic burns. *Knee* 2002; **9**: 341–6.
2. Lau YJ, Dao Q. Cutaneous burns from a fiberoptic cable tip during arthroscopy of the knee. *Knee* 2008; **15**: 333–5.
3. Smith LP, Roy S. Fire/burn risk with electrosurgical devices and endoscopy fiberoptic cables. *Am. J. Otolaryngol.* 2008; **29**: 171–6.
4. Hensman C, Hanna GB, Drew T, Moseley H, Cushieri A. Total radiated power, infrared output, and heat generation by cold light sources at the distal end of endoscopes and fiber optic bundle of light cables. *Surg. Endosc.* 1998; **12**: 335–7.

Dear Editor,

Malignant recurrence following TEM excision of a large rectal adenoma

This 72-year-old male originally presented with diarrhoea and underwent a colonoscopy. At that procedure, he was noted to have a rectal villous tumour extending circumferentially from the anorectal junction to 13 cm from the anal verge. Biopsies demonstrated a villous adenoma, and an endorectal ultrasound staged it as a T1 lesion. The patient underwent a trans-anal endoscopic microsurgical (TEM) excision of the lesion. A circumferential submucosal excision was performed and the polyp was measured at approximately 14 cm by 14 cm in size (196 cm²). Due to the large mucosal defect, the proximal mucosa was then sutured to the upper anal canal, imbricating the muscle layer. The patient was discharged home after 3 days. Histological analysis of the specimen demonstrated a villous adenoma with several areas of high grade dysplasia.

As part of the follow-up, the patient underwent a flexible sigmoidoscopy at 6, 12, and 18 and 24 months post-operatively. Because there were no features of recurrence, a colonoscopy was arranged for 12 months. This procedure was then delayed because the patient developed symptoms of prostatism. A transrectal ultrasound and prostatic biopsy was performed at the time and found benign disease.

The patient then presented acutely at 3.5 years post procedure following the development of a left sided deep venous thrombosis. He was also troubled by faecal urgency and urinary frequency. Examination revealed a large rounded extrinsic mass compressing the entire rectum from the right hand side. Further investigation with CT scan and MRI (Fig. 1) demonstrated a massive pelvic cyst arising from the distal right pelvic wall. Transrectal biopsy of the lesion demonstrated an acellular mucinous cyst. A formal transrectal biopsy was undertaken that included the cyst wall and allowed the lesion to be drained into the rectum and relieve some of the pressure on the pelvic veins and bladder. Histology confirmed a mucinous cystadenocarcinoma of colorectal origin. Following long course chemo-radiotherapy, the patient underwent an abdominoperineal excision to clear the cystic tumour. Histopathology confirmed a mucinous adenocarcinoma (G3 T3c N0 M0) that had been excised with clear margins (R0 resection).

This patient's clinical presentation most represents a recurrence of a villous adenoma that had been excluded outside of the bowel lumen and that subsequently underwent malignant transformation. It may also represent a primary malignant lesion that was not detected at initial histology (especially in view of the size of the original specimen). This highlights a novel problem that may occur with the