Letters

CHRISTMAS RELATED FRACTURES ADMITTED TO THE FRACTURE DEPARTMENT, NORTHERN IRELAND

Editor,

In the Fractures Department, RVH, an increased incidence of fractures sustained whilst performing Christmas related activities was noted. These include patients falling from a height whilst storing presents in the attic and decorating the house with Christmas decorations. We aimed to record the experiences of the Fractures Department, RVH in relation to fractures sustained whilst performing such activities.

In January 2013, a search of Pubmed was performed using the terms 'Christmas related injuries', 'Christmas related fractures' and 'seasonal fractures', to identify any related published data. This obtained 12 results, however none were of relevance. No data has been published on Christmas related fractures and therefore a comparison to other fracture department trends cannot be made.

A retrospective search of patients with fractures related to Christmas activities was performed on the trauma database, 'FORD' (Fracture Outcome Research Database) and on trauma admission sheets for December 2010, 2011, 2012.

Table 1. Summary of patient admissions due to fractures related to Christmas activities

Year	Patient Age and Sex	History of Injury	Injury	Management	Length of Stay
2010	51 male	Fall from the attic whilst storing presents	Fracture of T12 vertebra	Surgical	66
	57 male	Fall from the attic whilst storing presents	Fracture of T2 vertebra	Surgical	65
	45 male	Fall from a chair whilst putting up Christmas decorations	Closed tri-malleolar fracture of right ankle	Surgical	4
2011	49 male	Fall from ladder whilst storing Christmas presents in attic	Right tibial plateau fracture	Surgical	5
	19 male	Fall from ladder whilst storing Christmas presents in attic	Closed tri-malleolar fracture of right ankle	Surgical	3
	61 female	Fall whilst decorating the Christmas tree	Fracture of right distal radius	Conservative	32
2012	94 female	Fall whilst decorating the Christmas tree	Extra-trochanteric fracture of left hip	Surgical	11
	78 male	Fall from the attic whilst storing presents	Fracture of T7 vertebra	Surgical	22
	68 female	Fall from ladder whilst storing Christmas presents in the attic	Left tibial plateau fracture	Surgical	10
	59 male	Fall from the attic whilst storing presents	Fracture of T5/T8 vertebrae	Conservative	7
	59 female	Fall from ladder whilst storing Christmas presents in the attic	Fracture of T12/L4 vertebrae	Conservative	5
	32 female	Fall from the attic whilst storing presents	Fracture of L1 vertebra	Conservative	20
	50 female	Fall from ladder whilst decorating outside of the house	Right acetabular fracture	Conservative	17
	55 female	Fall from the attic whilst storing presents	Right acetabular fracture Right olecranon fracture	Surgical Surgical	6
	41 female	Fall whilst decorating the Christmas tree	Closed tri-malleolar fracture of right ankle	Surgical	3

Fifteen patients were identified as having sustained a fracture whilst performing a Christmas related activity, equivalent to 1.5% of the 983 admissions during December 2010, 2011, 2012. There were seven males and eight females, with a mean age of 54.5 years. The total inpatient stay was 276 days. The mean length of inpatient stay was 18.4 days (range 3 - 66).

The results demonstrate increasing annual incidence. Three patients in 2010, three patients in 2011 and nine patients in 2012.

Ten patients sustained their fracture as a result of a fall from the attic or ladder leading to the attic, while five patients sustained a fracture during a fall while putting up Christmas decorations. Ten patients underwent surgical management and five had conservative management.

The individual fractures sustained and their management are displayed in Table 1.

These results highlight a relationship between patients performing Christmas related activities and sustaining a fracture. Christmas decorating is dangerous. Fifteen patients experienced significant injury, requiring urgent hospital admission, utilising 276 bed days in total. There is increasing incidence over the three years reviewed. A significant proportion of musculoskeletal injuries are managed in the outpatient setting, including the fracture clinic and emergency department. A further review, including emergency department attendances, may reveal a larger proportion of injuries.

The reason for this increasing incidence is unclear, but may represent an increasing tendency for the public to decorate more excessively. To reach difficult areas, ladders and chairs are often required which may become unstable, placing the public at greater risk of injury. It appears the attic is also an area of danger.

During the festive period, attendances and injuries requiring treatment and inpatient stay place increased pressure on services. These can potentially be saved for general trauma with a cost saving to the department.

These are preventable injuries and it is therefore important to consider methods by which to avoid them, including education about carrying heavy loads, increasing awareness of potential risks when using unstable platforms and how to prevent injury. This should result in a reduced number of patients being admitted with fractures relating to these activities.

The authors have no conflict of interest.

Robin Gordon, Rakesh Dhokia, Niall Eames

Royal Victoria Hospital, Grosvenor Road, Belfast, BT12 6BA

CARDIAC METASTASIS FROM A SQUAMOUS CELL CARCINOMA OF THE TONGUE IN THE ABSENCE OF LOCAL RECURRENCE.

Editor,

A 77-year-old man presented to hospital following two episodes of collapse. Past medical history was significant for stable angina, osteoarthritis and squamous cell carcinoma of the tongue. On examination, he appeared frail with evidence of weight loss. Pulse was recorded at 108 beats per minute and was irregular. He was pyrexial with a temperature of 38.3°C. Auscultation of the chest revealed crackles at the left base. The remainder of the physical examination was unremarkable. In particular there was no evidence of lymphadenopathy or local recurrence of tongue cancer. An electrocardiogram confirmed atrial fibrillation. A chest X-ray displayed widespread pleural plaques and consolidation at the left base. Blood work was significant for an elevated white cell count, serum high sensitivity troponin T concentration

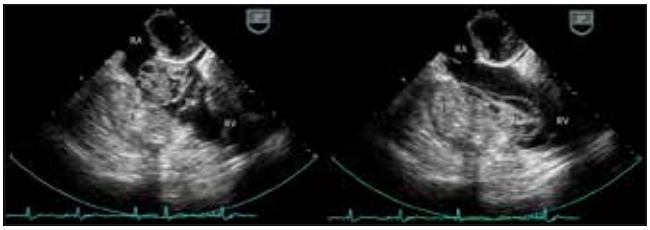

Fig 1. Trans-oesophageal echocardiogram images demonstrating a large mass (M) arising in the right atrium (RA) and prolapsing through the tricuspid valve (TV) into the right ventricle (RV), during the cardiac cycle, with evidence of intramural invasion (I).

and serum C-reactive protein concentration.

The patient was commenced on digoxin and received treatment for a lower respiratory tract infection. A computed tomography (CT) scan of brain was unremarkable. A

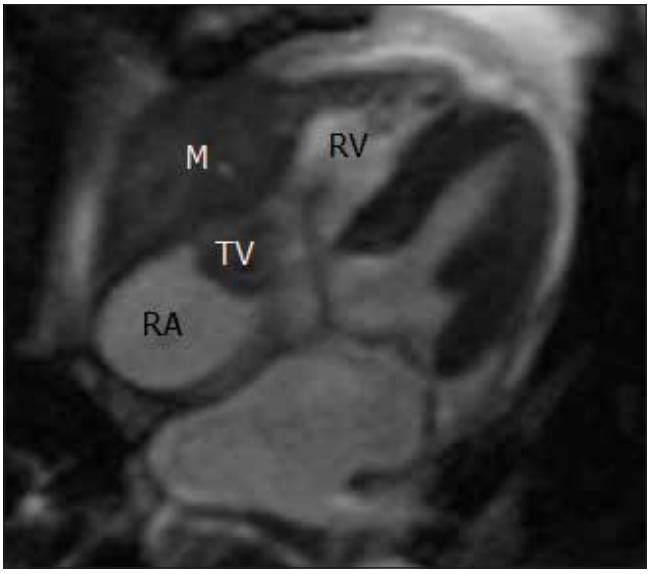

Fig 2. Cardiac magnetic resonance image demonstrating a large mass (M) involving the free surface of the right atrium (RA), right ventricle (RV) and tricuspid valve (TV).

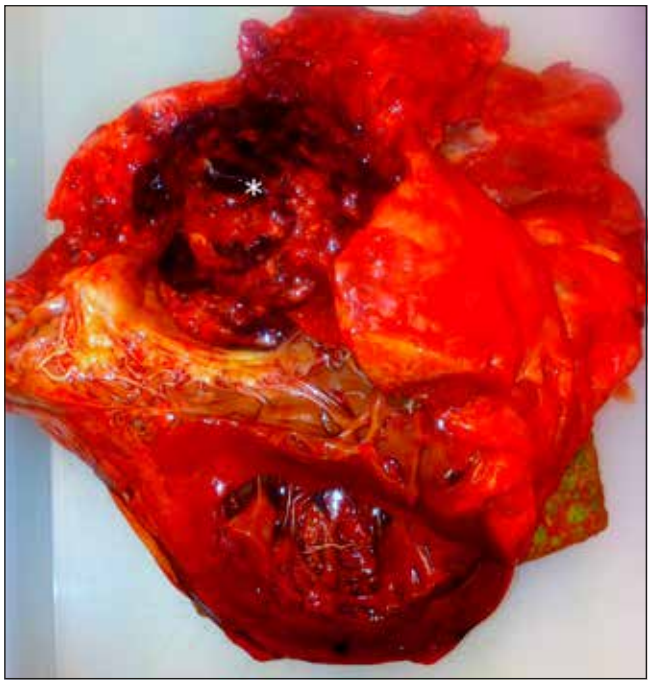

Fig 3. Postmortem appearance of the heart demonstrating a tear (*) within the right aorta.

transthoracic echocardiogram demonstrated a large mass in the right atrium. There was no evidence of a pericardial effusion. A trans-oesophageal echocardiogram confirmed a large mobile mass in the right atrium, prolapsing through the tricuspid valve during the cardiac cycle, with evidence of intramural invasion (Figure 1). A cardiovascular magnetic resonance imaging scan revealed a large infiltrative mass within the mediastinum extending from the distal superior vena cava to the diaphragmatic surface of the right ventricle (Figure 2). The appearances were felt to be in keeping with invasive malignancy. No definite evidence of lymph node or metastatic disease was observed on a CT scan of chest. The patient's condition deteriorated acutely on day 28 of

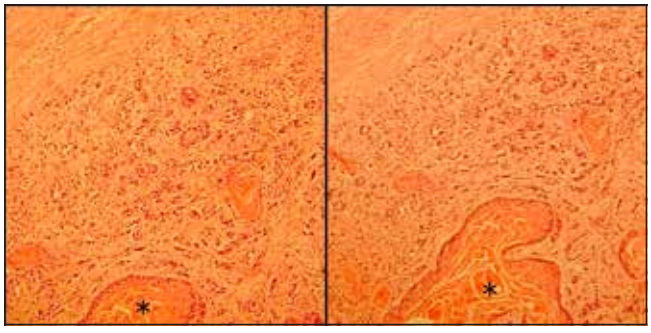

Fig 4. Histology slides demonstrating metastatic squamous cell carcinoma infiltrating the myocardium (left) and primary squamous cell carcinoma of the tongue (right). Similarities between the primary tumour and a metastasis arising from it can be appreciated, in particular, the eosinophilic whorls of squamous cells (asterisks).

the admission; he was managed conservatively and died the following day.

On post-mortem examination, a tumour was observed arising

from the medial border of the right atrium, extending through the tricuspid valve and into the right ventricle with infiltration of the myocardium (Figure 3). Histology demonstrated squamous cell carcinoma infiltrating the myocardium. The histological appearances were similar to those of the patient's previous tongue tumour (Figure 4), confirming a diagnosis of a cardiac metastasis from a squamous cell carcinoma of the tongue.

Post-mortem studies show cardiac metastases in up to 25% of patients who have died from malignancy, however, ante-mortem presentation is rare. The most common tumours metastasising to the heart are carcinomas of the lung, breast and oesophagus, malignant lymphoma, leukaemia and malignant melanoma[1]. Cardiac metastases usually present in patients with advanced widespread tumour disease[2]. Treatment is therefore usually palliative and the prognosis is poor[1]. In the present case an extensive cardiac metastasis was observed in the absence of clinically detectable local recurrence, lymphadenopathy or metastases elsewhere. Although such cases of cardiac metastasis are uncommon, similar cases have been described in the literature[3]. This diagnosis should therefore be considered in patients with a history of malignancy and new cardiovascular symptoms of uncertain aetiology.

The authors have no conflict of interest

Nicholas McKeag, Specialist Trainee[1]. Victoria Hall, Specialist Trainee[2]. Nicola Johnston, Consultant Cardiologist[3]. Brian McClements, Consultant Cardiologist[1].

[1]The Heart Centre, Mater Hospital, Belfast Health & Social Care Trust. [2]Histopathology Dept., Belfast Health and Social care Trust, Royal Victoria Hospital, Belfast Health and Social Care Trust.. [3]The Heart Centre, Royal Victoria Hospital, Belfast Health and Social Care Trust.

Correspondence to Nicholas McKeag

nickmckeag@googlemail.com

REFERENCES

1 Reynen K, Kockeritz U, Strasser RH. Metastases to the heart. *Ann Oncol.* 2004;**15(3)**: 375-81.

2 Rivkin A, Meara JG, Li KK, Potter C, Wenokur R. Squamous cell metastasis from the tongue to the myocardium presenting as pericardial effusion. *Otolaryngol Head Neck Surg.* 1999;**120(4)**: 593-5.

3 Hans S, Chauvet D, Sadoughi B, Brasnu DF. Cardiac metastasis after squamous cell carcinoma of the base of tongue. *Am J Otolaryngol.* 2009;**30(3)**: 206-8.

RELIGIOUS BELIEFS AND ATTITUDES TOWARD SUICIDE IN A COHORT OF MEDICAL STUDENTS AT QUEEN'S UNIVERSITY BELFAST.

Editor,

In 2002-2003 fourth year medical students at Queen's University Belfast were invited to participate in a study of their religious beliefs and attitudes toward suicide. The study proposal was approved by the local Research Ethics Committee. Data was collected using the Royal Free Questionnaire for Spiritual and Religious Beliefs (Self-Report Version)[1] and an abbreviated form of the Suicide Opinion Questionnaire (8 factor model)[2]. The questionnaires were offered to all 4th year medical students at a lecture during their undergraduate psychiatric placement; 152 were returned out of a year group of 180. Our statistical analysis of the results from the Suicide Opinion Questionnaire showed a lack of internal consistency and therefore much of the data was unusable. Further review of the literature showed that other authors have raised questions about the statistical reliability of the Suicide Opinion Questionnaire (SOQ), particularly regarding factor stability.[3] However, some of the data is of relevance to factors influencing an important aspect of clinical practice. Demographic and spiritual information about the cohort are listed in Table 1.

Table 1.

Demographic and Spiritual Information from 4th Year Medical Students at Q.U.B. (2002-2003).

n=152		
Age range		21-25 (mean 22)
Gender	Male	43%
	Female	57%
Religion	Religious and/or spiritual	93%
	Neither religious nor spiritual	7%
	Roman Catholic	44%
	Protestant	43%
	Muslim	4%
	Buddhist	3%
Religious Activity	Prays alone	80%
	Attendance at religious ceremony	57%
	Religious study alone	53%

Some of the SOQ (Likert scale) data from the cohort was suitable for statistical analysis. Eight separate questions from the abbreviated SOQ formed a domain which measured belief about a right-to-die (Cronbach's Alpha 0.79). The strength of belief in a right-to-die was then correlated against strength of religious belief (0-10 scale). This showed a moderately negative correlation i.e. a strong belief in a powerful deity that can influence what happens in one's daily life tended to be associated with a belief that one does not have a right-to-die (p value <0.0001, R -0.43).

We can therefore see that this cohort of 2002-2003 fourth year medical students in Belfast had slightly more females than males with nearly 90% indicating affiliation to the Roman Catholic or Protestant churches. A majority engaged in religious activity of some kind. Of particular contemporary interest is a moderate correlation between a belief in a powerful deity and the belief that one does not have the right to end one's own life.

The authors wish to acknowledge the help of Mr Michael Stevenson and Ms Rejina Verghis (Clinical Research Support Centre) with the statistical analysis.

J.C. Nelson, Specialist Registrar in Psychiatry, A. Collins, Consultant Psychiatrist, T. Foster, Consultant Psychiatrist, S.J. Cooper, Emeritus Professor of Psychiatry.

The authors have no conflict of Interest

REFERENCES

1. King M, Speck P, Thomas A. The Royal Free interview for spiritual and religious beliefs: development and validation of a self-report version. *Psychol Med.* 2001; **31(6):**1015-23.
2. Domino G, Macgregor JC, Hannah MT. Collegiate attitudes toward suicide: New Zealand and United States. *Omega: J Death Dying.*1989; **19**:351–64.
3. Rogers JR, DeShon RP. Cross-validation of the five-factor interpretive model of the suicide opinion questionnaire. *Suicide Life Threat Behav.* 1995;**25 (2):** 305-9.

Key Words: Suicide, Religion, Medical Student, Beliefs, Demographics

PROXIMITY PREDICTS REFERRAL TO THE TERTIARY PAEDIATRIC CARDIOLOGY SERVICE

Editor,

In the present era, demands on the specialist services provided in paediatric cardiology centres have increased dramatically[1,2]. We aimed to determine the frequency and basis for inpatient consultation with the paediatric cardiology service in a tertiary teaching hospital.

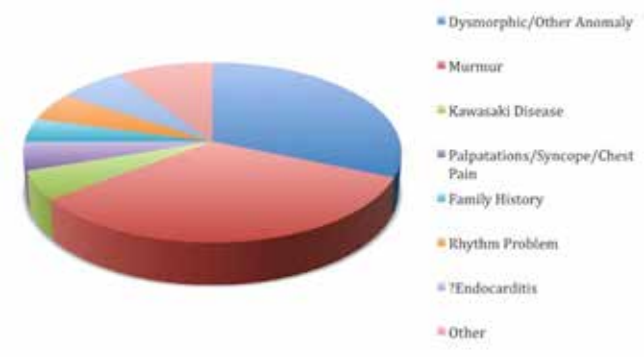

Fig 1. Indications for referral to Paediatric Cardiology.

Information regarding new patient referral activity in the Department of Paediatric Cardiology, RBHSC was collected prospectively Monday to Friday from 9am to 5pm during a 3-month period using a proforma

Ninety-six new patient referrals were made, 77 were formally reviewed. The mean age at referral was 2 years (range birth to 17 years). The most common reasons for referral were identification of a murmur (33.3%) or for assessment of a condition likely to be associated with congenital heart disease (31.3%). Reasons for referral are illustrated in Figure 1. Almost two thirds (65.6%) of referrals were made from the RBHSC site, significantly more than any other peripheral hospital site ($p < 0.05$). However, there were no significant differences in the reason for referral between RBHSC and non-RBHSC sites (Chi-squared 0.21).

Fig 2. Paediatric Cardiology diagnoses.

Of all the patients formally reviewed (n = 77), only five (7%) had major congenital heart disease (CHD) with diagnoses of hypoplastic left heart x2, coarctation, pulmonary atresia VSD and a large primum ASD. Eighteen patients (23%) had minor CHD not likely to require any intervention (e.g. small muscular VSD), 10% had features of normal transition from foetal circulation such as patent ductus arteriosus (PDA). Diagnoses reached are shown in Figure 2. A large number of patients (66.7%) were referred with incomplete first line investigations (i.e. CXR, ECG, measurement of saturations and blood pressure).

Triaging and managing of referrals represents a significant burden for junior medical staff on the paediatric cardiology ward and can potentially impact on level of care provided to inpatients. Proximity to the service appears to inappropriately increase number of referrals made although there is no difference in actual reason for referral. Similar to the current literature, few referrals yield significant pathology and the most frequent reason for referral remains evaluation of a murmur[2, 3]. Limited information available at time of referral makes it difficult to prioritise the patient in a proper fashion and may make the whole process more time consuming. We believe there is a requirement for further education of paediatric trainees regarding appropriate work-up of patients and which conditions require inpatient consultation.

The authors have no conflict of interest

M. Louise Morrison, Clinical Fellow in Paediatric Cardiology

Brian Grant, Consultant Paediatric Cardiologist

Department of Paediatric Cardiology, The Royal Belfast Hospital for Sick Children, 180 Falls Road, Belfast, BT12 6BE

Correspondence to Louise Morrison louisemorrison@doctors.org.uk

REFERENCES

1. Wagstaff MH, Rigby ML, Redington AN. Increasing workload and changing referral patterns in paediatric cardiology outreach clinics: implications for consultant staffing. *Heart* 1998;**79(3)**:223–4
2. Murugan SJ, Thomson J, Parsons, JM, Dickinson DF, Blackburn ME, Gibbs JL. New outpatient referrals to a tertiary paediatric cardiac centre: evidence of increasing workload and evolving patterns of referral. *Cardiol Young.* 2005; **15(1)**: 43–6
3. Geggel RL. Conditions leading to pediatric cardiology consultation in a tertiary academic hospital. *Pediatrics.* 2004;**114(4)**:e409-417

POTENTIAL RISK OF UNIDIRECTIONAL ROTATION WHEN ADVANCING CENTRAL VENOUS CATHETERS.

Editor

We report a case of a polytrauma victim who required central

venous catheter insertion in intensive care. This line was inserted but required replacing due to malposition felt to be caused by unidirectional twisting motion.

A 78-year-old female was involved in a road traffic collision and sustained multiple injuries including pneumothoraces, diaphragm rupture and a lacerated spleen. She had chest drains placed and proceeded to laparotomy with splenectomy. Post-operatively she required dialysis in the intensive care unit.

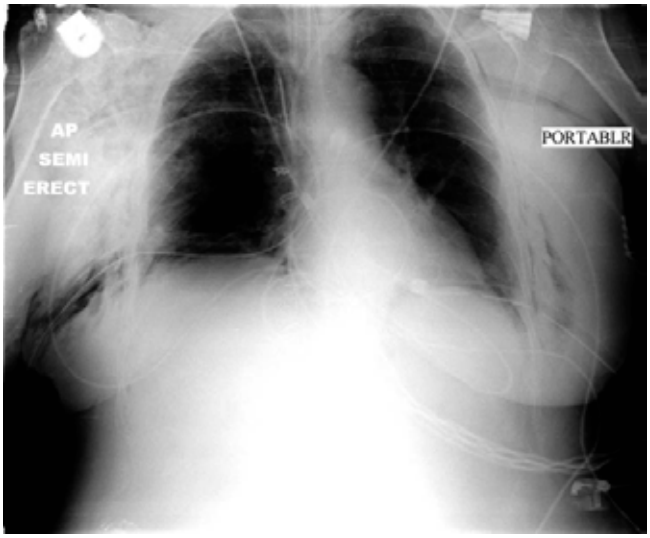

Fig 1. Right subclavian dialysis cathater tip curled up in 'U' shape within the superior vera cava.

A central venous catheter (CVC) "Arrow 12 FR Blueguard" was placed in the right subclavian vein using a Seldinger technique. After dilatation the catheter was advanced. In order to overcome some resistance in its placement a unidirectional clockwise rotating action was used. Initially position seemed satisfactory because of some ventricular ectopics associated with the guide wire and easy aspiration of blood from both ports.

Chest radiograph (figure 1) showed the dialysis line was twisted into a U-shape position. It was removed and a new line one was fed through into position.

A repeat chest radiograph (figure 2) indicated that withdrawal of the dialysis line had pulled the left subclavian CVC out of position and therefore also required replacement.

CVCs are placed commonly in emergency departments and intensive care units. Risks associated with central venous

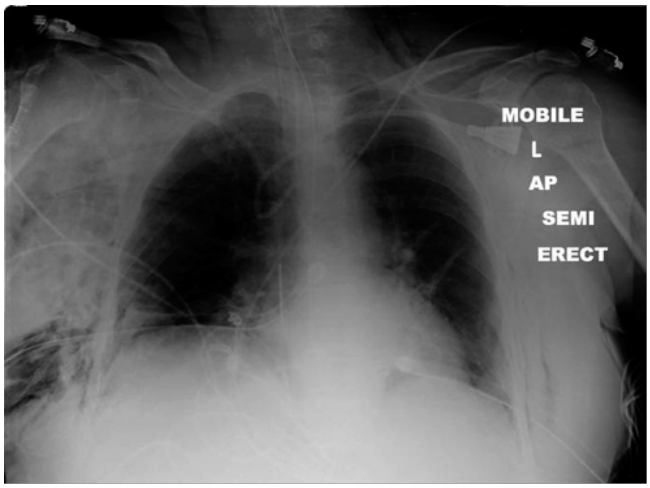

Fig 2. On withdrawal of the Dialysis catheter, the left-sided central line tip covers pulled out of position.

cannulation include malposition (9.3%), bloodstream infection (4.0%), arterial punctures (3.0%) and pneumothorax (1.5%).[1] This particular complication has not previously been described.

The rotating technique used to advance the catheter caused the twisting motion, which may have resulting in kinking of the line. This case demonstrates a potential complication of the Seldinger technique. Smaller motions in both clockwise and anticlockwise directions could prevent this complication occurring in future.

The authors have no conflict of interest.

David Johnston, consultant anaesthetist. Christopher Clarke

ST5 specialist trainee in anaesthesia. (Ulster hospital, Dundonald, Newtownards road, Belfast)

Main Theatres, Level C, Antrim Area Hospital, 45 Bush Road, Co. Antrim BT41 2RL.

Correspondence to David Johnston

djohn015@doctors.org.uk

REFERENCE

1. Ruesch S, Walder B, Tramèr MR. Complications of central venous catheters - a systematic review. *Critical Care Med*. 2002 Feb;**30(2)**:454-60.