Blake Drains as chest tubes in lung resection patients

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Background: In Japan, an increasing number of surgeons use a Blake Drain (Ethicon, Somerville, NJ) as a chest tube after lung resection to reduce the removal workload. However, optimum Blake Drain length and placement has not been established, nor removal wound closure method. We started using Blake Drains in August 2002 in place of traditional chest tubes after lung resection.

Objective: Evaluate use of a single 19 Fr Blake Drain in place of a single 28/32 Fr chest tube after lung resection. Compare two Blake Drain lengths and placement. Evaluate Blake Drain removal without tube wound suturing.

Methods: At the National Cancer Center Hospital East, from August 2002 through December 2006, we used a single 19 Fr Blake Drain for chest cavity drainage in 450 consecutive patients undergoing lung resection. Initially, until August 2004, the Blake Drain was inserted at the 7th intercostal space, up along the vertebrae, to the chest cavity apex (short type: ST). From September 2004, a longer Blake Drain was used, running to the apex and then turning down the front chest wall, almost reaching the diaphragm (long type: LT).

Results: There were 273 men and 177 women. Of them, 396 patients underwent lung resection for primary lung cancer, 37 for metastatic cancer, and 17 for various benign diseases. Three patients underwent bilateral thoracotomy, and 453 Blake Drains were placed. Length distribution was almost evenly split with 222 ST and 231 LT Blake Drains placed. Three hundred and thirty-six patients underwent lobectomy (ST: 171, LT: 165), 20 bilobectomy (ST: 7, LT: 13), 19 pneumonectomy (ST: 9, LT: 10), 7 segmentectomy (ST: 3, LT: 4), 67 wedge resection (ST: 19, LT: 48), and 4 exploratory thoracotomy (ST: 3, LT: 1).

The Blake Drains were removed an average of 4 (range 1-21) days after surgery. We had the, not unusual, complications of tube obstruction or massive subcutaneous emphysema due to poor air drainage, but nothing unique to the Blake Drain. Tube obstruction occurred in 37 (16.7%) ST patients and in 3 (1.3%) LT patients (p<0.001). We replaced the Blake Drain with trocar tubes due to obstruction or massive subcutaneous emphysema in 5 (2.3%) ST patients and 4 (1.7%) LT patients (p=0.69). The Blake Drain removal wounds were sutured in 59 (26.6%) ST patients and 14 (6.1%) LT patients (p<0.001).

Summary: Tube obstruction occurred significantly more frequently in ST patients. However, there was no difference in the need for Blake Drain replacement between ST and LT patients. Initially we were not confident in using just tape and leaving the removal wound unsutured so more ST patients had removal wound suturing. Less than 10% of the LT patients needed suturing. This occurred mostly if the Blake Drain was in for a long period.

Conclusions: Blake Drains in the Long Tube placement showed good drainage capability in lung resection patients. Most patients did not need Blake Drain removal wound suturing. This saves considerable surgeon’s time.

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Predictive utilisation and associated costs of bevacuzimab with chemotherapy in advanced NSCLC

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Background: The cost of systemic cancer therapies continues to increase and is a major concern to those funding these therapies. Novel therapeutics continue to show additional benefit when combined with systemic therapies. Our aim was to assess the potential cost impact of adding bevacuzimab to chemotherapy as per the eligibility criteria of the ECOG E4599 trial (Carboplatin, Paclitaxel & Bevacuzimab; Sandler et al NEJM 2006; 355; 2542-50).

Methods: All patients with NSCLC seen in the clinic of one medical oncologist over a 1 year period were assessed. Patients with stage IIIIB (with malignant pleural effusion), stage IV or recurrent NSCLC were selected for consideration. Patients’ records were assessed for inclusion/exclusion criteria as per E4599. Costings for bevacuzimab were as per epocrates.com quotations ($646 per 100mg).

Results: 49 of 87 patients were eligible for assessment. The male to female ratio was 2.5:1. Only 6% (3) of patients were eligible for the protocol with bevacuzimab. Most patients had at least one of the 12 exclusion criteria or failed to meet all of the 6 inclusion criteria. The top 5 most common exclusion criteria are shown in table 1.

Conclusions: The vast majority of patients with advanced NSCLC would not have been eligible for the addition of bevacuzimab to chemotherapy. With only 6% of patients eligible, the anticipated direct drug cost for inclusion of bevacuzimab into standard care was lower than expected. For an average 70kg male the addition of bevacuzimab 15mg/kg to 6 cycles of chemotherapy would cost an extra $40,698 and for an average 55kg female the cost is $31,977. If an additional 5 cycles of bevacuzimab monotherapy are given (average until disease progression in E4599) the additional costs would be another $33,915. With only 6% of patients eligible the anticipated direct drug cost for inclusion of bevacuzimab into standard care was lower than expected. For an average 70kg male the addition of bevacuzimab 15mg/kg to 6 cycles of chemotherapy would cost an extra $40,698 and for an average 55kg female the cost is $31,977. If an additional 5 cycles of bevacuzimab monotherapy are given (average until disease progression in E4599) the additional costs would be another $33,915. For an average 70kg male the addition of bevacuzimab 15mg/kg to 6 cycles of chemotherapy would cost an extra $40,698 and for an average 55kg female the cost is $31,977. If an additional 5 cycles of bevacuzimab monotherapy are given (average until disease progression in E4599) the additional costs would be another $33,915.

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The role of the nurse practitioner thorax oncology in the Netherlands

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Background: The nurse practitioner is a specialized nurse. In his professional approach he is able to take over some roles from the specialist. He integrates nursing care and medical care. In the 1960s
and 1970s the nurse practitioner became a new professional in the USA by reason of shortage of primary care physicians. Van Offenbeek et al (2003) described the effects of the embedding of the nurse practitioner in the health system in the Netherlands. The main part of the role of the nurse practitioner was the coordination of patient care, performing medical acts, consultation and keeping medical consulting hours. In addition, the role of the nurse practitioner seemed particularly suitable to integrate the nursing and medical and social aspects of patient care. Only in 1997, the first nurse practitioner education in the Netherlands was established, and in 2001 the Netherlands Cancer Institute-Antoni van Leeuwenhoek Hospital appointed its first nurse practitioner. The nurse practitioner thorax oncology started in February 2004.

The nurse practitioner is a member of the thoracic oncology group, consisting of dedicated (radiation) oncologists and surgeons. He integrates different roles; nursing care, expert, consultant, education, research and nursing leadership. This focuses on particular problems seem in lung cancer and mesothelioma patients. He forms a link between outpatient clinic and clinical care, performing all medical actions that are written in dedicated protocols and consulting medical specialists for situations that go beyond the protocols. He prescribes medication under supervision of medical specialists. He is especially equipped to integrate complex medical-social problems and consulting for patients and their families. In the clinic, he educates and supports the nursing staff concerning specific lung cancer related issues, like nebulization and pleural fluid drainage. He is actively involved in medical research, e.g. setting-up the study logistics, informing and supporting patients in the study.

Conclusion: The nurse practitioner is a fairly new profession in the Netherlands Cancer Institute. This profession creates a good balance between nursing care and medical care. From the patient’s point of view it is important that the integrated care is given by one professional. He is allowed to prescribing medication, although political debate on this problem is still ongoing.

P1-267 Supportive Care/QOL Posters, Mon, Sept 3
Concordance Between Recommendations of a Multidisciplinary Thoracic Oncology Conference and Actual Clinical Practice
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Background: Management of patients with lung cancer requires the involvement of multiple specialists. A multidisciplinary approach to care is advocated to facilitate shared-decision making which can improve the quality of care. Setting up multidisciplinary clinics is difficult because of the number of different specialists needed and their widely disparate work schedules. A multidisciplinary thoracic oncology conference (MD-TOC) involving the key specialists is potentially a way of achieving the benefits of multidisciplinary care. However, the effectiveness of this approach depends on compliance with recommendations.

We report our experience with patients presented to a new MD-TOC at the Methodist University Hospital, Memphis TN, a tertiary healthcare teaching facility in the USA. The period of analysis spans the time from inauguration of the conference in February 2006 to January 2007.

Methods: Descriptive retrospective comparison of MD-TOC recommendations and actual clinical management of consecutive patients. MD-TOC participants included a thoracic surgeon, pulmonologist, medical oncologist, radiation oncologist, pathologist and radiologist. Actual clinical management information was obtained from an electronic medical record system at the University of Tennessee Cancer Institute. MD-TOC recommendations were obtained from meeting logs. This study was approved by the Institutional Review Board of the University of Tennessee.

Results: Fifty two patients were presented, 28 females and 24 males, median age was 63 years (range 43 to 77). The patients were representative of an urban population in the southern US, with 35 African American, 14 Caucasian, 2 Hispanic and 1 Native American. Employment status was as follows: 6 employed, 13 unemployed, 16 retired, 3 disabled, 13 unknown, 1 prison inmate. The health care payor characteristics were as follows: 21 with commercial insurance, 6 with medicare; 3 with medicaid; 20 with no insurance, 1 unknown and 1 ‘other’.

Of 52 patients had no diagnosed cancer; 2 expired before biopsy, 2 had benign lung lesions, 3 refused biopsy and 2 were lost to followup. Forty-three patients (82.7%) were diagnosed with cancer with the following histology: adenocarcinoma 21 (49%), squamous cell 16 (37%), small cell 4 (9%), large cell neuroendocrine 1 (2%), bronchoalveolar cell carcinoma 1 (2%). Five of 43 patients (11.6%) were not clinically staged: 3 declined evaluation, 1 failed to followup, 1 patient was treated with chemotherapy without documented staging. Thirty-eight patients were clinically staged as follows: stage I, 6 (15.8%); II, 1 (2.6%); IIIA, 6 (15.8%); IIB, 12 (31.6%); IV, 13 (34.2%).

MDTOC recommendations and clinical concordance were as follows: 18 patients were recommended for an invasive procedure, which was performed in 9 (50%). Nine of 18 patients (2 for surgical resection, 4 for staging percutaneous CT-guided biopsy, 3 for staging mediastinoscopy) did not undergo the recommended surgical procedure. Three of these nine patients declined the recommended procedure and received no treatment. 6 of 9 patients were treated with chemotherapy and/or radiation therapy without the recommended procedure. Of the 31 patients for whom chemotherapy was recommended, 30 received treatment, 1 patient declined and was lost to followup. Radiation therapy was recommended for 16 patients, all of whom received that modality of treatment. Participation in a clinical trial was recommended for 5 patients, none participated.

Conclusions: There is a high level of concordance with non-surgical treatment recommendations of an MD-TOC, but relatively poor concordance with recommendations for invasive staging procedures and surgical management. The reasons for this include patient and provider dissent. The multi-disciplinary thoracic oncology clinic environment, with active patient participation, may be a better model to ensure better concordance with evidence-based recommendations and clinical practice.

P1-268 Supportive Care/QOL Posters, Mon, Sept 3
Clinical relevance of symptom change during chemotherapy for advanced non-small-cell lung cancer
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Background: The objective of this study was to identify which symptoms commonly associated with advanced non-small-cell lung cancer (NSCLC) are most likely to change (worsen or improve) in association...