The Christie NHS
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BRIEFING PAPER
THE USE OF RED FLAGS TO IDENTIFY SERIOUS SPINAL PATHOLOGY

THE CHRISTIE, GREATER MANCHESTER & CHESHIRE

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Introduction

Metastases to the spinal column occur in 3–5% of all patients with cancer (most commonly those with breast cancer, prostate cancer and lung cancer, in whom the incidence may be as high as 19%) and may cause pain, vertebral collapse and metastatic spinal cord compression (NICE (2008) Metastatic spinal cord compression: Diagnosis and management of patients at risk of or with metastatic spinal cord compression).

Early detection and diagnosis of metastatic spinal cord compression (MSCC), before the development of neurological symptoms relies solely on the history taking and diagnostic skills of (health care) staff eliciting and evaluating information from patients. MSCC is a well recognised complication of cancer and is usually an oncological emergency. The risk of MSCC is also proportionally related to the duration of disease and therefore, as cancer survival times increase, so too might the incidence of MSCC. The condition occurs when there is pathological vertebral body collapse or direct tumour growth causing compression of the spinal cord leading to irreversible neurological damage with resulting paraplegia (Levack *et al*. 2002). Early diagnosis and treatment is essential to prevent neurological damage and to achieve this, early recognition and onward referral for urgent investigations and prompt treatment are needed. Therefore it is important that the patient and all health care professionals are aware of the early symptoms and signs of MSCC (Loblaw *et al*. 2003, Levack *et al*. 2002, Husband 1998, Bucholtz 1999).

Identifying symptoms of serious spinal pathology

The issue of identifying MSCC early to prevent serious long term disability was a key theme taken forward by the Task and Finish Group at Greater Manchester and Cheshire Cancer Network (GMCCN) in 2010. Complicating the problem of identifying these patients from the many thousands who present with back pain were a number of factors; the 25% of MSCC patients who had an unknown primary which would immediately raise suspicion; the sheer number of people suffering low back pain; the variety and vagueness of symptoms

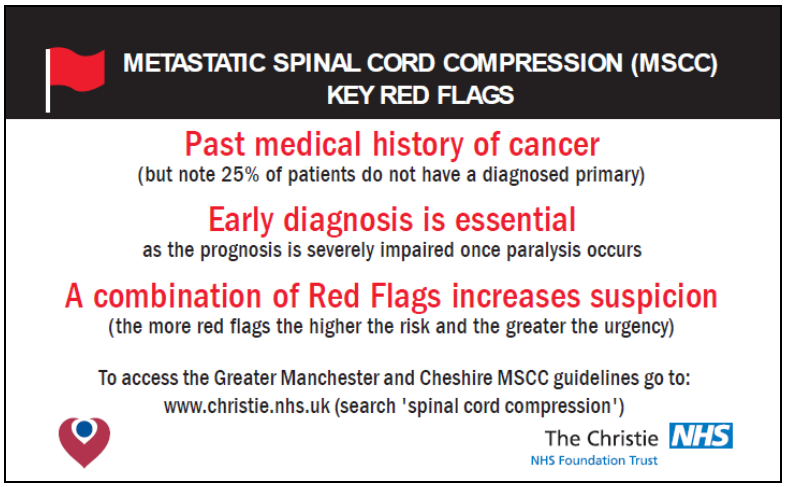
articulated by the patients (funny feelings, heavy legs etc); the broad range of locations at which people presented with potential symptoms where very often the staff were not specialists in cancer.

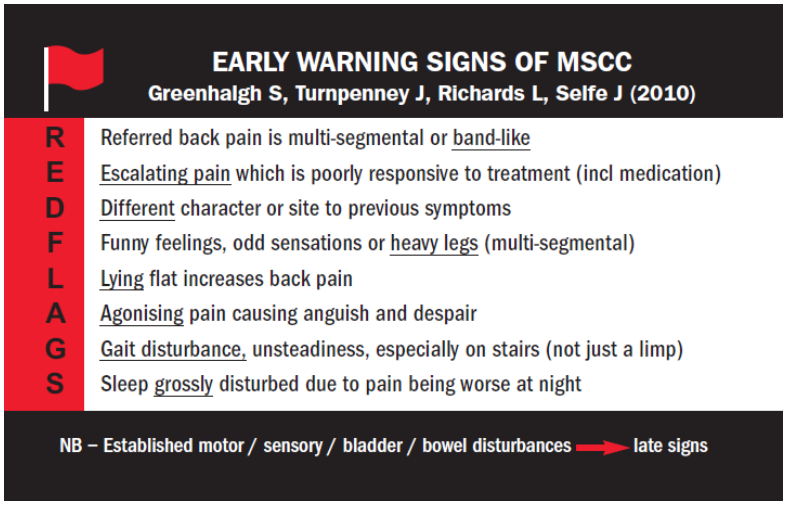
It became very obvious that to make any impact at all, the level of awareness of the 'red flags' which potentially indicated the presence of MSCC had to be raised and raised across a wide variety of staff.

The Red Flag card

The idea of a credit card sized reminder of the red flags was proposed and seemed to offer a quick, visually attractive way of helping to promote the message and raise awareness across a broad range of health professionals. The work to define the key messages was taken forwards by a team of people. This included three physiotherapists each within a different specialty – musculoskeletal, oncology and academia. An overview of progress was given by an orthopaedic consultant and a strategic perspective by the cancer network.

Bringing the expertise from this multidisciplinary group together has been extremely valuable as they could see the problem from a variety of angles; the community based issue of MSCC being a rare but significant and potentially life limiting diagnosis and the oncology issue of the need for early identification and referral onto an agreed pathway of care. The team produced a piece of work that is in itself very simple but has a very significant well thought out message.





The cards were initially used within the Greater Manchester & Cheshire Cancer Network (bearing the GMCCN logo). Following publication of an article in the Frontline magazine which accompanies Physiotherapy, the journal of the Chartered Society of Physiotherapy, there was a big increase in interest nationally. The demand for use of the cards increased rapidly and many organisations have now added their own logo to the cards for distribution in their localities.

Thousands of cards have been circulated widely within the United Kingdom. The cards have been distributed to many different health care settings, to named MSCC leads in each organisation for onward dissemination within relevant departments such as A/E departments, rehab staff, Clinical Nurse Specialists. The cards have also been distributed to Walk-in Centre's, GP's, GP Out of Hours services, etc and followed up with on-site training when requested to do so. The demand has been enormous and the card has significantly raised the profile of MSCC. At 8p per card this is a cost-effective way of helping deliver this key messages so that health staff can have at hand easily available clinical information that can make a big difference. For example:

> *"Having recently had cause to further increase our awareness about the importance of spotting early indicators for cancer within our practice and subsequently reading about the red flag cards in this months Frontline, I was wondering how we could obtain some of these cards (there are 17 in our practice.) We would be very happy to pay the going rate and postage".*

> *"I was wondering whether you might be able to help us out. I read your comments in Frontline in relation to your red card alert system with some alarm in regards to the number of malignancy that are coming through your service. Although we are a small service averaging about 100-120 referrals a month we don't seem to picking up similar percentages despite most likely a similar population base. I do have some of your previous work and we have been following that but I was wondering whether you could possibly send me a PDF or word version of your red card system to see and compare with our current protocols to make sure we are doing everything correctly. Look forward to hearing from you in the future".*

Summary

This piece of work has already raised awareness, and will continue to educate health professionals about combinations of signs and symptoms which raise suspicion of MSCC. It gives guidance of appropriate specialist care pathways, enabling access to rapid diagnosis

and timely treatment thus preventing avoidable ill health and reduced life expectancy. The following extracts from recent emails illustrate how raising awareness can make a difference.

Dear Sue,

Thank you so much for the talk you did yesterday at the professionals meeting. It was very poignant to me personally as my friend passed away with this just last November. I sat in disappointment and then anger that I hadn't heard your talk 2 years ago so I could have maybe helped and advised them along the pathway and then the realisation of how much time was wasted in the assessment and treatment of my friend. Her case did certainly not follow the guidelines you demonstrated yesterday, and it has left me with a lot of questions. Obviously I don't have all the facts about my friends case and I am not sure how compliant they were or if they were in denial.
As a health professional I am annoyed with myself that I didn't recognise her first symptoms for what they were.

Thanks again,
xxxxxxx
"I recently attended the 'Spinal Masqueraders' day in Cambridge and you said you wanted feedback re spinal mets and the red flag card.

I had a patient last week that I actually saw prior to your study day. An MRI came back showing spinal metastases and I reviewed her retrospectively so I can let you know her signs on assessment. She had:

- *Thoracic band like pain for 3 months with history of thoracic X-ray done by GP which showed no bony signs apart from partial collapse of the 8th thoracic vertebra*
- *Chest X-ray normal*
- *Referred leg pain which was new*
- *she was taking morphine for the pain and not managing*
- *No history of cancer*
- *No bladder/bowel/saddle anaesthesia*
- *Night pain was waking her at night*

After a chat with the Orthopaedic team I arranged an urgent MRI of the thoracic and lumbar spine which came back showing large metastatic deposits at 4 thoracic vertebrae and imminent cord compression at one vertebral segment.

Now, looking back at your talk, I should have argued the case for a 24hr scan but we have major problems here with the radiology department and orthopaedics accepting these people. This case has helped strengthen the argument and we are currently reviewing the pathway to take to Radiology to get this sorted.

Your lectures were really helpful and I hope we can ensure care improves here on the back of your evidence".

This last correspondance clearly illustrates the problem that needs to be addressed. The patient had four of the eight red flags described on the MSCC card, all of which in isolation are less significant but when in combination are indicative of serious spinal pathology requiring urgent specialist attention. This is the key message this card will assist in delivering.

This work was published at the beginning of September 2013 in the Primary Health Care Research & Development Journal:

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CONSULTATION, APPROVAL & RATIFICATION PROCESS

All documents must be involved in a consultation process either locally within a department or division or throughout the trust at relevant board/committee meetings before being submitted for approval.

VERSION CONTROL SHEET

Version	Date	Author	Status	Comment
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