Acute care toolkit 7: Acute oncology on the acute medical unit October 2013

Advances in cancer management continue to improve patient outcomes, but this has been accompanied by a steady increase in emergency admissions with disease- or treatment-related complications. The acute medical unit (AMU) currently shoulders much of this burden. Providing efficient and excellent care to this complex patient group in a busy AMU presents a key challenge. A good working partnership between the AMU and acute oncology service (AOS) can result in a significant improvement in patient care together with opportunities for admission avoidance and early discharge.

Background

Cancer patients are attending UK emergency units in increasing numbers with a diverse and challenging set of problems (box 1). An ever-widening range of treatments for broadening cancer diagnoses makes it difficult for a non-specialist to remain up to date in best management and leaves patients and staff exposed. The National Confidential Enquiry into Patient Outcomes and Death report (NCEPOD), For better, or worse? (November 2008) identified a number of worrying themes in patients dying within 30 days of receiving systemic anti-cancer therapy (SACT), with 27% of cases being judged as having death hastened or even caused by treatment. The pitfalls exposed in the case of those patients presenting with febrile neutropenia (FN) within 30 days of their death will resonate with many staff working in the AMU:

- delay in patient admission
- delay in antibiotic administration
- failure of junior doctor diagnosis
- lack of policies or awareness of them
- lack of senior assessment.

In this report, 49% of cases were judged as having room for improvement in their care. These worrying findings led to the National Chemotherapy Advisory Group (NCAG) report Chemotherapy services in England: ensuring quality and safety (Aug 2009), which made a number of recommendations centred on careful provision of care and effective communication between cancer services. This RCP toolkit complements additional initiatives including end-of-life care and recommendations by the RCP and Royal College of Radiologists (RCR) working party report on acutely unwell cancer patients: Cancer patients in crisis: responding to urgent needs (November 2012).

Box 1 Acute oncology themes

- type I: new cancer diagnosis (~20%)
- type II: treatment-related complication (~30%)
- type III: cancer complication (~50%).

‘The National Confidential Enquiry into Patient Outcomes and Death (NCEPOD) report, For better, or worse? (November 2008) identified a number of worrying themes in patients dying within 30 days of receiving systemic anti-cancer therapy (SACT), with 27% of cases being judged as having death hastened or even caused by treatment.’
specialists and acute care providers through the creation of an acute oncology service (AOS). We recognise that patients may be under the care of clinical oncologists, medical oncologists or haematologists. For simplicity, the term ‘acute oncology services’ will be used to cover all these groups.

AOS models differ between regions and trusts, but typically consist of consultant and nurse specialist staff, offering a 9am to 5pm patient-reviewing service with the aim of supporting patient review within 24 working hours of a referral. Working together, the AMU and AOS should create robust policies on management of the most common and serious cancer complications, and ensure that these are implemented effectively. Recommendations and practical decision aids have been published to aid service development in this area.

AOS has a remit much wider than the management of anti-cancer therapy complications; it provides advice on disease complications, symptom management, diagnostic pathways for new cancers and offers alternative routes to admission where appropriate. Thus all acute care providers should have 24-hour access to an oncologist to ask an opinion and the availability of fast-track assessment clinics where patient discharge is deemed reasonable.

**Challenges in the first 4 hours**

Initial assessment by way of a thorough history and examination with particular emphasis on the patients’ cancer pathway is pivotal to their effective management.

**Key information**

Most patients having active treatment will have some form of information on their person, possibly in the form of a chemotherapy alert card (Fig 1), patient-held records or cancer helpline (triage) number. Many carers will be able to give valuable information on home circumstances leading up to the admission and may have contact details for specialist nurses who are aware of the patients’ case.

**Recommendations for the first 4 hours**

Determine the patient’s cancer history:

- Ensure details of patients’ cancer diagnosis, disease stage, treatment intent, drugs and timings of most recent treatments are ascertained and taken into account in decision-making processes. Has the patient been treated within the last 6 weeks?

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### Box 2 Quick guide to oncological emergencies

**Febrile neutropenia (FN)** is defined as a neutrophil count of <0.5 with a temperature of >38°C and is associated with a mortality rate of between 2–21% (National Institute for Health and Care Excellence (NICE) clinical guideline (CG) 151, Sept 2012).3

- Do undertake immediate assessment with urgent routine bloods including lactate and blood cultures.
- Don’t wait for blood results; once FN is suspected administer immediate empirical antibiotics.
- After FN is confirmed refer to local policy for further management.
- Do not remove indwelling lines/devices unless there is a clear requirement to do so.

**Metastatic spinal cord compression (MSCC)** includes both spinal cord and cauda equina compression. (NICE CG 75, November 2008).5

- Request urgent whole-spine MRI on anyone with suspected MSCC and discuss all confirmed cases with the MSCC coordinator. Red flags for MSCC are shown below.
- Do nurse the patient flat and where possible, start dexamethasone 16mg.
- Do refer for definitive treatment once diagnosis is established. Spinal surgeon and clinical oncology opinions should be available on a 24-hour basis.

**Red flags for MSCC: Signs and symptoms**

- limb weakness
- difficulty walking
- sensory loss
- bladder/bowel dysfunction
- neurological signs
- thoracic/cervical pain
- progressive lumbar pain
- pain increased by straining
- nocturnal spinal pain.

**Superior vena cava obstruction (SVCO)** requires histological diagnosis for decision of optimal treatment. Few patients will require immediate intervention.

- Do refer patients in extremis for possible stent insertion (NICE interventional procedure guidance: IPG 79, July 2004).6

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[Figure 1: Chemotherapy alert card]
Twenty percent of new cancers present following an emergency admission and are associated with poor one-year survival. Any patient with a suspected new cancer diagnosis should be referred to the site specialist cancer team.

Challenges in the first 24 hours

Once stabilised, a patient’s journey clearly needs to proceed in a timely manner in order to maintain AMU flow and minimise lengthy inpatient stays. Many patients will be known to cancer services and be under a cancer care team. Involving these team members early on will minimise the number of unnecessary referrals and investigations and ensure that the patient has an efficient service tailored to their needs.

Recommendations for the first 24 hours

- Suspected newly diagnosed cancer patients should be referred to the site-specific team immediately with the option of early discharge and fast-track outpatient slot.
- Patients with a malignancy of unknown origin (MUO) should receive early oncology opinion as to fitness for treatment and thus minimise unnecessary investigations.
- Detailed history, examination, routine bloods and a chest X-ray are regarded as a minimum standard of investigation in the acute setting. All other investigations should be symptom- and patient-fitness led.
- Robust pathways involving an MUO multidisciplinary team should be in place and AMU staff aware of how to access this service. It is likely that in practice the first point of contact for this service will be via the AOS.

- Ensure all newly admitted cancer patients are flagged to the AOS by a member of AMU staff as soon as possible and irrespective of diagnosis. The consultant ward round is a useful prompt for this. Flagging will aid continuity of care and links with the treating cancer team.
- An automatic electronic alert system (RAPA) or an agreed daily communication with the AOS point of contact should be in place and this process should be known to AMU staff.
- If urgent oncology advice is required to facilitate immediate medical management, ICU escalation, end-of-life decision-making or early discharge, contact the acute oncology team or out-of-hours oncology on-call/ triage number.

A small number of patients may be in a clinical trial, the details of which should be with the patient, but will certainly be available via the oncology dataset. The essence of acute medical care remains unchanged; however there is a duty to inform the trials unit of any serious event (including patient admission) within 24 hours of its occurrence.

Ensure the trials coordinator is informed of all patients participating in a clinical trial within 24 hours of admission. This role could be delegated to the patient, carer or AO team.

Twenty percent of new cancers present following an emergency admission and are associated with poor one-year survival. Any patient with a suspected new cancer diagnosis should be referred to the site specialist cancer team. Those patients with suspected metastatic cancer with no known primary are a complex set of patients with diverse requirements. Early involvement of specialist services is known to decrease the number of inappropriate investigations and speed the patient discharge (NICE CG 104, July 2010). An agreed multidisciplinary pathway involving acute, oncology and palliative care services will ensure the patient receives appropriate and timely investigations, referrals and symptom control.

- Consider gaining more detailed clinical information via the cancer treatment centres’ triage line or via direct access to the oncology case notes.

Is the episode an oncological emergency?

- A small number of oncological emergencies exist which require immediate diagnosis and intervention, (see Box 2). Poor diagnosis or management can have catastrophic results for a patient. Keeping all staff educated and on high alert for these events is clearly important, but can present a major challenge in an environment where there is a high junior-staff turnover and a time-pressured working environment. Raise awareness of online training and encourage attendance at local acute oncology awareness and training sessions (eg FACTS e-learning package).

Does the patient need escalation of care to ICU?

- Consider reversible causes
- Ascertain the patient and family expectations
- Discuss with ICU early
- Involve the treating or on-call oncologist via acute oncology or out-of-hours triage.

Is the patient within final weeks of life?

- Is the patient for further active treatment, including resuscitation? What is the DNACPR (do not attempt cardiopulmonary resuscitation) status?
- Where is the preferred place of care and death? Would fast-track discharge or admission to a hospice be appropriate?

Many of the remaining common AMU presentations, specific to cancer patients, are those related to treatment or cancer diagnosis (see Tables 1 and 2). The great diversity of cancer treatments and their differing side-effect profiles make it extremely challenging for AMU staff with limited oncology training to treat effectively. A good working relationship between the AOS and the AMU combined with access to acute oncology protocols is critical in gaining timely specialist advice.

Recommendations for the first 24 hours

- Consider gaining more detailed clinical information via the cancer treatment centres’ triage line or via direct access to the oncology case notes.
Admission avoidance

In many instances medical admissions can be prevented by a proactive collaborative approach that pulls together AOS, cancer triage, palliative care and community services. For many cancer patients, home is the preferred place of care especially in the setting of a limited prognosis.

Cancer centres offer a 24-hour triage service so patients (and staff) can contact a specialist nurse for advice and information. These typically use tools such as the UK Oncology Nursing Society (UKONS) triage tool. Improved patient education by way of patient-held records, alert cards and palliative care hotlines may be supplemented by information technology improvements. Patient-friendly smart phone apps (pictured right) are one example of these changes helping to empower patients allowing them to present to the appropriate services.

Recommendations for admission avoidance

- AMU staff should have a reciprocal relationship with their local chemotherapy triage, allowing flow of patient information in both directions.
- Consider forging working relationships with community, primary care and specialist services in order to improve the quality and speed of patient discharge and to avoid admissions.
- Policy should be in place for day-case procedures to occur, such as paracentesis or rapid-access diagnostics without inpatient admission. These may be performed in the AMU, affording staff learning opportunities, or in specialist rapid-access clinics. A range of cancer care providers should be able to gain access to these.
- Ensure AMU staff have access to fast-track oncology, treatment (such as deep vein thrombosis clinic) and diagnostic clinics. AMU staff should be equipped with the tools to identify patients who are suitable for these outpatient-driven services.
- Consider having a process of regular service reassessment and realignment in collaboration with other care providers to continue to meet the ever-changing needs of this patient group.

Summary

There is a great deal of resource provision directed to cancer care, yet the AMU is often left to work in isolation of these services when these patients present. A collaborative and forward-thinking approach to patient care should allow staff to make full use of these services and improve patient experience. Inevitably, cancer patients will remain an important and challenging group within the AMU and staff will need to be equipped with suitable induction, education and policy to cope with them. The AO medical and nursing staff should be available for all of these purposes and regarded as a part of the team.
Table 1: Presentations related to treatment in cancer patients

<table>
<thead>
<tr>
<th>Tumour type</th>
<th>Drug</th>
<th>Side effects</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>All cytotoxics (often given in 3–4 week ‘cycles’)</td>
<td>Nausea and vomiting</td>
<td>‘Acute’ within 1–3 days, ‘delayed’ within 7 days</td>
<td></td>
</tr>
<tr>
<td>All cytotoxics</td>
<td>Febrile neutropenia</td>
<td>Typically 7–14 days post chemotherapy</td>
<td></td>
</tr>
<tr>
<td>Breast/GI</td>
<td>5FU/capecitabine (may be delivered as continuous infusion or oral)</td>
<td>Severe diarrhoea</td>
<td>Common during chemotherapy and within days/weeks of cycle</td>
</tr>
<tr>
<td>Breast/GI</td>
<td>5FU/capecitabine</td>
<td>Cardiac (arrhythmia, coronary artery spasm)</td>
<td>During treatment</td>
</tr>
<tr>
<td>Breast, lung, renal, melanoma</td>
<td>TKI’s (‘nibs’) eg sunitinib, erlotinib (delivered as daily oral and continuous)</td>
<td>Rash, cardiac (prolonged QT)</td>
<td>Be aware of wide-ranging side effects</td>
</tr>
<tr>
<td>NHL, breast, GI, melanoma,</td>
<td>Monoclonal antibodies (‘abs’) eg cetuximab, rituximab, trastuzumab</td>
<td>Hypersensitivity, cardiac, rash</td>
<td>Be aware of wide-ranging side effects</td>
</tr>
</tbody>
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Recommendations

› If in doubt, do not continue any oral SACT prescriptions and discontinue any continuous intravenous pump until specialist advice has been given.
› Ensure induction of all AMU staff includes an overview of the AOS role and contact details in addition to the recognition and management of the oncology emergencies.
› Encourage AMU staff to attend taster days in oncology, and any oncology training sessions to promote better understanding of cancer patient management.
› Ensure that AMU staff are aware of a clear single point of contact for AOS during weekdays (9am–5pm).
› Out-of-hours oncology is available to the AMU on a 24-hour basis. However, this may be organised at a cancer-centre level and linked to cancer triage. Ensure all AMU staff are familiar with the out-of-hours contact point.
› Acute oncology diagnostic and referral pathways should be easily accessible, clear and easy to navigate.
› Ensure robust acute oncology management protocols are in place and at hand in the AMU.

Table 2: Presentations related to cancer diagnosis

<table>
<thead>
<tr>
<th>Problem</th>
<th>Presentation</th>
<th>Management hints</th>
</tr>
</thead>
<tbody>
<tr>
<td>SACT-related diarrhoea</td>
<td>Loose stools &gt; 3–4/day</td>
<td>Fluids, exclude Clostridium difficile, loperamide</td>
</tr>
<tr>
<td>SACT-induced nausea and vomiting</td>
<td>Within 7 days of SACT</td>
<td>Review antiemetics, fluids, consider subcutaneous delivery</td>
</tr>
<tr>
<td>New presentation of brain metastases</td>
<td>Seizure, altered personality, somnolence</td>
<td>Head CT, dexamethasone</td>
</tr>
<tr>
<td>Hypercalcaemia</td>
<td>Confusion, dehydration</td>
<td>Fluids, bisphosphonates</td>
</tr>
<tr>
<td>Poor symptom control</td>
<td>Constipation, pain</td>
<td>Review medication, palliative care advice</td>
</tr>
<tr>
<td>Poor oral intake</td>
<td>Nausea, diarrhoea, oral candida</td>
<td>Treat underlying cause, mouth care</td>
</tr>
<tr>
<td>Thromboembolism</td>
<td>Sudden onset shortness of breath, chest pain, tachycardia</td>
<td>CTPA, low molecular weight heparin</td>
</tr>
</tbody>
</table>
Further reading

Useful links

References