

Audit of the implementation and use of a Bleomycin Toxicity checklist following the administration of Bleomycin in Male germ cell tumours.

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Background.

Bleomycin is a cytotoxic antibiotic that forms part of the BEP (Bleomycin, Cisplatin and Etoposide) regime for the management of some testicular cancers. Bleomycin can be toxic, with potential long-term complications and in rare cases can be fatal. One of the most serious complications following the administration of Bleomycin is pneumonitis and lung fibrosis. Pneumonitis is a potentially life threatening condition.

Due to the potential risks associated with Bleomycin, we introduced the use of a Bleomycin checklist (Published in UK National Consensus Document) which was to be completed prior to administration of day 2, day 8 and day 15 Bleomycin.

The aim of the checklist was to identify and trigger a senior review of any patient who may have early signs of lung fibrosis. This was achieved by an 8 question checklist. The clear colour coding of red and green would prompt staff if safe to proceed with treatment or if a consultant opinion was required prior to commencing. The checklist was available electronically on chemo care for staff to complete and create an electronic record.

Audit Aim.

The aim of the audit is to review the use of the Bleomycin checklist for patients who received BEP chemotherapy between 1st April 2021 and 31st March 2022 within Swansea Bay University Health Board and Hywel Dda health board. There is no baseline data for this audit however the aim to assess rates of compliance with the checklist.

Method.

A chemo care search was made to retrieve data of all patients prescribed BEP between 1st April 2021 and 31st March 2022. Inclusion criteria was all patients who received Bleomycin as part of the BEP regime. Those patients who did not have Bleomycin were excluded for the purpose of this audit.

BLEOMYCIN TOXICITY CHECKLIST

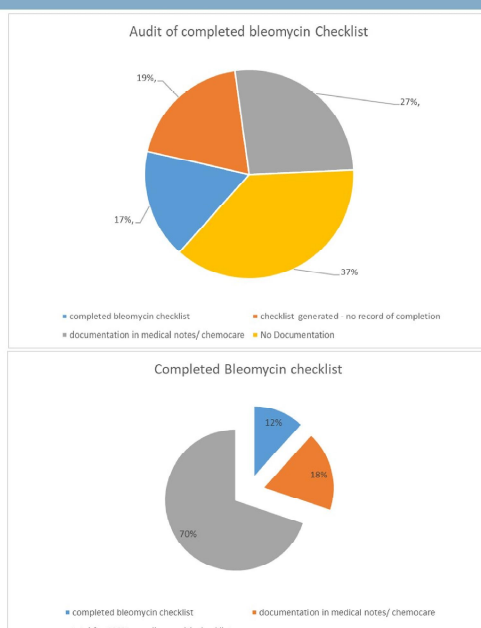
PATIENT DETAILS «Pmi_Nhs_Number» -		Treatment Regimen: «Last_regimen_name»	
«Pmi_Fullname»	«Pmi_Address_1», «Pmi_Address_2», «Pmi_Address_3»	Cycle No: of	Day No: Date:
«Pmi_Postcode»	«Pmi_Dob»		
Proceed with treatment			
Discuss with the Consultant Oncologist in charge of this patient's care.			
Pulse:	<101	>101	
Respiratory rate:	<19	>19	
O ₂ sats:	>94%	<94%	
If the answer to any of the questions below is 'yes' please discuss with the Consultant Oncologist in charge of this patient's care.		No	Yes
Consider HRCT before proceeding with any further bleomycin.			
Does the patient report new cough? <i>New is defined as a date of onset that post-dates the first bleomycin dose administered.</i>			
Does the patient report new shortness of breath? <i>New is defined as a date of onset that post-dates the first bleomycin dose administered.</i>			
Does the patient report any other new respiratory symptoms? <i>New is defined as a date of onset that post-dates the first bleomycin dose administered.</i>			
Has renal function deteriorated? <i>Estimated GFR reduction of 10% or more from baseline.</i>			

Example of electronic checklist available on Chemocare.

Results.

The search returned 13 patients, 3 patients were excluded as they did not receive Bleomycin. The treatments were administered in a variety of inpatient and outpatient settings across two health boards.

The number of treatment cycles varied from 1 - 4 cycles. For 100% compliance with the Bleomycin audit checklist, there would be 83 checklists completed in total. There were 14 out of 83 (17%) fully completed checklists, in 16 out of 83 events, (19%) a checklist had been generated on Chemocare, but the document was blank. Review of both chemo care notes and medical notes demonstrated documentation of appropriate assessment instead of a Bleomycin checklist in 22 out of 83 cases (27%). There was no documentation found in 31 cases (37%). Overall, the number of cases with a completed checklist or documentation either within medical notes or Chemocare were 36 out of 83 (30%).



Discussion points.

This small retrospective audit demonstrated a clear awareness of the Bleomycin checklist document. There are no trends where completion rates are better in one setting compared to another as it has proven variable across both health boards. Generally, there is a poor completion rate with only 17% having a completed checklist however there is still evidence of documentation in other areas (medical notes, chemocare) that a patient has no risk factors to proceed with the Bleomycin. A unified approach to completing the Bleomycin checklist will improve traceability, future audits and access to information for other health professionals if and when needed. With documentation being a key aspect of daily practice for all health professionals and in particular the administration and delivery of systemic anti-cancer treatment it's a concern that in 37% of cases, there was no clear document on the relevant treatment days that a Bleomycin assessment had occurred. The use of a Bleomycin checklist is a simple, effective document which should be completed for every patient receiving Bleomycin.

Recommendations in practice following the audit.

- Distribution of the audit and its findings to all SACT areas across SBUHB and HDD.
- Increased awareness and training of its implementation and use.
- Repeat Audit to review learning and compliance.

Reference:

Article in the national consensus 'Development of a best-practice clinical guideline for the use of bleomycin in the treatment of germ cell tumours in the UK' (2018) available at : <https://www.nature.com/articles/s41416-018-0300-x>