Chronic transfusion project
Review of the impact of transfusion treatment plans on the Haematology Day Unit

Helen Maria, Transfusion Specialist
Clear advice on transfusion thresholds in general clinical settings

Introduced concept of setting **individual targets** for chronic transfusion dependent patients

Aware strict application of NICE guidance can cause issues with this patient group

Discussed project with Haem Day Unit medic and sister
Aims of treatment plan

- Plan on Millennium system so accessible to all areas
- Developed with IT
- Clear advice to nurse led unit when (and when not) to transfuse – avoid unnecessary transfusion
- Efficient use of clinical space and staff
- Accounts for relevant co-morbidities and patient’s symptoms
- Quality of life a key factor

Basic Information

Primary Diagnosis
Myelodysplasia

Relevant Co-Morbidities
see recent clinic letter

Relevant Medications
see recent clinic letter

Haemoglobin Threshold (i.e. Transfusion Trigger)
Maintain Hb above 85 g/L
- If Hb <70g/L, transfuse 3 units
- If Hb ≥70g/L, transfuse 2 units
- If Hb >90g/L transfuse 1 unit
- If Hb ≥93g/L, do not transfuse
  **slower transfusion rate - suggest 3 hourly.**
  **will need frusemide after 2nd unit - 20mg as per PGD**

Haemoglobin Target Range (Should not exceed 100 g/L)
Do not exceed Hb 100g/L

Platelet Threshold (i.e. Transfusion Trigger)
Do not transfuse unless wet bleeding (WHO bleeding scale 2-4)

EPO Result (If Applicable) : Serum Erythropoietin (mu/mL)
- 14/Sep/17 13:02 BST : Serum Erythropoietin 325.0 mu/mL Hl

Serum Ferritin (Advise check after 20 units of packed red cells) : Serum Ferritin
- 08/Sep/17 19:29 BST : Serum Ferritin 212 nanogram/mL Normal
If serum ferritin >1000ng/mL inform consultant haematologist to consider suit therapy (BJH 2014,164,503-525)
The MPN group – route to regular transfusion programme

- 25 to 30 patients at any time receiving chronic transfusion support
- Liaise with senior nursing staff and day unit doctor
- Discuss transfusion plan detail with each patient – variable requirements
- Programme to run with senior nurses and doctor to prescribe as required
Best laid plans and problems…..

- May 2017 – trouble at t’mill…
- Doctor and senior nurse on long-term sickness – Haem day unit in crisis
- Ambulatory Care area unhappy about number of haem/onc referrals
- Started project solo with haematology medical staff permission
- Approved to authorise blood transfusions from April 2016
- Lots to learn!
Getting started – setting limits

- Transfusion Treatment plan template launched on Millennium
- Patient list on Millennium – all haem clinical staff given access
- Completed for all relevant patients
- Education for day unit staff re. my role managing chronic tx dependent group
- New referrals from haematology
- Not ad hoc transfusions from clinic
Checklist for transfusion management

Daily appointment lists on ARIA

Patients given next appointment letter and blood forms – advised to have bloods 2 days before next appointment

- Check blood test results 24-48 hours before appointment
- Assess and authorise number of units required as per plan
- Cancel and inform patients who do not require transfusion
- Check transfusion waiting list for one-off referrals and book in where possible
- Inform lab of number of units required for each patient
- Document EVERYTHING centrally
Results (expected and unexpected)

- Results being monitored so…
- Patients cancelled in time to book in replacements, therefore….
- Referral waits shorter than before and…
- Fewer referrals to Ambulatory Care due to lack of capacity
- Better use of Haem Day Unit capacity
- Laboratory %issue rates improved – less units issued then returned unused

<table>
<thead>
<tr>
<th>Patients transfused</th>
<th>Haem/Onc DU</th>
<th>Amb Care</th>
<th>Haem/Onc referrals to AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-May 17</td>
<td>204</td>
<td>122</td>
<td>33</td>
</tr>
<tr>
<td>Jun-Oct 17</td>
<td><strong>249</strong></td>
<td>131</td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
Platelets…

- Started implementation of BJH 2016 guidance for platelet transfusions
- Previously using platelet count <10 to transfuse in chronic BMF
- Platelet transfusions now rare for this group
- Only transfused if reporting bleeding (WHO 2-4) and/or additional risk factors
- Platelet wastage due to ‘just in case’ orders for chronic BMF – no longer an issue
Assessment so far

- Feedback from Day Unit staff overwhelmingly positive
  - Supported – point of reference
  - Greater control of unit chair space

- Patients delighted with service –
  - can feel ‘abandoned’ when referred for chronic transfusion support
  - medical response to any queries or concerns on the day

- Laboratory staff not issuing unnecessary units – better stock management
The future

- More transfusion referrals to community hospitals
- Empower unit to manage their own patients
  - Staffing issues
- Senior nurses on Haem Day Unit to become non-medical authorisers of blood
- Take on new referrals and manage list
- Introduce PGDs for supporting medication - done
Thank you!