Side Effect Management: Nurse Experience

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Objectives

- Discuss side effects (SE) of tyrosine kinase inhibitors (TKI) used in CML treatment
- Provide awareness of specific TKI SE profile
- Suggest practical advice and nursing support how to manage SE and other symptoms
- Who can help to manage SE?
- What are the useful CML resources and links?
TKI side effects can be debilitating
Side effects are very individual
Early reporting of SE is vital to allow treatment to continue
Medication adherence and compliance is important to maintain excellent response to treatment
Minimising SE symptoms can help achieve better quality of life
Side Effects that are common to All TKI’s

- Bone pain
- Diarrhoea
- Fatigue
- Fluid retention
- Headaches
- Heartburn/Indigestion
- Joint pains/muscle pain
- Muscle cramps
- Nausea
- Skin rash
- Abnormal blood counts
- Abnormal liver/kidney function
### Specific Side Effects of TKI’s

<table>
<thead>
<tr>
<th></th>
<th>Imatinib</th>
<th>Dasatinib</th>
<th>Nilotinib</th>
<th>Bosutinib</th>
<th>Ponatinib</th>
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</thead>
<tbody>
<tr>
<td>Weight gain</td>
<td>Headaches</td>
<td>Skin rash</td>
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<td>Diarrhoea</td>
<td>Dry skin</td>
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<tr>
<td>Fluid retention</td>
<td>Abdominal cramps</td>
<td>Increase in blood glucose</td>
<td>Abdominal pain</td>
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<td>High blood pressure</td>
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<tr>
<td>(periorbital oedema)</td>
<td>Fluid in lungs (pleural effusion)</td>
<td>Increase in cholesterol levels</td>
<td>Fluid retention (periorbital oedema)</td>
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<td>Inflammation of pancreas</td>
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<td>Dry gritty eyes</td>
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<tr>
<td>Nausea</td>
<td>Low platelets (Thrombocytopenia)</td>
<td>Rare-clots in the arteries of heart, brain and lower legs</td>
<td>Abnormal liver function</td>
<td></td>
<td>Clots in the arteries of the heart, brain and lower legs</td>
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<tr>
<td>Hypopigmentation</td>
<td>Constipation</td>
<td>Constipation</td>
<td></td>
<td>Increase in serum lipase</td>
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<tr>
<td>Renal impairment</td>
<td>Rare- blood in stool; colitis; pulmonary arterial hypertension</td>
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<tr>
<td>Hair loss</td>
<td>Rare – Panniculitis</td>
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# Management of SE Symptoms

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Practical Management</th>
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<tbody>
<tr>
<td>Bone/muscle pain</td>
<td>Assess pain severity&lt;br&gt;Paracetamol with dose caution&lt;br&gt;NSAID Ibuprofen&lt;br&gt;Warm compress (heat packs)&lt;br&gt;Light to moderate exercises</td>
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<tr>
<td>Constipation</td>
<td>High fibre fruits and vegetables&lt;br&gt;Adequate fluid intake&lt;br&gt;Increase physical activity&lt;br&gt;Mild Laxatives, stool softeners</td>
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<tr>
<td>Diarrhoea</td>
<td>Adequate fluid intake&lt;br&gt;Anti-diarrhoea tablet-Loperamide</td>
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<tr>
<td>Fatigue</td>
<td>Set priorities; ask help if needed&lt;br&gt;Regular exercises-yoga, meditation&lt;br&gt;Daily nap&lt;br&gt;Lifestyle modifications-work, activities</td>
</tr>
<tr>
<td>Symptoms</td>
<td>Practical Management</td>
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</table>
| Heartburn/Indigestion          | Common to person with GI reflux  
                               | Avoid overeating  
                               | Avoid spicy foods  
                               | Reduce caffeine/alcohol intake  
                               | Use antacids, H2 blockers, Proton pump inhibitor i.e. Lansoprazole, Omeprazole (be aware of drug interaction) |
| Abnormal blood counts (White cell count, Haemoglobin, Platelets, Neutrophils) | Close monitoring of blood results  
                               | May require dose interruption or dose reduction  
                               | Consider transfusions if indicated  
                               | Consider GCSF (Filgrastim)  
                               | Discuss with haematology doctor |
| Muscle and Joint Pain           | Can be difficult to treat if persistent  
                               | Check Vit D level  
<pre><code>                           | Paracetamol and NSAID (Ibuprofen) with caution risk of GI bleeding, renal functions |
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<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Practical Management</th>
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<tbody>
<tr>
<td>Muscle cramps</td>
<td>Calcium, magnesium and potassium level should be checked</td>
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<tr>
<td></td>
<td>Calcium and magnesium supplements</td>
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<td></td>
<td>Tonic water is effective</td>
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<td></td>
<td>Adequate fluid intake</td>
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<td></td>
<td>Dark chocolate</td>
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<tr>
<td>Nausea/Vomiting</td>
<td>Very common during 1st weeks of therapy</td>
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<td></td>
<td>Be aware of correct TKI intake</td>
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<td></td>
<td>Antiemetics/Antinausea-Ondansetron</td>
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<tr>
<td>Skin itchiness and rash</td>
<td>Apply skin moisturiser</td>
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<tr>
<td>(Hypersensitivity and photosensitivity)</td>
<td>Avoid direct sunlight</td>
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<td></td>
<td>Use high factor sun screen</td>
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<td></td>
<td>Topical hydrocortisone cream</td>
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<td></td>
<td>Antihistamines-cetirizine, loraditine</td>
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<td></td>
<td>Consider steroid tablets in severe cases</td>
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<td>Practical Management</td>
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</table>
| Weight gain                                  | Regular physical exercises  
Healthy eating habits/reduced calorie intake  
Decrease sodium intake  
Monitor thyroid function |
| Abnormal Liver/Renal Functions/Blood Glucose | Close monitoring of blood results  
May require dose interruption or dose reduction  
Discuss with haematology doctor |
| Pleural Effusions (Fluid in the lung) i.e. shortness of breath, cough, chest pain | Chest X-ray  
STOP Dasatinib  
Diuretics (water tablet)  
Severe Cases-fluid drainage and steroids |
Patient Issues

- Side effect management
- Medication adherence and compliance
- Drug access
- Lifestyle Changes
- Patient Education
- Self Management
- Patient Quality of Life
Patient Centred Care

The four principles of person-centred care

- Care is... personalised
- Care is... coordinated
- Care is... enabling
- Person is treated with... dignity, compassion, respect
Role of Clinical Nurse Specialist (CNS)

Adapted from National Cancer Action Team, 2010
Holistic Needs Assessment

- Identifies patients who need help
- Opportunity for patients to reflect on their needs
- CNS can develop a nursing care plan
- Promote self-management
- Assist HCP to target support & care needs
- Promote good patient experience
Who can help to manage SE?

- Haematology Consultant, Doctors, GP
- Clinical Nurse Specialist
- Pharmacist
- Clinical Psychologist
- Relatives/family member
- Support groups - CML advocates
CML Links and Resources

- https://www.cmlsupport.org.uk/
- http://www.cmladvocates.net/
- https://www.leukemia-net.org/
- https://www.cml-foundation.org/
- http://www.nationalcmlsociety.org/
- http://www.cancerresearchuk.org/
- https://www.macmillan.org.uk/
- https://bloodwise.org.uk/
- http://www.leukaemiacare.org.uk/
- https://www.medicareuk.org/
- Medisafe pill reminder app
The Way Forward

- Patient care requires holistic nursing approach
- Determination and resiliency can help achieve best possible outcome
- Monitoring response to TKI therapy is a critical component
- Optimization medication adherence, side effect management and improve quality of life is a priority
- Collaborative partnership between patient and healthcare professional is essential
Things will get harder before they get better!!!
WHEN YOU'RE A NURSE, YOU KNOW THAT EVERY DAY YOU WILL TOUCH A LIFE OR A LIFE WILL TOUCH YOURS.
Thank You for your Attention!