Intra-dialysis Blood Transfusion Burden Among Chronic Kidney Disease Patients At Kidney Care Centre, Ondo State, South-west Nigeria

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INTRODUCTION

- Current guidelines prefer erythropoietin and parenteral iron to red cell transfusion for the management of anaemia in chronic kidney disease (CKD) patients.
- This is to avoid Transfusion-Transmitted Infections (TTIs) and risk of graft rejection.
- Burden of blood transfusion among CKD patients is ≥4% at 70.2% at Boston, USA.
- In Africa, up to 11.7% and 16.3% of donor blood are omitted during screening for HBV and HCV respectively.
- This is risky as CKD patients are immune-compromised
- For example, approx 20% of dialysis patients fail to develop a protective titre of antibodies to HIV after vaccination.

OBJECTIVES

1. Quantify blood transfusion rates among CKD haemodialysis patients.
2. Identify factors (if any) that determine blood transfusion among them.

METHOD

- A retrospective survey of patients' records: dialysis charts, case notes, laboratory records
- Period: January 2015 to December 2016.
- All consecutive CKD-HD patients included
- AKI subjects were excluded
- Data was analyzed with SPSS 20.

CORE PARAMETERS OF INTEREST:

- Bio-data, serum Craniol blood pressure
- Clinical diagnosis
- PCV at start of haemodialysis
- PCV at last haemodialysis
- Number of red cell transfusion
- Number of erythropoietin doses
- Number of dialysis sessions

RESULTS

GENDER DISTRIBUTION

- Male: 39.10%
- Female: 60.90%

SOCIODEMOGRAPHICS OF SUBJECTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>Age [years]</td>
<td>47.8</td>
<td>15.6</td>
</tr>
<tr>
<td>Serum creatinine [umol/L]</td>
<td>121.2</td>
<td>718.3</td>
</tr>
<tr>
<td>PCV at first dialysis [%]</td>
<td>23.1</td>
<td>5.4</td>
</tr>
<tr>
<td>PCV at last dialysis [%]</td>
<td>22.8</td>
<td>4.4</td>
</tr>
<tr>
<td>SBP (mmHg)</td>
<td>159.8</td>
<td>39.3</td>
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<tr>
<td>DOP (mmHg)</td>
<td>93.9</td>
<td>21.4</td>
</tr>
<tr>
<td>No of blood transfused</td>
<td>4.12</td>
<td>3.99</td>
</tr>
</tbody>
</table>

Other parameters

- Median no of days on HD: 81
- Median no of dialysis > 5: 5

AETIOLOGICAL DISTRIBUTION

PREVALENCE OF RED CELL TRANSFUSION

- No Transfusion: 46.86%
- Blood Transfusion: 53.14%

PREVALENCE OF EPO USE

At least 4,000UI of Erythropoietin

- No Use: 47.48%
- Use: 52.52%

CONCLUSIONS

- Red cell transfusion among CKD pts is high
- Use of erythropoietin among CKD pts is low
- Education of CKD patients is key to reducing blood transfusion burden in this population
- CKD patients who receive frequent blood transfusion are the ones who are likely to require more erythropoietin
- Early identification of CKD and start of erythropoietin should be emphasized in renal clinics.

REFERENCES