Patients with scoliosis, in particular patients with neuromuscular scoliosis (NMS), have more blood loss during spinal instrumentation than other pediatric surgical populations.

**Abnormal PFA results:**
- >183 sec for collagen/epinephrine (Col/Epi)
- >126 sec for collagen/ADP (Col/ADP)

**Abnormal vW panel:**
- Low vWF levels RCo 30-50%
- von Willebrand disease RCo <30%

**RESULTS**

<table>
<thead>
<tr>
<th>Patient</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, gender, weight</td>
<td>6 yo girl 23 kg</td>
<td>6 yo girl 17 kg</td>
<td>12 yo boy 32 kg</td>
<td>11 yo girl 69 kg</td>
</tr>
<tr>
<td>Scoliosis Diagnosis</td>
<td>Trauma</td>
<td>NMS</td>
<td>NMS</td>
<td>Genetic</td>
</tr>
<tr>
<td>ABO group</td>
<td>A</td>
<td>O</td>
<td>A</td>
<td>O</td>
</tr>
<tr>
<td>PFA</td>
<td>Col/Epi (84-183 s)</td>
<td>201</td>
<td>179</td>
<td>230</td>
</tr>
<tr>
<td>Col/ADP (69-126 s)</td>
<td>149</td>
<td>143</td>
<td>178</td>
<td>97</td>
</tr>
<tr>
<td>vW panel</td>
<td>FVIII</td>
<td>115</td>
<td>65</td>
<td>83</td>
</tr>
<tr>
<td>vWF:Ag</td>
<td>38</td>
<td>49</td>
<td>42</td>
<td>66</td>
</tr>
<tr>
<td>vWF:RCo</td>
<td>36</td>
<td>30</td>
<td>29</td>
<td>33</td>
</tr>
</tbody>
</table>

**UNEXPECTED FINDING OF LOW VON WILLEBRAND FACTOR LEVELS OR VON WILLEBRAND DISEASE IN PEDIATRIC PATIENTS WITH SCOLIOSIS**

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**BACKGROUND**

Patients with scoliosis, in particular patients with neuromuscular scoliosis (NMS), have more blood loss during spinal instrumentation than other pediatric surgical populations.

**AIM OF STUDY**

To demonstrate that, regardless of bleeding history, PFA has utility as a screening tool in pediatric patients with scoliosis.

**MATERIALS AND METHODS**

Abnormal PFA results:
- >183 sec for collagen/epinephrine (Col/Epi)
- >126 sec for collagen/ADP (Col/ADP)

Abnormal vW panel:
- Low vWF levels RCo 30-50%
- von Willebrand disease RCo <30%

**RESULTS**

- Patients A and C have undergone surgical intervention
- Both were given FVIII/vWF concentrate (Humate-P™) perioperatively
- NBL 1.3 mL/level/kg for patient A
- NBL 1.01 mL/level/kg for patient C
- Rates much lower than published NBL for patients with scoliosis

**CONCLUSIONS**

- PFA screening followed by vWD work up prior to scoliosis surgery identified 4 patients with low vWF/vWD
- This is an unexpected finding given the limitations of PFA as a screening tool
- Further studies are needed to determine association between low vWF/vWD and scoliosis

**REFERENCES**

