Let’s Talk About Sleep: Correlations of Self-Reported Sleep, Actigraphy, and Disease Activity in Patients with Rheumatoid Arthritis

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Background
• Poor sleep is a frequently reported but under-investigated complaint among patients with rheumatoid arthritis (RA).
• Lack of use of sleep measures with clinical care makes diagnosis of sleep issues difficult.

Methodology
• Prospective, cross-sectional, study. A sample size of 15 patients with RA was recruited through convenience sampling.
• Participants self-reported sleep quality using the Pittsburgh Sleep Quality Index (PSQI) and disease activity using the Routine Assessment of Patient Index Data 3 (RAPID-3).
• Patients’ sleep quality was also measured by actigraphy (i.e. wrist motion, output below) using the MotionWatch 8.
• Actigraphy measures of sleep efficiency, latency, and fragmentation were averaged over 6 nights
• Actigraphy measurements were correlated to PSQI and RAPID-3 scores through Spearman correlations.

Are self-reported measures of sleep and disease activity related to actigraphy?

Self-reported measures demonstrate low, non-significant correlation with actigraphy suggesting it may capture complementary clinical information.

RA Severity in Sample

<table>
<thead>
<tr>
<th>RA Severity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near Remission</td>
<td>15%</td>
</tr>
<tr>
<td>Low Severity</td>
<td>25%</td>
</tr>
<tr>
<td>Moderate</td>
<td>40.0%</td>
</tr>
<tr>
<td>High Severity</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

Global RAPID-3 scores range from 0-1 (near remission), 1.3-2.0 (low severity), 2.3-4.0 (moderate severity), and 4.3-10 (high severity).

Clinical Implications
• Actigraphy may be a useful tool in facilitating patient-rheumatologist communication about sleep issues.
• Further research is needed to determine actigraphy’s value in clinically identifying sleep disorders.

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