Quality of Life Assessment in Internal Medicine Patients

N. Laraba
Internal Medicine Department, University Hospital of Bab El Oued, University of Algiers, Algeria

N. Bellik
Nephrology Department, University Hospital of Bejaia, University of Bejaia, Algeria

M. A. Habouchi
Radiology Department, University Hospital of Bab El Oued, University of Algiers, Algeria

K. Belhocine
Gastroenterology Department, University Hospital of Mustapha, University of Algiers, Algeria

A. Gouasmia
Internal Medicine Department, University Hospital of Bab El Oued, University of Algiers, Algeria

K. Abbaci-Deghor
Internal Medicine Department, University Hospital of Bab El Oued, University of Algiers, Algeria

Abstract
The relationship between quality of life and chronic illness is clearly established, the evaluation of the latter is necessary for overall care of these patients, the SF36 is a good tool dedicated to this purpose. Our study, although limited by its single-center nature, sheds light on the impact of pathologies encountered in internal medicine hospitalization on quality of life. Our series includes 41 patients with a slight female predominance: 22 women and 19 men. The average age is 48 years old. Thus, it appears that, just like cancer, diabetes and connective tissue disease significantly reduce the quality of life of patients.

Introduction
The interest in measuring quality of life in hospital settings is significant. For a humanized approach to care, it has become necessary to have valid and reliable measurement tools [1]. Thus, over the last decade, simple and multidimensional questionnaires, both generic and disease-specific, have been developed. Among the numerous generic questionnaires available (Euro-Qol, NHP, WHOQOL-100, and WHOQOL-26), the Short Form 36-Item Health Survey (SF-36) has been translated and validated in several languages [2]. It is part of a series of patient-focused self-assessment questionnaires developed as a tool for measuring overall quality of life to assess health status following medical and surgical treatments. A major concern of modern hospital management, patient quality of life is impacted differently depending on the specific condition. Our objective is to assess, using the SF-36 questionnaire, the quality of life of patients hospitalized in internal medicine and to specifically compare the impact of different pathologies.

Materials and Methods
A prospective cross-sectional study on the quality of life of hospitalized patients in internal medicine is being conducted. The SF-36 is a multidimensional assessment tool consisting of eight dimensions, each expressed on a scale ranging from 0 to 100. Four dimensions are physical (PF): Physical Functioning, Role Limitations due to Physical Health, Pain, General Health; and four are mental (MH): Role Limitations due to Emotional Problems, Energy/Fatigue, Emotional Well-being, Social Functioning. We propose to compare the mean scores of each dimension according to gender and type of pathology using univariate analysis with software such as Excel and EpiData.

Results
Our series includes 41 patients, with a slight female predominance: 22 women and 19 men. The average age is 48 years. The most represented pathologies are:
connective tissue diseases (n=11), diabetes (n=11), venous thromboembolic disease (n=8), and hypertension (n=7). Our study population has an average physical score of 44.59% and a mental score of 50.29%. Overall, our patients perceive their physical health as poorer than their mental health. The overall SF-36 scores of our population, with a breakdown by gender, are summarized in Table 1. Significantly, men have higher scores than women on the majority of dimensions assessed by the SF-36. Physical activity limitation is significantly more pronounced in women: 22.7% vs 48.7% (p=0.02). The physical score is higher in men: 51.4% vs 38.73% (p=0.07). Mental health is rated lower in women: 56.4% vs 70.3% (p=0.03).

**Table 1: SF36 Scores According to Gender**

<table>
<thead>
<tr>
<th></th>
<th>PF</th>
<th>RLPH</th>
<th>P</th>
<th>GH</th>
<th>physical Score</th>
<th>EWB</th>
<th>RLEP</th>
<th>EF</th>
<th>SF</th>
<th>Mental Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>52.1</td>
<td>22.7</td>
<td>38.1</td>
<td>43.8</td>
<td>38.7</td>
<td>56.4</td>
<td>33.2</td>
<td>39.8</td>
<td>61.8</td>
<td>47.4</td>
</tr>
<tr>
<td>Male</td>
<td>62.4</td>
<td>48.7*</td>
<td>53.8</td>
<td>42.4</td>
<td>51.4*</td>
<td>70.3*</td>
<td>36.7</td>
<td>41.8</td>
<td>66.8</td>
<td>53.6</td>
</tr>
<tr>
<td>Total</td>
<td>56.8</td>
<td>34.8</td>
<td>45.4</td>
<td>42.9</td>
<td>44.6</td>
<td>62.8</td>
<td>34.8</td>
<td>40.7</td>
<td>64.1</td>
<td>50.3</td>
</tr>
</tbody>
</table>

*Significative test p<0.1; PF: Physical Functionning, RLPH: Role Limitation due to Physical Health, P: Pain, GH: General Health, EWB: Emotional wellbeing, RLEP: Role Limitation due to emotional problems, EF: Energy Fatigue, SF: Social Functionning

Table 2 summarizes the SF-36 score results according to the considered pathology. Physical activity is more impacted in cases of connective tissue diseases, diabetes, and neoplasia, with scores of 42.73% (p=0.08), 41.80% (p=0.06), and 32.3% (p=0.05), respectively. Physical limitation (PF) and physical score are significantly low in cases of connective tissue diseases, with scores of 15.2% (p=0.05) and 32.55% (p=0.04), respectively. For social functioning (SF), diabetics obtained a significantly higher score of 81.64% (p=0.02).

**Table 2: SF36 Score According to Disease**

<table>
<thead>
<tr>
<th></th>
<th>AHT</th>
<th>Diabetes</th>
<th>CTD</th>
<th>VTED</th>
<th>Behçet</th>
<th>Oncology</th>
<th>Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF</td>
<td>48.6</td>
<td>41.8*</td>
<td>42.7*</td>
<td>55.0</td>
<td>95.0</td>
<td>23.3*</td>
<td>57.5</td>
</tr>
<tr>
<td>RLPH</td>
<td>39.3</td>
<td>36.4</td>
<td>15.9*</td>
<td>34.4</td>
<td>12.5</td>
<td>33.3</td>
<td>31.3</td>
</tr>
<tr>
<td>P</td>
<td>61.2</td>
<td>56.0</td>
<td>32.9</td>
<td>45.0</td>
<td>32.0</td>
<td>59.0</td>
<td>33.0</td>
</tr>
<tr>
<td>GH</td>
<td>36.4</td>
<td>39.6</td>
<td>39.6</td>
<td>41.3</td>
<td>30.0</td>
<td>36.7</td>
<td>43.7</td>
</tr>
<tr>
<td>Score physique</td>
<td>45.9</td>
<td>42.9</td>
<td>32.6*</td>
<td>43.5</td>
<td>30.0</td>
<td>37.7</td>
<td>40.7</td>
</tr>
<tr>
<td>EWB</td>
<td>64.6</td>
<td>70.6</td>
<td>57.8</td>
<td>67.0</td>
<td>60.0</td>
<td>76.0</td>
<td>49.0</td>
</tr>
<tr>
<td>RLEP</td>
<td>38.0</td>
<td>42.3</td>
<td>27.0</td>
<td>25.0</td>
<td>00</td>
<td>00</td>
<td>16.5</td>
</tr>
<tr>
<td>EF</td>
<td>40.7</td>
<td>45.0</td>
<td>37.3</td>
<td>46.3</td>
<td>32.5</td>
<td>45.0</td>
<td>31.3</td>
</tr>
<tr>
<td>SF</td>
<td>76.6</td>
<td>81.6*</td>
<td>71.5</td>
<td>59.3</td>
<td>43.5</td>
<td>87.3</td>
<td>46.7</td>
</tr>
<tr>
<td>Score mental</td>
<td>54.6</td>
<td>59.5</td>
<td>48.0</td>
<td>49.0</td>
<td>34.0</td>
<td>51.7</td>
<td>35.5</td>
</tr>
</tbody>
</table>

*Significative test p<0.1; AHT: Arterial hyper-pressure, CTD: Connective tissue disease, VTED: Venous thromboembolic disease, PF: Physical Functionning, RLPH: Role Limitation due to Physical Health, P: Pain, GH: General Health, EWB: Emotional well-being, RLEP: Role Limitation due to emotional problems, EF: Energy Fatigue, SF: Social Functionning

**Discussion**

Men hospitalized in internal medicine exhibit higher SF-36 scores compared to women. This can be explained by the nature of the pathology leading to their hospitalization. Thus, Behçet's disease, hypertension, and venous thromboembolic disease, more prevalent among the male population in our series, have a lesser impact on the perceived quality of life assessed by the SF-36 questionnaire. Connective tissue diseases significantly impair quality of life. Similar findings are reported in the literature: [3] series for scleroderma, [4] series for Sjogren's syndrome, and [5] series for rheumatoid arthritis. A common observation across these studies and our series is that the significant impairment of quality of life is more pronounced in dimensions related to physical health compared to those related to mental health.

Regarding diabetes, this trend of more pronounced impairment of items related to physical health than mental health is also reported. In a Tunisian series conducted among diabetics, they exhibited a mean score of 32.5 for physical limitation (RLPH) and 43.3 for mental or psychological limitation (RLEP). Interestingly, the social functioning score of diabetic patients is
significantly high, reaching 81.6. This observation is supported by the Tunisian series by [6], where the social functioning score is 66.3. This could be attributed to the nature of type 1 diabetes management, which is based on therapeutic education allowing self-management and better acceptance of the chronic condition. Diabetics may benefit from better family and societal support.

The definition of quality of life and the methods by which it has been studied can be criticized in many ways. The subjective nature of the questionnaire is an inherent limitation that can introduce biases. Our study also has intrinsic limitations: it is monocentric, and its sample size is small. However, its results are encouraging and prompt us to seek collaboration with other centers to increase recruitment and statistical power to achieve significance.

Conclusion
The pathologies seen in internal medicine hospitalizations negatively impact quality of life. Diabetics, connective tissue diseases, and neoplasia are the most detrimental pathologies in terms of quality of life.

References