Assessing Severity in Psoriasis: Correlation of Different Measures (PASI, BSA and IGA) in a Canadian Real World Setting

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Methods

• Psoriasis is a chronic inflammatory skin condition with symptoms including raised, red, scaled patches typically appearing on the elbows, knees and/or scalp.
• The severity of psoriasis symptom can be assessed through a variety of measures.
• The percentage of body surface area (BSA) affected is a common approach used in clinical settings. The BSA also considers the location of the psoriasis.
• The investigator global assessment (IGA) is another common approach used in clinical practice. This approach takes into consideration the clinical presentation of the disease from the physician's perspective, using five categories of severity.
• The Psoriasis Area and Severity Index (PASI) score is widely used in clinical trials and accepted by approving agencies and other decision makers. The PASI measures severity on a scale of increasing severity from 0 to 72.
• Comparisons across studies are difficult without a clear understanding of how the different severity measures correlate.
• Additionally, it is important for clinicians to understand how the measures used in routine clinical practice correlate with measures commonly used in clinical trials.
• This study assessed the correlation of the PASI, BSA, and the modified IGA (IGA MOD), all of which assess psoriasis disease severity.

Data Collection:
• Participants completed a survey of demographic and clinical questions, and various patient-reported outcome measures.
• Medical chart data from eligible participants were extracted to collect continuous variables for the overall study sample, stratified by PASI category (IGA MOD 2011) assessment of disease severity at enrolment for the total study sample and stratified by PASI category for the continuous variables for the overall study sample, stratified by disease severity category.
• The mean (SD) BSA was 10.9% (11.7%) for the total study sample and 12.1% (13.8%) for the moderate/severe PASI category.
• The BSA and PASI were the most closely correlated measures (r=0.91), followed by the PASI and the IGA (r=0.83) and then the BSA and IGA (r=0.77).
• The data from this observational study indicate that the PASI, BSA and IGA severity measures closely align in their assessment of psoriasis severity.
• There was no clear trend between location of psoriasis based on the BSA measure and PASI severity. This is likely due to the majority of the study sample having psoriasis on their legs which is given the highest weighting in the PASI assessment.

Results

Participant Demographics:
• 142 participants were included in the study (Table 1) across the 4 PASI categories:
  - Mild (<12)
  - Moderate (12-20)
  - Moderate/severe (20-44)
  - Severe (>44)
• The majority (57.8%) of patients in the study had moderate or severe disease as per the IGA MOD 2011 score (Table 4).

Severity Assessment:
• The mean (SD) BSA was 10.9% (11.7%) for the total study sample.
• The mean BSA increased according to the PASI category:
  • 2.2% among patients in the mild PASI category;
  • 5.8% among patients in the moderate PASI category;
  • 8.2% among patients in the moderate/severe PASI category;
  • 27.3% among patients in the severe PASI category.
• The limbus were the most frequently affected area, with 93% of patients affected.
• The genitals were the least frequently affected area, with 18.3% of patients affected.
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• No pattern was observed between affected area and PASI category.

Data Table 1: The Investigator's Global Assessment modified 2011 rating scale

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<th>Disease Score</th>
<th>IGA MOD</th>
<th>Categories</th>
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| 0 | Almost clear | No psoriasis
| 1 | Slight | Minimal or partial clearing of lesions. No photophobia, no redness but tender on pricking.
| 2 | Mild | Photophobia. Minimal or partial clearing of lesions. No plaques or thickening.
| 3 | Moderate | Light photophobia. Irregular, patchy clearing of lesions. Some photophobia to moderate tenderness.
| 4 | Severe | Moderate photophobia. Extensive photophobia. Extensive plaques or thickening.

BSA measure and PASI severity. This is likely due to the majority of the study sample having psoriasis on their legs which is given the highest weighting in the PASI assessment.

Conclusion
• The data from this observational study indicate that the PASI, BSA and IGA severity measures closely align in their assessment of psoriasis severity.
• These data enable the comparison of patient samples assessed using different severity measures in the diagnosis and the assessment of treatment effectiveness of psoriasis in the real world setting.
• There was no clear trend between location of psoriasis based on the BSA measure and PASI severity. This is likely due to the majority of the study sample having psoriasis on their legs which is given the highest weighting in the PASI assessment.
• A key limitation of this study is the limited number of severe patients included.
• Only 21 out of 40 target patients were recruited in the PASI category.
• Two sites noted that more severe patients were often in clinical trials, thus not eligible for this study.
• Additionally, many of the patients in severe disease were from one study site, thus limiting the generalizability of the results.
• Further research among a larger patient sample with severe disease would be required to ascertain the correlation of these severity measures among more severe cases.

References