“Role of cross-repertorized, individualized Homoeopathic treatment in cases of Acne Vulgaris.”

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ABSTRACT

Acne usually appears in adolescent age group, where apart from scarring, it also has psychological
effects. The main purpose of undertaking this study was to provide better skin and overall (quality of life) improvement
with homoeopathic treatment. This was an open-label, uncontrolled, mono-centric, prospective pragmatic study.
Primarily, Quality of Life (QoL), was measured using the Acne-QoL questionnaire. The severity of Acne was measured
using global acne grading system (GAGS). A total of 102 patients between 11 to 30 years age, suffering from Acne
vulgaris for more than 3 months with mean GAGS score at baseline being 26.47±6.103 and mean Acne-QoL score at
baseline being 57.8±2.208 were treated with individualized homoeopathic treatment on the basis of repertorisation
and cross-repertorisation. QoL and acne status improved significantly (p<0.0001) after treatment as assessed by Acne-
QoL and GAGS respectively.

Keywords: homoeopathy, Acne-QoL, GAGS, repertory, repertorisation, cross-repertorisation, acne vulgaris

Introduction

Acne vulgaris is one of the most common, chronic inflammatory condition of the skin. It usually
affects adolescents and young adults. Almost more than 80 - 85 % of individuals between the age group of
11 to 30 years suffer at some point of time from acne vulgaris.¹ Presenting with the papules, open and
closed comedones, nodules, pustules and in some cases acne scar marks. These physical symptoms are seen
on the face, neck, shoulders, chest and upper part of the trunk.²

Acne vulgaris, usually does not compromise the general health of patient, but consistent studies
shown that it might cause negative impact on the patients psychology, self-perception and social behavior.
Apart from physical scarring, its main effects are psychological, such as reduced self-respect&self-esteem,
low confidence, social withdrawal, anxiety and sometimes even depression. One of the main
complication of acne vulgaris is facial and psychological scarring.

To assess the impact of acne vulgaris on quality of life of patients, requires a well-validated and very
reliable measure. Keeping this in mind, an ACNE Specific Quality of Life Questionnaire (Acne-QoL) was used
with the aim to measure the physical impact and psychological or emotional impact along with social impact
of Acne vulgaris, to determine the Quality of Life.³ Acne related quality of life questionnaire is authentic,
unambiguous, with ability to get answers accurately, easy to apply and to interpret the responses.⁴⁵

Because of its polymorphic nature and presence at varied locations, acne vulgaris is notably difficult
to evaluate objectively, and this hampers the physical assessment of response during the follow up
treatment. Acne is clinically easy to diagnose, but acne eruptions vary in number, type and location during
its natural course.⁶ Treatment assessment must be based on the severity, type (comedones, papules,
pustules, nodules) and location (anatomical area) of acne. So, for evaluation and quantification of acne,
Global Acne Grading System (G.A.G.S) is used.

Conventionally, drugs such as benzyl peroxide, retino-A, resorcinol, salicylic acid, and antibiotics
like oxytetracycline, doxycyclin, erythromycin, etc., laser therapy and hormonal therapy is used in selected
cases.⁷ They are very expensive and they again have their own side effects.

Homoeopathy, considers acne vulgaris as an external manifestation of internal hormonal process,
which requires internal medicines rather than treating it by local applications. Homoeopathic medicines are
very effective and harmless.

For each patient, detailed case taking was done as per the Homoeopathic Case taking Proforma.
Individualization, based on the characteristic totality of the symptoms, is one of the most important factor in
selection of Homoeopathic remedy. After repertorisation, well selected individualized homoeopathic
remedy cures the existing acne lesions, and it also forbids new lesions from forming, prevent acne scarring
and also minimize the psychological impact caused by acne.
Totality of characteristic symptomatic picture has been considered for repertorisation of the cases. Repertorisation process has a background and basis which helps to solve a case in particular manner. This process is different for different types of repertory. Various homoeopathic repertories were used for repertorization and cross–repertorisation to arrive at the similimum. After repertorisation, well selected, individualized homoeopathic remedy cure the existing acne lesions, and also forbids new lesions from forming, prevent acne scarring and also minimizes the psychological impact caused by acne.

Methodology
This open-label, uncontrolled, mono-centric, prospective pragmatic study was conducted between the years 2015 to 2018 at the Bharati Vidyapeeth Medical Foundation’s Homoeopathic Hospital, Pune. The Institutional Ethical Committee had approved the study protocol. A total of 117 individuals of both the sexes, within the age group of 11 to 30 years, of all ethnic groups were registered in the study.

Case Definition-Patients presenting with the clinical features of Acne vulgaris, which is persistent for more than 3 months, with the formation of either comedones, papules, nodules, pustules or cysts on the face, neck, chest or upper part of the trunk.

Inclusion Criteria
- All the patients fulfilling Case definition.
- Males and females between 11 to 30 years of age and all ethnic groups.
- Patients in whom acne vulgaris is persistent for more than 3 months.
- Patients who are willing to continue the treatment and follow-up according to protocol.

Exclusion Criteria:
- Subjects with any complications or immuno-compromised condition.
- Patients suffering from acne fulminans, acne rosacea and conglobata acne.
- Subjects associated with any significant endocrine or systemic disease.
- History of chronic diseases treated with medications in the preceding month which might affect acne condition and treatment outcome.
- Patients who require emergency medical and surgical intervention.

The individuals were informed about the project, were explained of their voluntary participation and were assured that their data and details would be kept confidential. Patient Information Sheet was provided, all the information about project, pertaining to patient was given and signed informed consent form was obtained for voluntary participation from all the participants and only then they were included in the study.

Outcomes
A total of 102 individuals who continued all their follow-ups were taken into consideration for the study. The primary outcome of the study was the change in GAGS score at the end of the study. According to a structured proforma of case taking, the case history was documented where the total number of acne were counted at each visit and were subsequently graded for their intensity using GAGS.8

The secondary outcome was the change in Acne-QoL score at the end of the study. Acne-QoL questionnaire is adequately reliable to measure the psychological impacts of acne. It is a 19 point questionnaire grouped under four different domains of Self Percepti- on, Role Social, Role Emotional, and Acne Symptom with a modified 5-point response scale where higher scores indicate a lower quality of life. This was a self-assessed questionnaire where subjects were asked to fill the questionnaire by themselves and was also measured at the beginning and at the end of the study.9

Statistical analysis
Statistical analysis was carried out using Graphpad Prism 7.0 software. Participants who had completed all the follow-ups as per the protocol were included in the study for analysis. Data was expressed as number (%) and mean ± SD. Acne-QoL scores with its sub-domains were analyzed on pretest-posttest analysis using paired t-tests. GAGS was analyzed using paired t-tests. If the P-value was less than 0.05, it was declared a statistically significant result.

Results
One hundred and seventeen participants were enrolled in the study (Figure 1). Fifteen participants were dropped out as (i) 3 girls got married and discontinued treatment. They were not able to come for follow-up
treatment. (ii) 10 patients did not come for follow up treatment as per the schedule and did not take medicine/treatment as told. (iii) During treatment, 2 patient's abdominal USG report diagnosed as PCOD which was one of the exclusion criteria, so they were dropped from this study. One hundred and two participants completed all the follow-ups. Of the total of 102 individuals included in the study, 65 (63.73%) were females and 37 males (36.27%) with a mean age of 23.01 ± 3.876 years as shown in Figure (2) and Table (1).

![Figure (1): Participants in the study.](image1)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
<th>Mean Age</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>36.27%</td>
<td>22.76</td>
<td>3.897</td>
</tr>
<tr>
<td>Female</td>
<td>63.72%</td>
<td>23.15</td>
<td>3.886</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>23.01</td>
<td>3.876</td>
</tr>
</tbody>
</table>

Table (1): Gender-wise distribution of the included cases and mean age (n=102)

The age wise classification of the cases is given in Figure (2).

![Figure (2): Grouped age-wise distribution of the cases](image2)

The Acne-QoL score at baseline was 57.82 ± 4.187, which decreased to 30.71 ± 5.575 at the end of treatment. Further analysis of the domains, which represent four different aspects of health-related QoL, also showed improvement ($P<0.0001$) (Table 2).

<table>
<thead>
<tr>
<th>Mean (SD)</th>
<th>SEM</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>After</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td>Acne-QoL</td>
<td>57.82 (4.187)</td>
<td>30.71 (5.575)</td>
<td>0.4146</td>
</tr>
<tr>
<td>Self-Perception</td>
<td>15.03 (2.885)</td>
<td>7.892 (1.61)</td>
<td>0.2857</td>
</tr>
<tr>
<td>Role Emotional</td>
<td>13.61 (2.478)</td>
<td>7.824 (1.771)</td>
<td>0.2454</td>
</tr>
<tr>
<td>Role Social</td>
<td>13.16 (1.627)</td>
<td>7.186 (1.597)</td>
<td>0.1611</td>
</tr>
<tr>
<td>Acne Symptoms</td>
<td>15.95 (2.966)</td>
<td>7.676 (2.498)</td>
<td>0.2937</td>
</tr>
</tbody>
</table>

Table (2) Comparison of Acne-specific QoL scores for four sub-domains using paired t-test (n=102)

The changes in the Acne-QoL in between the genders were also significant as are shown in Table(3).

<table>
<thead>
<tr>
<th>Mean (SD)</th>
<th>SEM</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>After</td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td>Acne-QoL Male</td>
<td>58.89 (4.338)</td>
<td>32.32 (6.08)</td>
<td>0.7132</td>
</tr>
</tbody>
</table>
Table (3) Comparison of gender-wise Acne-specific QoL scores using paired t-test (n=102)

GAGS was systematically measured at each follow-up. The GAGS score at baseline was 26.37 ± 7.321, which decreased to 12.25 ± 3.708 at the end of treatment. The details are seen in Table (4).

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD) Before</th>
<th>SEM Before</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAGS</td>
<td>26.37 (7.321)</td>
<td>0.7249</td>
<td>-15.33 to -12.93</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>GAGS Male</td>
<td>29.14 (6.734)</td>
<td>1.107</td>
<td>-17.83 to -13.84</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>GAGS Female</td>
<td>24.8 (7.222)</td>
<td>0.8958</td>
<td>-14.64 to -11.67</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Table (4) Comparison of gender-wise and overall GAGS scores using paired t-test (n=102)

After the case taking with careful analysis and totality of symptoms, the selection of repertory was based on the available data of the case. Various repertories were taken into consideration for repertorisation and cross repertorisation to arrive at a similimum. Figure (2) shows the selection of repertory in all the new cases.10-14

Figure (3): Repertory used in the new cases.

All the cases were cross-repertorized with help of Repertorium Homoeopathicum Syntheticum (Synthesis Repertory) by Frederik Schroyens and Homoeopathic Medical Repertory by Robin Murphy.15 The final remedy selected was on the basis of repertorisation and cross-repertorisation as shown in Figure (3).

Figure 4: Case-wise distribution of the selected remedy

Discussion

Although sometimes acne is considered to be of lesser importance as compared to other medical conditions, acne wrecks the beauty along with probability of scars for a lifetime. Acne has a noteworthy effect on particularly the adolescent and young adult group’s quality of life and their wellbeing. The rising importance of QoL in the field of research with its co-relation to the health care assessment is well proven. Homoeopathic treatment has proven to have a significant impact on the GAGS score of the individuals.
suffering from acne. After homoeopathic treatment, also there is clear difference in their quality of life which is statistically proven with help of Acne-QoL score. This also proves that repertorisation of a case is a significant step in analyzing a case and an important tool in selection of remedy. Moreover, the important step of cross-repertorisation led to selection of a remedy which is the simillimum for the case and because of which the success ratio raises significantly. Homoeopathic materia medica and various homoeopathic repertories show that there are multiple remedies for acne vulgaris but which is to be given and that to when and to whom is of utmost importance to get the desired results which was possible with help of a detailed case taking and repertorisation, cross-repertORIZATION. In this study, Kent’s Repertory was found to be most indicated repertory, followed by BBCR and Boericke Repertory. However, the drawn results from this study further needs cross-validation with a larger group of individuals using a multi-centric, double-blind RCT design.

Conclusion
This study points out a definite role of homoeopathic medicines which were deduced with help of repertorisation and cross-repertorisation in the management of cases with acne vulgaris and also on the quality of life hampered thereby. The present results are positive which gives an impetus to the effectiveness of homoeopathic medicines, selected after thorough repertorisation. This was an open-label, uncontrolled, mono-centric study and cannot estimate the effect of regression to the mean and that of placebo treatment. Further study needs to be carried out with a multi-centric, double-blind Randomized Clinical Trial design on a large group.

Conflict of Interest
There was No Point of Conflict of Interest between the Authors.

Acknowledgement
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