Systematic Review and Meta-analysis of Validated Quality of Life Outcomes in Voice Feminization

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INTRODUCTION

• Various surgical interventions and voice therapy have been shown to increase fundamental frequency (F0) (vocal pitch) for transwomen seeking voice feminization.

• However, F0 is not the sole determinant of voice femininity, and elevations often fail to correlate with improvements in quality of life (QoL).

Objectives:

• Assess the relationship between F0 change and QoL improvement

• Compare the effects of different voice feminization approaches on QoL

• Compare various validated questionnaires used to measure QoL in this population

RESULTS

• 16 studies met criteria, of which 10 (representing 544 patients) were able to be included in the meta-analysis.14

• Techniques used endoscopic shortening glossectomy (EGL),5,11 laser reduction glossectomy (LRGL),5,11 cricothyroid approximation (CTA),12 and voice therapy (VT).13

• Questionnaires used: Transgender Self-evaluation Questionnaire (TSEQ),5,7,10 Trans Woman Voice Questionnaire (TWVQ),5,7,10 Voice-related Quality of Life (V-RQOL),5,7,11 Voice Handicap Index (VHI-30),5,7,12,13 and the abbreviated Voice Handicap Index (VHI-10).5,7,10

• V-RQOL has 2 sections: Physical-Functional (V-RQOL PF) and Social-Emotional (V-RQOL SE).

• V-HI-30 has 3 sections: Emotional (VHI-30 E), Functional (VHI-30 F), and Physical (VHI-30 P)

Meta-analysis Findings:

• Lack of association between F0 increase and QoL improvement (Figure 1).

• EGL and LRGL exhibited statistically significant QoL improvement; however, the difference in QoL improvement across all interventions, including VT, did not reach statistical significance (Figure 2).

• TWVO, V-RQOL (SE), VHI-10, and VHI-30 E displayed statistically significant improvement in QoL score, with the TWVO measuring the greatest change (Figure 3).

DISCUSSION

• F0 is a valuable indicator of technical success6,10 but is not sufficient to determine intervention success in terms of improving QoL.

• As there were no statistically significant differences in QoL improvement across the various interventions, this study supports the use of voice therapy as a first-line intervention given its safety.1,11

• Surgical options remain valuable adjuncts for those who fail to reach desirable outcomes with VT alone.6

• Ultimately, decision of technique should be made through shared decision-making as no one technique is clearly superior to others.

• TWVO appeared to be the most sensitive in measuring QoL improvement in this population, and unlike the VHI-30 and V-RQOL, was specifically designed for use in transwomen.19

Limitations and Future Directives

• Heterogeneity among studies in terms of follow-up time, pre- or post-operative voice rest duration, etc.

• Need to determine minimum clinically important difference for these questionnaires in this patient population

CONCLUSIONS

• It is insufficient to use F0 alone to determine the effectiveness of voice feminization: validated QoL measures should be considered as well.

• We recommend the TWVO questionnaire for measuring QoL improvement in transwomen undergoing voice feminization.

• This study supports the continued use of voice therapy over surgical options as a first-line intervention

REFERENCES