

Treating Functional Aphonia: A Case Study

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ABSTRACT

Introduction: Functional aphonia is a rare disorder that mostly manifests in the period between adolescence and early adulthood, especially in women.

Objective: To present a case report of a patient with functional aphonia seen in MERF, India.

Case Study: 14 years, male, presenting to the Speech and Language Pathology clinic with the complaint of change of voice and strain in voice while speaking for 20 days. Clinical diagnosis was done since the instrumental examinations revealed normal bilateral mobile vocal folds. Stages of care and follow up sessions are detailed.

Conclusion: Detailed history on psycho-emotional aspects must be taken since it may cause or modify the presenting signs and symptoms of the problem and also help in managing the prognosis. Effective managements included counselling, solving the psycho-emotional trigger and voice therapy.

Key words: Functional aphonia, case study, voice, psycho-emotional.

INTRODUCTION

Functional Aphonia is a condition that is of neurology or psychiatry in origin. It refers to the loss of voice or inability to produce voice in absence of organic pathology. [1] It has a relatively sudden onset. It is sometimes known as Conversion aphonia, Hysterical aphonia, acute sudden voice loss or psychogenic aphonia. [2] The International Classification of Health and Related Problems includes functional aphonia as conversion disorder with motor symptom or deficit (ICD-10 code F44.4). It affects 0.4 % of the general population and between the age groups of 14 and 35 years. [3]

Functional aphonia can be due to several reasons that includes anxiety or fear, stress, depression, intra or interpersonal problems or an illness such as an Upper Respiratory Tract Infection. [2,4] Organic causes include recurrent laryngitis or associations with Muscle Tension

Dysphonia or Spasmodic Dysphonia. The psycho-emotional disorders can trigger the onset of psychogenic dysphonia related to conversion, the frame being the most common conversion dysphonia, defined as the total loss of voice. [5]

The human voice is unique and allows the individual to communicate with their peers, express thoughts and emotions. Sometimes, psychiatric symptoms often manifest themselves on the vocal tract. [5]

Here, is a case presentation wherein we focus on the assessment and management of a client with functional aphonia that was a result of a psycho-emotional issue which had been recurring. The focus is on the effectiveness of counselling and solving the psycho-emotional issue along with voice therapy in treating functional aphonia.

1. CASE REPORT

1.1. First visit: Initial Diagnosis and Therapy

Client XXX of 14 years, Male, came to the Department of Speech and Language Pathology at Madras ENT Research Foundation on 08/02/2019 with a complaint of change of voice including voice strain while speaking for 20 days. He was pursuing schooling in a boarding school and his performance at school was reported to be good. He was previously diagnosed to have sudden onset aphonia (?) Functional Aphonia. Trans Nasal Flexible Endoscopy done revealed Bilateral vocal folds mobile, incomplete adduction and presence of phonatory gap. The Video Laryngoscopy done on 08/02/19 revealed bilateral mobile vocal cords, mild adductor weakness with the presence of phonatory gap observed during phonation tasks.

The client's vocal habits stated that he has been using his voice more than 12 hours per day including shouting/ screaming (2 hours) in presence of noisy environment. His non- vocal habits included proper hydration, caffeine intake within normal quantity and occasional intake of spicy food. The respiratory support was found inadequate for speech and presence of clavicular breathing was observed. This was proved with Maximum Phonation Task which revealed reduced breath support for phonation [less than 5 seconds for each vowel - /a/, /i/ and /u/]. The s/z ratio was also not normal (8 seconds) which shows that they might be a laryngeal pathology.

The perceptual analysis of his voice revealed breathy voice quality with poor endurance, restricted variability and range of pitch and loudness voice breaks and inadequate loudness. GRBAS Scale was administered and voice was quantified to have severe breathiness and strain, moderate roughness and asthenia and was graded as severe (Grade: 3). Objective analysis could not be done since it was a Type- III signal and DSI could not be calculated since the client was not able to perform a glide.

The clinical impression given was (?) Hypofunctional voice disorder and the client was recommended to attend a demonstration therapy and undergo a stroboscopic evaluation in order to rule out functional aphonia. He was advised to follow vocal conservation practices along with proper vocal hygiene and vocal behaviours. He was given counselling and was recommended to have a follow up on 19/02/19.

1.2. Follow up 1:

The client came for a follow up session on 20/02/2019. Stroboscopic evaluation had been done but the reports were not available for the same. The client reported to have followed the techniques taught in the demonstration therapy and had also practised vocal conservation practices along with appropriate vocal behaviours. He was discontinued from the boarding school.

His respiratory support was observed to be adequate for both speech and non- speech activities, however, he had vocal fatigue during a long conversation. His MPT was improved to 12-13 seconds but was not within the normal limits. His S/Z ratio (/S/= 9 seconds and /Z/= 10 seconds) was observed to be within the normal range indicating no Laryngeal pathology.

The perceptual analysis revealed appropriate pitch with the presence of pitch breaks and restricted range and variability, Adequate loudness and loudness range and variability. The voice quality was perceived to be mild hoarse with the presence of voice breaks and poor endurance. The perceptual analysis was quantified using GRBAS Scale and it revealed moderate roughness and asthenia and mild breathiness and strain and was graded as moderate. Objective analysis was done.

The client was given a clinical impression as slight dysphonia and was recommended to continue following the voice therapy techniques and have a review with the ENT specialist. He was also given a counselling session and was asked to come for a follow up after 2 weeks.

1.3 Follow up 2:

The client came for a follow up evaluation on 05/03/2019 with the complaint of absence of voice and throat pain for a week. The client's respiration was observed to be adequate for both speech and non-speech activities, however, vocal fatigue was observed during longer conversations. The client's MPT was reduced to less than 7 seconds for all three vowels and the client was unable to produce /Z/ indicating that there is a presence of laryngeal pathology.

Perceptual analysis of the client's voice revealed appropriate pitch with breathiness during prolonged voice usage, restricted pitch range and variability, Inadequate loudness, Restricted loudness range and variability. His voice quality perceptually was observed to be hoarse with the presence of voice breaks and poor endurance. On rating with GRBAS Scale, his voice was quantified to have moderate roughness and mild breathiness, asthenia and strain and hence was graded as moderate (Grade: 3). Objective evaluation could not be done since the client's voice was of Type- III signal and he was unable to produce glide making the calculation of DSI not possible. However, the client was observed to have a normal cough reflex and was able to produce normal voice when being alone in the session. The client reported to have fear when being alone in hostel.

Informal consent was taken and the session was recorded. The clinical impression stated that the client had Functional Aphonia. Counselling was given and he was recommended to have a review with an Otolaryngologist and was advised on following appropriate vocal hygiene and vocal behaviours. Also, recommendation was given to have a follow up.

1.4. Follow up 3:

The client visited our clinic for a follow up on 16/11/2019 with the complaint of change of voice and throat pain for about a week. Video Laryngoscopy done on 15/11/2019 revealed bilateral normal and

mobile vocal folds and the stroboscopic evaluation done also indicated functional aphonia. The client had normal cough reflex (strong cough) and silent laugh. The MPT was reduced and S/Z ratio indicated (?) laryngeal pathology.

The perceptual analysis of the client's voice revealed inappropriate pitch and inadequate loudness, restricted pitch and loudness range and variability. The voice quality was breathy with the presence of voice breaks and poor endurance. Lombard phenomena was applied by asking the client to phonate and speak in the presence of noise that was presented using headphones and he was able to produce voiced speech but when the noise was stopped, on realizing that his actual voice was out, he changed to breathy strained voice.

Since the client was able to produce voice at times and produce a voiced cough and silent laugh, he was diagnosed to have functional aphonia. Managements given including counselling, laryngeal massage, postural corrections and yawn-sigh approach

DISCUSSION

The literature shows a vast evidence of causes behind developing a functional aphonia. There are also evidences that it affects subjects belonging to adolescence and early adulthood in large. The case presented here also is of a teenage male and had his psycho-emotional trigger.

The evidences for the diagnosis include the instrumental findings such as video laryngoscopy and stroboscopic examinations which reveal normal bilateral mobile vocal folds and no indications of lesions or laryngeal pathology, strong cough, silent laugh and production of voice in the presence of a feedback masker.

The client had reported that he developed stress and fear on staying alone in hostel and gradually its effect was shown in his voice which he started practising till he developed a psychogenic dysphagia. It is noted that the counselling session helped

him positively progress along with voice therapy. His shift from being a hosteller in a boarding school to being a day scholar brought up a bigger positive change and he was almost completely out of his previously underlying psycho-emotional issues that pushed him to develop functional aphonia.

The recurrence of the problem was due to admitting him again in an equally stressful school as the previous one. His voice was brought out through counselling on the effect of improper vocal behaviours and by creating a Lombard effect using a masker.

Voice therapies such as relaxation exercises, yawn-sigh technique and laryngeal massages proved to be effective in relieving the tension at the level of larynx and also indirectly helped in removing the mind block of inability to produce voice.

The recovery in each case was evident within one session of counselling and voice therapy.

CONCLUSION

The client's detailed psycho-emotional aspects have to be taken into consideration since they might cause or modify the symptoms or affect the prognosis. The medical history and instrumental findings are also important to rule out any laryngeal pathology that's organic. Effectiveness of the treatment for functional aphonia lies in counselling the patient and sorting the patient out of their psycho-social triggers in order to have a positive prognosis and to prevent recurrence. Treatment should include

appropriate voice therapy techniques for the patients including relaxation technique.

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