Aphonia Due to Chronic Alcoholism.

PARALYSIS OF THE LATERAL CRICO-ARYTENOIDS.

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APHONIA DUE TO CHRONIC ALCOHOLISM. PARALYSIS OF THE LATERAL CRICO-ARYTENOIDS.

There is no morbid condition involving the vocal organs possessing a more varied pathogeny than paralysis of the lateral crico-arytenoid muscles, the functional aphonia of pre-laryngoscopic authors.

No disease is more doubtful in its amenability to therapeutic measures, the restoration of voice in some instances following the introduction of the laryngoscopic mirror; in others baffling all our resources. That motor disturbances of the muscles under discussion resulting from fright, mental emotion, anæmia, chlorosis, dysmenorrhœa, intestinal irritation,[1] rheumatism,[2] syphilis, diphtheria, hysteria, and reflex influences do occur is a fact generally admitted and frequently observed by the laryngologist.

Lead,[3] arsenic,[4] phosphorus, opium,[5] and belladonna,[6] have all been accredited with having caused palsy of the various laryngeal muscles. These cases, however, are greatly scattered throughout literature, and occasionally lack important details. "The influence of certain substances taken in poisonous doses is exerted upon the nerves and muscles of the larynx as well as other parts, and loss of voice is a circumstance to be witnessed after using some of the powerful narcotics, antimony, mercury, arsenic, and other poisons of an exhausting character."

[1]Voltolini, *Wochenschr. f. d. ges. Heilk.* Berlin, 1845, p. 454-59.
[2]Ziemssen's Cyclop. Pract. Med., vii, p. 946.
[3]A. H. Smith, N. Y. *Med. J.*, 1873, xviii, p. 412.
[4]C. E. Sajous, Archiv. Laryngology, vol. iii, I. p. 58.
[5]Andral, Cours de Pathologie Interne. Par. 1836, i. p. 310.
[6]Gibb (G. D.), Diseases of the Throat and Windpipe, London, 1854, p. 102-103.

"These agents act slowly . . . . causing a palsy similar to wrist-drop."

Though analogically we may be warranted in establishing an alcoholic laryngeal paralysis, I am aware of but few precedents in the form of recorded cases.

Hamon,[1] in recording an instance of what he denominates "aphonie alcoolique," takes occasion to say: "Alcoholic aphonia is an affection rarely observed, and it is doubtless for this reason that medical treatises are silent upon this subject."

Whilst prolonged indulgence in alcoholic stimulants not infrequently terminates in loss of voice and imperfect articulation, dependent upon central paralysis, there is also evidence that the loss of voice may occasionally originate in defective peripheral innervation.

I am only too conscious of the great difficulties enshrouding this entire question of pathogenesis in paralysis of the laryngeal muscles in the affection under consideration.

Ziemssen[2] says, "It cannot be determined whether or not the toxic paralyses of the vocal cords are to be regarded as central paralyses of the glottis."

Cohen[3] in describing paralysis of the lateral adductors says, "The cause of these paralyses is sometimes involved in great obscurity."

The exposure, muscular relaxation and lowered vitality accompanying and resulting from chronic alcoholism, doubtless assist in producing the motor laryngeal trouble.

A few of the ancient writers on medicine clearly allude to the modification of voice during intoxica-

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[1] *Gaz. d'Hop.*, Paris, 1860, xxxiii, p. 221.
[2] Op. Cit. vii, p. 942.
[3] Diseases of the Throat and Nasal Passages, N. Y., 1879, p. 642.

tion. Thus Hippocrates[1] in his article on Aphonia remarks:

"*Si quis ebrius ex improviso mutus fiat, convulsus moritur, nisi febris corripuerit, aut ubi ad horam qua crapulæ solvuntur, pervenit locutus fuerit.*"

Morgagni[2] mentions alcoholism as a cause of aphonia, and speaks more particularly of the central lesions giving rise to this trouble.

G. Andral[3] says: "Nervous aphonia is sometimes noticed after hysteria is developed during drunkenness, and may be caused by both opium and belladonna."

There is a common phrase used in Germany expressive of the deleterious influence which alcoholics exert upon the vocal organs—"Er säuft sich die Kehle ab."

Bierbaum[4] records the history of a man suffering with mania á potu who was aphonic. This case, however, was evidently due to central influences.

Examples of loss of voice have fallen under my care during a number of years past, which have clearly pointed to alcohol as the "*fons et origo*" of the laryngeal palsy, and consequent phonetic deficiency.

These patients were not periodic, but to the contrary habitual imbibers, and as a rule, only discontinued their protracted debauch when bed-ridden.

The clinical history and data in my first case are as follows:

Case I. A military gentleman of fine physique and 30 years of age was referred to me by Dr. William M. Mew, U. S. A.

The patient had neither pain, cough, nor thoracic trouble, but exhibited a dull appearance of visage,

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[1] Aphorismes D'Hippocrate, Paris, 1811, Sec. 5, ¶ 5, p. 168.
[2] *De Sedibus et Causis Morborum*, Venice, 1761, vol. I, Epist. xiv, ¶ 34, p. 120.
[3] Cours de Pathologie interne, Paris, 1836, I p. 310.
[4] Deutsche Klin., Berl., 1866, vxiii, p. 56.

and the general evidence of a protracted dissipation, which he admitted.

He could scarcely speak in an audible tone, and stated that the voice commenced to weaken eighteen months previous.

He had been compelled to relinquish his company, as the puerile voice rendered proper decorum among his men an impossibility, for they could not hear his commands.

The laryngoscope revealed a moderately congested pharyngeal and laryngeal mucous membrane, no erosions, hypertrophies, nor inter-arytenoid thickening.

Upon attempted phonation the vocal bands were incompletely approximated, and much phonetic leakage occurred.

The treatment instituted consisted in enforced abstinence from all alcoholic stimulants, the internal administration of thirty minims of tincture of nux vomica thrice daily.

Sprays of an ethereal solution of iodoform 2.30 gms. to 21.00 gms., as well as ammonium chloride 1.60 gms. to 32.00 gms. of water, were administered on alternate days, morning and evening.

Improvement followed, and the patient said that his own children were frightened at his voice on returning after four weeks' absence from home.

In six weeks the voice was completely restored, and he was discharged from medical treatment and rejoined his company.

I learn that he has been more temperate, and that his voice is still good two years after treatment.

CASE II. M. C., aged 32, white, to whom I was called on the morning of March 30, 1884, was my second case.

The messenger stated that the patient was experiencing suffocative attacks, and desired my aid immediately.

On arrival I found my patient in a state of nervous

excitement. He said in a whisper, devoid of vocal sound, that he had habitually drank alcoholics to excess; but having recently indulged more freely than usual, developed aphonia, insomnia and nervousness.

A laryngoscopic examination showed a normal mucous membrane—no hyperæmia, inflammation or ulceration. The vocal bands, however, failed to approximate during phonation, and on inspiration the same bands evinced indisposition to proper abduction.

A careful physical exploration of the thoracic organs demonstrated the absence of all disease other than slight cardiac hypertrophy, and his intellect, hearing and vision were normal. He had never had syphilis, rheumatism, or any laryngeal inflammation.

The patient said that on a previous occasion he had lost his voice for ten days, during an exacerbation of alcoholism.

My treatment in this case comprised abstinence from alcohol, the administration of a purge of calomel and rhubarb, followed by nervous sedatives and hypnotics. I pencilled the larynx with a pigment of zinc chloride, endeavoring to arouse the torpid muscles.

The patient slept well during the next forty-eight hours, took nourishment, and improved in voice but slowly.

I finally employed faradisation and nux vomica with the best result, as the power of complete phonation was regained in ten or twelve days.

Here are two instances of aphonia existing in patients having normal sight, hearing, and perfect intellectual faculties, patients free from chronic catarrhal laryngitis and the evidence of syphilis or rheumatism.

The removal of the alcohol and the employment of either an excito-motor stimulant or faradisation resulted in entire restoration of voice in these patients.

The rapid improvement in my cases, and line of

treatment, excludes intracranial influence as causing the aphonia.

Hamon[1] says: "It is totally unnecessary for alcoholic poisoning to be pronounced in order that aphonia may be produced." This statement is in accord with my own observation, and is verified by my cases.

Alcoholic aphonia is, in my opinion, more common than the scanty literature would suggest.

The voice, as Broue[2] judiciously observes, is the hygrometer of sobriety.

Recalling, then, the many causes involved in the production of paralyses of the lateral crico-arytenoids, and the uncertainty of our knowledge on the entire subject, may I venture to add alcohol to the list of toxics occasioning paralysis of the laryngeal muscles?

At least let alcohol be assigned to the same category as lead, arsenic, antimony and opium, there to remain subject to future scrutiny and additional clinical observation.

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[1] *Gaz. d' Hop.*, Par., 1860, xxxiii. p. 222.
[2] Hygiene Philosop. d' Artistes Dramatiques, Par., 1836, ii, p. 109.