TABLE 9.—Aural measurements and variations.

LENGTH.	WIDTH.	HELIX.				ANTI-HELIX.			
		Development.		Form.		Development.		Form.	
		Arrested.	Medium.	Excessive.	Folded.	Medium.	Open.	Normal.	Abnormal.
Illinois State Reformatory.	13 1/4	2	21 1/4	23 1/4	7 1/4	1	66	105	17
New York State Reformatory.	15	3	4	205	682	113	17	236	55
								174	181
								296	294
								771	52
								48	236
								907	747
								308	134
								195	317
								270	722

TABLE 10.—Crime.

	Illinois State Reformatory.	New York State Reformatory.
Burglary.	263	499
Larceny.	154	2
Murder.	8	10
Rape.	3	65
Assault to kill.	10	309
Forgery.	12	4
Grand larceny.	12	2
Arson.	1	2
Abduction.	1	2
Malicious mischief.	1	2
Violation of postal laws.	2	4
Perjury.	1	2
Horse stealing.	2	2
Confidence game.	1	42
Assault.		1
Crime against nature.		68
Robbery.		2
Manslaughter.		6
Bigamy.		16
Receiving stolen goods.		1
Possession of counterfeit certificate.		2
Violation of election laws.		2
Embezzlement.		2
Obstruction on railroad.		2
Attempt to escape from prison.		2
Unlawful marriage.		1

selected out to form the population of New York State, while the other States received the more robust and less degenerate members. In addition to this, the attraction of a large city naturally held the weaker members of the emigrant community, while the stronger tended away from the sea-board.

While many of the special peculiarities claimed by various authors as characteristic of the criminal class were found, still there was no such predominance of any one or more of these features that would justify the creation of a criminal type as shown by particular and generally manifested features. The sole conclusion to be drawn in this particular is, that these younger criminals belong to the degenerate class, and are so handicapped by hereditary defects that they fall ready victims to criminal tendencies and environment.

ANTERIOR PILLARS OF THE FAUCES, THEIR ABNORMALITY, ETIOLOGY AND TREATMENT.

Presented in the Section on Stomatology, at the Forty-eighth Annual Meeting of the American Medical Association, held at Philadelphia, Pa., June 1-4, 1897.

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The anterior pillars are in my judgment, and from observation, disputed ground, belonging both to the oral surgeon and the laryngologist, but receiving little attention from either. The faucial arches are covered with mucous membrane. The anterior pillars are formed by the palato-glossus muscles. The blood supply comes from a branch of the descending palatine artery and is returned by the inferior palatine vein from a plexus surrounding the tonsil, and from the pillars and soft palate into the deep facial vein. The nerves are from the descending branch known as the small or posterior palatine nerves, which are conducted to the pillars, tonsil and uvula. The membrane, which is visible from the mouth, is thinner and slightly redder than that of the hard palate; but like it, is covered with a scaly stratified epithelium. The margins of the pillars are covered with the same epithelium. The posterior and upper surfaces are covered with ciliated columnar epithelium. Lymphatics are abundant on these surfaces and numerous small compound glands form almost a complete layer under the mucous membrane. Lymph follicles are true lymphatic apparatus whose juices and lymph corpuscles can pass into the nearest lymphatics. Great numbers of leucocytes continually pass out between the epithelial cells covering these follicles, through which, under certain conditions, microbes and other poisonous substances may enter.

It is not my purpose in this short paper to discuss the diseases in general that affect the fauces, such as syphilitic or ulcerative conditions, but it is the dark red, or reddish blue color which is a venous stasis of the pillars and uvula and their shining sticky mucous surfaces that I wish to consider.

I find that in a large number of patients visiting my office for dental services, this abnormal condition is present. These parts are easily brought to view by having the patient breathe through the mouth. The patients do not complain of sore throat but of a fetid breath, and sometimes of a disagreeable taste in the mouth. The condition of the teeth and gums (in the

absence of an erupting or impacted third molar) in many cases does not furnish cause for the existing condition of the fauces. The patient has not applied to a laryngologist but to a dental, or oral surgeon, and it is his opportunity to put the mouth in a healthy condition; I think it is his duty to have suitable instruments so as to make a proper diagnosis, and either give proper treatment or direct the patient where he can receive the same. The venous stasis of the pillars acts as a sentinel, the etiology of which, if not in the erupting molar, will be found either in the tonsil or post nares. The tonsil may have little or no inflammatory action and the crypts may or may not be filled with a cheesy exudate, and still their sluggish condition will produce foul smelling secretions, and absorption by the lymphatics will follow. Also stenosis and chronic catarrhal conditions of the post nares will produce a dropping in the pharynx and keep the pillars bathed with a foul secretion which will taint the breath and produce, through absorption, an abnormal appearance of the pillars. Frequent attacks of coryza which do not receive treatment, and are allowed to become chronic, produce the same result and thus become etiologic factors.

The treatment consists in antiseptic gargles, of which borolyptol, either in full strength, or diluted, is one of the best; also an alkaline and antiseptic wash, as Dobell's solution used as a gargle or spray for the throat, and spray for the nose. The tonsillar condition may be stimulated with nitrate of silver, grams 3.9 or 7.8 to aqua c.c. 30, or the electric cautery can be used to advantage. When the catarrhal conditions exist, any stenosis should be corrected, and the nares and fauces cleaned night and morning with an alkaline spray. In addition to this, two or three times a week, the iodine solution, grams 0.13 to 0.65 of iodine to the 30 c.c. of water with iodine of potassium and glycerin, will be found advantageous. I have found great satisfaction in the treatment of this affection as the condition is always improved, if not entirely cured.

TRACHEOTOMY IN DIPHTHERIA IN CONJUNCTION WITH ANTITOXIN.

Read before the Missouri State Medical Association, May, 1897.

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Of all diseases of childhood, laryngeal diphtheria or membranous croup is the most dreaded. Either the larynx is primarily the seat of affection or is secondary to tonsillar diphtheria. Sometimes the affection in both organs is simultaneous, or the post nares or tonsils have had a deposit which so rapidly spread to the larynx that the primary seat of infection was overlooked by parents until threatened asphyxiation called their attention to the fact that their darling was in danger and they sent post haste for medical aid. Whether the cause of membranous croup was identical with that of diphtheria or not, was for years a bone of contention in medical ranks. Volumes were written on the subject and differential diagnosis was a bugbear to the general practitioner. Gradually the profession became divided; one side believed in the duality of the disease and the other in the unity; and discussions *pro* and *con* were heard at meetings of medical societies in this and the old country. Infectiousness of true croup was doubted by a large and influential body of men, while others were firm be-

lievers in it, and only since bacteriology has thrown light on the subject and proven in the majority, if not in all, cases, the presence of the Klebs-Loeffler bacillus in the membranes and exudates, has the band of doubters been reduced to a very small body. It is to be hoped that soon the term "croup" and "membranous croup" will cease to exist in medical literature, cease to be posted in our cities as such, and cease to appear in our death reports; but simply be classified as diphtheria. Remedy after remedy for the treatment of membranous laryngitis was introduced, tried and extolled, but the death-rate remained enormous, even with tracheotomy, and soon it was condemned by a great number of the profession. O'Dwyer's tubes were hailed with delight by many operators, but even with their use the death-rate remained too high. This operation found more favor with the laity, while the profession used it more readily because the objections to the surgeon's knife were too great in many cases.

Intubation, universally used, failed to be the boon its champions claimed. Without discussing the merits or demerits of this operation, I will frankly state that I prefer tracheotomy as long as it gives the percentages of recoveries that I have had, both before and after the discovery and use of antitoxin in the treatment of this disease. Even before the introduction of antitoxin, my success in this operation was all that could be expected. It was not due to a selection of cases nor to a better understanding of the operation, but to the fact of its timely performance and the exercise of diligence in the after-attention and care of the patient. To do tracheotomy only as a *dernier ressort* is a grave mistake, for the vital forces of the child have been exhausted from the non-aeration of the blood. Still, I have met with success in two cases after sensation had ceased, by quickly opening the trachea and introducing a full sized tube, and performing artificial respiration. Breath and air is what is wanted at this critical moment. Minutes are hours and delay means death. Generally speaking the golden rule for performing tracheotomy is whenever dyspnea with cyanosis has manifested itself—the respiration murmur is faint or absent, with retraction of the chest wall, the attacks of extreme dyspnea becoming more frequent. Delay under such circumstances would be disastrous. The introduction of antitoxin into therapeutics marks a new era in the treatment of this affection.

In November, 1894, I read a paper on Antitoxin before the Jackson County Medical Society, by request, having closely followed the literature on the subject since 1890. A committee was appointed at the time, by the above named society, to investigate the use and action of the antitoxin, and a quantity was procured by the board of health. I was a member of this committee, and watched closely the effect of this remedy. At the end of a few months we gave a complete and unbiased report of our work. As usual with all new remedies, enthusiasm ran high in some quarters, while in others antitoxin was condemned as a fad and its use said to be dangerous. Now, after two years trial, enthusiasm has given way to sober judgment and it has received its place in therapeutics, has won friends and admirers in quarters where it was first bitterly opposed.

I believe that every unprejudiced physician must reach the positive conclusion that it is a valuable remedy and predict that the time will come when the