

to speech development in the vocal and respiratory organs. The slightest thickening of the nasal mucosa or of the pharyngeal or faucial tonsils greatly interferes with the formation of natural speech and thus indirectly makes an impress on the mind, the magnitude of which is out of all proportion to the cause of the trouble. In children with adenoid growths (in the vault of the pharynx) the 'vacant stare,' which is a fairly accurate picture of the vacant mind within, is due not more to faulty breathing than to its concomitant faulty speech. Enlarged faucial tonsils which may interfere very little with respiration give the same facial characteristics, and I have seen cases of defective speech due to tongue-tie and other cases entirely independent of adenoid thickening in which arrested mental development was reflected in the continuance in exactly the same manner."*

Dr. Harrison Allen, in a personal letter, gives me the facts concerning the effects of naso-pharyngeal obstruction: "Clinging to the roof of the upper throat passage, or to its posterior wall, there is found in every individual a number of small seed-like masses, which have received the name of the lymphoid or adenoid bodies. We know little or nothing of the nature of these growths or the purposes they serve in the economy. Not infrequently they will be found large enough to interfere with comfort and health. If they prevent air from passing through the nose into the throat, while the mouth is closed, the development of the body is often retarded and natural functions perverted. The chest becomes deformed, the upper ribs being widely separated, while the lower ribs lie close together. In weaklings, in whom the bones are lacking in lime-salts, the deformation of the chest is more marked than in sturdy subjects whose bones are normally developed. The upper jaw is narrowed from side to side, highly arched and, as a rule, the front teeth irregularly disposed. Occasionally deafness exists. The power of attention, the tenacity of the memory, the control of the will, and the emotions are all weakened. The disposition is apt to be sullen and occasionally intractable. The mouth is continually open and the face has a lack-lustre expression, the countenance has a pasty look, the general appearance of the child is one lacking in intelligence. In some instances, indeed, the child is actually mentally defective.

"If by any chance a child is already on the border line between normal and the abnormal intellection (and is a sufferer from adenoid overgrowth) we can well understand how the condition named may push it on the wrong side of the line, and keep it there.

"No rule exists by which the physician can determine the exact size or consistence of the growth; a small mass in a small naso-pharynx may be expected to excite more distress than does a larger and more vascular growth in a capacious naso-pharynx.

"When the growth is removed the symptoms named often disappear as if by magic. I say often, because it is not uniformly the case. Sometimes we observe a child whose general nutrition is impaired, who has inherited one of the numerous features belonging to an impaired constitution, and who happens, with the other evils, to have an obstructive adenoid

* A remarkable case is reported by Prof. Forbes, *Med. News*, Sept. 2, 1893.