A NOTE ON CONGENITAL LARYNGEAL STRIDOR
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FOR many years the cause of congenital laryngeal stridor has been thought to be an anatomical abnormality or variation in the shape of the larynx, in which the epiglottis is long and tapering with rolled lateral edges and the ary-epiglottic folds are closely approximated. In consequence the lumen of the \textit{introitus laryngis} is greatly reduced, and it was thought that stridor would result very readily with any increase in the frequency and depth of the respiratory excursions. However, in 1952 and again in 1955 I stated the opinion that this so-called exaggerated infantile epiglottis was merely one of several normal anatomical variations and that it could not be held responsible for the syndrome. I further stated (1955) that “it would seem that the underlying cause is much more likely to be tracheal stenosis combined with softness and immaturity of the tissue”. This view has now come to be widely accepted. When the softness and immaturity of the tissues affect chiefly the larynx, the condition is known as laryngomalacia, and if the trachea is affected it is known as tracheomalacia. Laryngomalacia is diagnosed much more commonly than tracheomalacia: the latter condition is indeed a somewhat nebulous condition in the minds of most laryngologists.

\textbf{Fig. 1.}
Marked kinking of the trachea in a stridorous child of five and a half months.

\textbf{Fig. 2.}
The same child as Fig. 1. The trachea is straightened as the larynx is lifted by the contraction of the elevator muscles at the beginning of the act of swallowing.
In order to study the size and shape of the trachea in these cases soft-tissue radiograms were taken of the lateral aspect of the neck in 11 cases of congenital laryngeal stridor recently seen at the National Children's Hospital. Of these cases 5 showed kinking of the cervical portion of the trachea in greater or less degree. Some cases showed a single kink, the angle of which was not very acute, while others had two or three corkscrew-like twists. Fig. 1 is a radiogram of the most marked of these cases. Numerous x-ray studies were made of this child, and the only time the trachea was found to be straight was in the act of swallowing. (Fig. 2.)

At first it was thought that kinking was a normal phenomenon of no particular significance, particularly as a search of the laryngological, paediatric and radiological literature disclosed no reference to the condition. It was thought, however, that the severity of the stridor varied directly with the degree of kinking or bending of the trachea. Similar soft-tissue radiograms were then taken of 50 non-stridorous infants under the age of six months, in all but three of whom the trachea proved to be quite straight. (Fig. 3.) The three exceptions showed slight kinking. One of these was a "noisy breather" at birth and suffered from a patent inter-ventricular septum. It has not been possible to get a clear history in the second case, whose mother is mentally somewhat subnormal. No history of stridor could be elicited in the third case (Fig. 4).

Therefore, of 11 cases diagnosed as congenital laryngeal stridor, 5 showed definite or gross kinking of the trachea, whilst in 50 non-