

Retrosternal goitres, small though they may be, are particularly liable to produce the most distressing dyspnoea. The dyspnoea is usually explained as being due to the direct pressure of the goitrous tumor on the trachea or to irritation of the recurrent laryngeal nerve. The periodical character of the attacks is due to the tendency to rapid increase in size of the gland at certain times from vascular changes, before spoken of.

It would appear that these cases of thyroid dyspnoea are not infrequently mistaken for true asthma, especially where the neck is short and fat and the goitre is smooth and regular in outline: or when it involves the isthmus or is retrosternal. This should be borne in mind in obscure cases of dyspnoea.

Third, death may result during these attacks of dyspnoea and often suddenly. It occurs from various causes—direct pressure on the trachea, on the recurrent laryngeal nerve with spasm of the glottis, from pressure on the vagus nerve and stoppage of the heart or from pressure in the cervical veins, with consequent cerebral congestion. Treatment during the attacks—usually by division of the isthmus or by tracheotomy is attended by a high mortality.

The possibility of a goitre producing sudden death is important from a medico-legal point of view, though I have never seen it stated among the causes

THE ALKALOIDS.*

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Perhaps none of the organic compounds possess greater interest to the therapist than the alkaloids, in the display of their effects in treatment, especially on the nervous system which they so profoundly impress.

The attractions too which these vegetable products hold for the working chemist of to-day is easily accounted for, composing as they do so very small a proportion of the plants in which they are found, yet representing in many cases their whole virtue and activity as remedial agents. It is quite natural then that their composition should be carefully studied with a view to explaining the changes by which they are produced in Nature and, if possible, to imitate those processes in order to reproduce these valuable agents by artificial means. So we find Fischer (Berlin 1895) building up caffeine from urea; Königs plodding along steadily on quinine; Knorr, of antipyrine fame, working away on morphine; Petit on eserine, and many more, each on his own hobby.

In 1804, Sertürner, a German apothecary, demonstrated an active principle in opium. His experiments extending over a period of eleven years, when he isolated morphine, learned its characteristics and differentiated it from narcotine. This constitutes the first knowledge on record of this class of proximate principles. For this attainment the Institute de France granted him a prize of two thousand francs.

As to their occurrence: the alkaloid is found forming in all parts of the plant to which it is native—except the growing wood or stem, being

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