

System," Dr. J. J. Putnam³³ summarizes this question of the relation of lesion and toxic cause as follows: "That the mere absence of demonstrable lesions in a given case of poisoning cannot be taken as proof that the pathogenesis of the symptoms is not the same as in another case where lesions were found. That which is characteristic is often the primary action of the poison, rather than the effects of the lesions, even when lesions are present."

The practical third question of the prognosis of these affections ultimately must depend upon a knowledge of the exciting cause or causes. The lesions produced evidently have only a partial bearing on the matter as indicated by what has just been said. The earlier cases of the Wernicke type were described as usually fatal. The type supposed to be closely associated with influenza and other general infections is apparently far less so. Unquestionably very many of the cases recover, with or without permanent defects; no prognostic criterion can be laid down except the general one of a judgment based upon the violence of the preliminary infection, and even this is uncertain, particularly in those cases which are of somewhat subacute onset.

In the foregoing remarks I have attempted to give concrete examples of types of disease, unusual in themselves, but chiefly of importance as illustrating the fact that a large group of affections exists, very confusing in detail, which are too rarely regarded under a single category. A recognition of a broad, general pathological and, so far as possible, etiological point of view is eminently desirable, if we are to progress in these matters beyond the merely descriptive stage. It is likewise evident that were we to lay stress only upon the evidence of infection, in the broad sense, our group of affections could well be extended to include the various manifestations of infectious neuritis, and also of so-called transverse and disseminated myelitis, claimed to be due to a localized inflammation. This would, however, lead beyond the limits set for this discussion, and would divert attention from the main point at issue, which is to suggest the identity of a group of cerebro-spinal affections chiefly on a pathological-anatomical basis.

The following conclusions, therefore, appear legitimate:

That a large group of affections of the central nervous system exists, provisionally to be regarded as inflammatory, in which may be included encephalitis, poli-encephalitis, superior and inferior, poli-encephalomyelitis, poliomyelitis, encephalomyelitis and, with reservations, Landry's paralysis, and possibly myasthenia gravis, and certain apparent peripheral nerve infections;

That these affections should be regarded as essentially identical, differing only in symptomatic expression;

That the evidence for this lies in the simultaneous involvement in individual cases of various portions of the nervous system, a notable example of which is given in poli-encephalomyelitis;

That we should gain in our understanding of

³³ Putnam: *Am. Journ. Med. Sc.*, March, 1895. This paper contains a valuable bibliography and an important discussion of the whole subject of infection in relation to diseases of the nervous system.

these and various other affections of the nervous system if we adopted a classification based on pathological alterations and on etiology, wherever possible, rather than on clinical symptoms determined by anatomical subdivisions;

That, admitting a somewhat definite pathological alteration of the nature of inflammation, as a fairly constant factor, we may assume the existence of a common exciting, probably toxic, cause;

That the nature of this cause is practically unknown, that its manifestations are not always uniform and that our final understanding of the distribution and prognosis of these affections must depend, first, upon our knowledge of these exciting causes, and, secondly, upon the nature of individual susceptibility and resistance.

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A CASE OF PAGET'S DISEASE OF THE NIPPLE TREATED BY THE X-RAY.

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Mrs. T., colored, aged thirty-two years, was sent to me by Dr. M. E. V. Fraser for treatment of a chronic obstinate disease of the right breast. According to the patient, it began two years ago as a pimple on the nipple; the symptoms had extended slowly, and at the time I first saw her the nipple and areola were involved. The entire surface was bright red, moist, with here and there small bleeding points; the nipple was not retracted, on the contrary, was quite prominent. No nodules were found in the breast, the lymphatic glands were not affected, the border of the lesion was well defined. At no time had the patient been troubled with pain nor itching. During the greater part of the two years she had been under treatment at the various skin and surgical clinics of this city.

A specimen for microscopical examination was taken, and the following report was returned by Dr. T. J. Leary of Tufts Medical School: "Received a small piece of skin. Microscopical examination shows a uniform thickening of the epidermal layer, the normal epithelium being replaced by elongated alveoli of large pale cells separated indefinitely by strands of connective tissue. The new growth is sharply marked off from the underlying connective tissue, and no metastases are evident in the lymphatics beneath the surface layer. Both new growth and underlying tissues are markedly infiltrated with lymphoid and plasma cells. Diagnosis — Carcinoma of skin."

Operation was advised and refused. X-ray treatments were given; the first week, a treatment of twenty minutes daily, the second week six treatments, the third week four, the fifth week three. As a precautionary measure, the axillary glands on that side were given a few exposures. Within ten days marked improvement was noted; the end of the fourth week the nipple and areola were perfectly normal in appearance. At the beginning of the sixth week another specimen for examination was taken, and the report of normal skin and subcutaneous tissue was returned by Dr. Leary.

In the earlier stages this disease closely simulates eczema, but in this especial case there was at no time itching; the color was bright red; there was an absence of exacerbations, and the outline of the lesion was sharply defined. In the majority of the cases the right breast is the affected part, fully 75% of the reported cases having had this situation. Forrest reports a case in which a chronic eczema of the breast in a male was followed by carcinoma. The patient was seventy-two years of age, and had had for some time a discharge from the nipple, which produced crusting, underneath which was a red secreting surface. In the course of six months the nipple retracted, and swelling of the lymphatics along the lower border of the pectoral muscles and the axilla occurred. At the time of observation all signs of cancer were present.

Other parts of the body are sometimes affected, such cases being reported by Crocker, Pick and Ravogli. In all of the fifteen cases observed by Paget two years elapsed before carcinomatous degeneration was noted. Stelwagon and other recent observers claim that the process is malignant from the beginning. During reports two cases: "The first had been in existence ten years; varied treatments had been tried, including tar, chloral, carbolic acid; a great deal of relief was obtained from an ointment of pyrogallie acid, an open wound being produced; this was allowed to granulate under simple ointment; three months later the disease relapsed into its former state; the entire surface was then curetted, but in six weeks there was a return. Excision of the whole gland was advised." The second case was treated in the same way, with a similar result. Stelwagon reports one case improved by x-ray.

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1. Forrest: Glasgow Med. Journ., vol. xiv, p. 759.
2. Crocker: London Patholog. Soc'y Trans., vol. x, 1889, p. 187.
3. Pick: Prager med. Woch., 1891, p. 282.
4. Ravogli: Journ. Cutan. Dis., 1894, p. 222.
5. Durling: Amer. Journ. Amer. Sci., July, 1883.

Medical Progress.

REPORT ON PEDIATRICS.

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THE CLINICAL VALUE OF BLOOD PRESSURE DETERMINATIONS AS A GUIDE TO STIMULATION IN SICK CHILDREN.

Cook¹ used a modification of the Riva-Rocci sphygmomanometer. He found that the blood pressure during the first three months normally varied from 75 mm. to 90 mm.; during the second year from 85 mm. to 95 mm., and during the rest of early childhood from 90 mm. to 105 mm. or 110 mm. He found that the blood pressure of children was a much more absolute quantity than in adults. For a child of eighteen months 80 mm. may be considered moderately low, 70 mm. to 75 mm. low and 60 mm. very low. Physiological rises in the blood pressure occur in a healthy child from crying, pain, coughing, any form of excitement and after feeding. These

normal variations do not as a rule confuse observations on cases requiring stimulation, as such children are usually listless and do not take much nourishment. Their vasomotor system seems unable to respond to physiological stimuli.

Alcohol in single doses was unsatisfactory as a stimulant for immediacy, permanency or reliability. In repeated doses it appeared to have a marked and permanent beneficial effect. Thus it would seem not to be indicated when urgent stimulation is required, although very useful during the course of a depressing toxic or marantic illness. Strychnin was found to have a more positive effect on the blood pressure. Hypodermic doses of $\frac{1}{400}$ of a grain to infants during the first year, of $\frac{1}{200}$ of a grain during the second year and of $\frac{1}{100}$ of a grain during early childhood, as a rule produced a rise in the blood pressure in from ten minutes to twenty minutes, which was well maintained for from two hours to six hours, provided the child was not moribund. Digitalin given hypodermically in the same doses acted more quickly and produced a higher rise in the blood pressure. The elevation was not maintained so long, however. The rise usually began in from five to ten minutes and lasted one or two hours. It sometimes reached as high as 20 or 30 mm.

Children not needing stimulation do not show these marked responses to strychnin and digitalin, nor do the moribund, in whom the vasomotor center is insensitive to stimulants. It is in the large intermediate class of toxic and marantic conditions accompanied by low-tension pulse that carefully regulated drug stimulation gives such satisfactory results.

Infusions of normal salt solution had no true stimulant action, although they seemed useful in some toxic and wasting conditions either by increasing elimination or by supplying needed fluid to the tissues. Their use seems inadvisable in acute prostration or collapse, as the afferent impulses from the needle puncture and local tissue distention only make further drains upon the lowered vitality. In these conditions digitalin, which acts most promptly, is the drug of choice, followed by strychnin, which maintains the bettered condition.

It was found that by routine determinations every one, two or three hours, according to the severity of the case, variations in blood pressure could be met and corrected by regulating the stimulants according to the indications of the blood-pressure chart.

Conclusion: "Although it must not be inferred that blood-pressure observations are considered the only measure of a patient's condition, or that any single observation necessarily gives an absolute indication for treatment, still, in general, it would seem that blood-pressure observations which constitute a numerical index for the mechanism most affected by stimulation would be the best single guide to the choice and administration of stimulants."

THE BLOOD OF HEALTHY CHILDREN.

Karnizki² examined the blood of 20 infants and 42 older children, all absolutely healthy and selected

¹ Cook: Johns Hopkins Hosp. Bull., 1903, vol. xiv, p. 37.

² Archiv. f. Kinderh., 1903, vol. xxxvi, p. 42.