

the circumstances under which the disease develops, and by the absence of swelling of the gums. The malignant forms of the fevers, particularly small-pox and measles, are distinguished by the prodromata and the higher temperature.

**Treatment.**—In symptomatic purpura attention should be paid to the conditions under which it develops, and measures should be employed to increase the strength and to restore a normal blood condition. Tonics, good food, and fresh air meet these indications. In the simple purpura of children, or that associated with slight articular trouble, arsenic in full doses should be given. No good is obtained from the small doses, but the Fowler's solution should be pushed freely until physiological effects are obtained. In peliosis rheumatica the sodium salicylates may be given, but with discretion. I confess not to have seen any special control of the hæmorrhages by this remedy. We are still without a trustworthy medicine which can always be relied upon to control purpura.

Aromatic sulphuric acid, ergot, turpentine, acetate of lead, or tannic and gallic acids, may be used, and in some instances they seem to check the bleeding. In other cases the whole series of hæmostatics may be tried in succession without any benefit.

## XII. HÆMOPHILIA.

**Definition.**—An hereditary, constitutional fault, characterized by a tendency to uncontrollable bleeding, either spontaneous or from slight wounds. It is sometimes associated with a form of arthritis.

Early in the century several physicians of this country called attention to the occurrence of profuse hæmorrhage from slight causes. The fact that fatal hæmorrhage might occur from slight, trifling wounds had been known for centuries. The recognition of the family nature of the disease is due to the writings of Buel, Otto, Hay, Coates, and others in this country. The disease has been elaborately treated in the monographs of Legg and Grandidier.

**Etiology.**—In a majority of cases the disposition is hereditary. The fault may be acquired, however, but nothing is known of the conditions under which the disease may thus arise in healthy stock.

The hereditary transmission in this disease is remarkable. In the Appleton-Swain family, of Reading, Mass., there have been cases for nearly two centuries; and F. F. Brown, of that town, tells me that instances have already occurred in the seventh generation. The usual mode of transmission is through the mother, who is not herself a bleeder, but the daughter of one. Atavism through the female alone is almost the rule, and the daughters of a bleeder, though healthy and free from any tendency, are almost certain to transmit the disposition to the male offspring. The affection is much more common in males than in females,

the proportion being estimated at eleven to one, or even thirteen to one. The tendency usually appears within the first two years of life. It is rare for manifestations to be delayed until the tenth or twelfth year. Families in all conditions of life are affected. The bleeder families are usually large. The members are healthy-looking, and usually have fine, soft skins.

**Morbid Anatomy.**—No special peculiarities have been described. In some instances changes have been found in the smaller vessels; but in others careful studies have been negative. An unusual thinness of the vessels has been noted. Hæmorrhages have been found in and about the capsules of the joints, and in a few instances inflammation of the synovial surfaces. The nature of the disease is undetermined, and we do not yet know whether it depends upon a peculiar frailty of the blood-vessels or some peculiarity in the constitution of the blood, which prevents the normal thrombus formation in a wound.

**Symptoms.**—Usually hæmophilia is not noted in the child until a trifling cut is followed by serious or uncontrollable hæmorrhage, or spontaneous bleeding occurs and presents insuperable difficulties in its arrest. The symptoms may be grouped under three divisions: external bleedings, spontaneous and traumatic; interstitial bleedings, petechiæ and ecchymoses; and the joint affections. The external bleedings may be spontaneous, but more commonly they follow cuts and wounds. In 334 cases (Grandidier) the chief bleedings were epistaxis, 169; from the mouth, 43; stomach, 15; bowels, 36; urethra, 16; lungs, 17; and in a few instances bleeding from the skin of the head, the tongue, finger-tips, tear-papilla, eyelids, external ear, vulva, navel, and scrotum.

Traumatic bleeding may result from blows, cuts, scratches, etc., and the blood may be diffused into the tissues or discharged externally. Trivial operations have proved fatal, such as the extraction of teeth, circumcision, or venesection. It is possible that there may be local defects which make bleeding from certain parts of the body more dangerous. D. Hayes Agnew mentioned to me the case of a bleeder who had always bled from cuts and bruises above the neck, never from those below. The bleeding is a capillary oozing. It may last for hours, or even many days. Epistaxis may prove fatal in twenty-four hours. In the slow bleeding from the mucous surfaces large blood tumors may form and project from the nose or mouth, forming remarkable-looking structures, and showing that the blood has the power of coagulation. The interstitial hæmorrhages may be spontaneous, or may result from injury. Petechiæ or large extravasations—hæmatomata—may occur, the latter usually following blows.

The joint affections of hæmophilia are remarkable. There may simply be pain, or attacks which come on suddenly with fever, and closely resemble acute rheumatism. The larger joints are usually affected. Arthritis may usher in an attack of hæmorrhage.

So far as the examination of the blood goes, no changes of special moment have been noted. When the bleeding has been severe it is thin



and watery, but at the beginning of the bleeding the blood is rich in corpuscles and coagulates firmly.

**Diagnosis.**—In the diagnosis of the condition the family tendency is important. A single uncontrollable hæmorrhage in child or adult is not to be ranked as hæmophilia; but it is only when a person shows a marked tendency to multiple hæmorrhages, spontaneous or traumatic, which tendency is not transitory but persists, particularly if there have been joint affections, that we may consider the condition hæmophilia. Peliosis rheumatica is an affection which touches hæmophilia very closely, particularly in the relation of the joint swelling. It may also show itself in several members of a family. The diagnosis from the various forms of purpura is usually easy.

**Prognosis.**—The patients rarely die in the first bleeding. The younger the individual the worse is the outlook, though it is rarely fatal in the first year. Grandidier states that of 152 boy subjects, 81 died before the termination of the seventh year. The longer the bleeder survives the greater the chance of his outliving the tendency; but it may persist to old age, as shown in the case of Oliver Appleton, the first reported American bleeder, who died at an advanced age of hæmorrhage from a bed-sore and from the urethra. The prognosis is graver in a boy than in a girl. In the latter menstruation is sometimes early and excessive, but fortunately, in the female members of hæmophilic families, neither this function nor the act of parturition brings with it special dangers.

**Treatment.**—Members of a bleeder's family, particularly the boys, should be guarded from injury, and operations of all sorts should be avoided. The daughters should not marry, as it is through them that the tendency is propagated.

When an injury or wound has occurred, absolute rest and compression should first be tried, and if these fail the styptics may be used. In epistaxis ice, tannin, and gallic acid may be tried before resorting to plugging. Internally ergot seems to have done good in several cases. Legg advises the perchloride of iron in half-drachm doses every two hours with a purge of sulphate of soda. Venesection has been tried in several cases. Transfusion has been employed, but without success. During convalescence, iron and arsenic should be freely used.

### SECTION III.

## DISEASES OF THE DIGESTIVE SYSTEM.

### I. DISEASES OF THE MOUTH.

#### STOMATITIS.

(1) **Acute Stomatitis.**—Simple or erythematous stomatitis, the commonest form of inflammation of the mouth, results from the action of irritants of various sorts. It is frequent at all ages. In children it is often associated with dentition and with gastro-intestinal disturbance, particularly in ill-nourished, unhealthy subjects. In adults it follows the overuse of tobacco and the use of too hot or too highly seasoned food. It is a frequent concomitant of indigestion, and is met with in the acute specific fevers.

The affection may be limited to the gums and lips or may extend over the whole surface of the mouth and include the tongue. There is at first superficial redness and dryness of the membrane, followed by increased secretion and swelling of the tongue, which is furred, and indented by the teeth. There is rarely any constitutional disturbance, but in children there may be slight elevation of temperature. The condition is sufficient to cause considerable discomfort, sometimes amounting to actual distress and pain, particularly in mastication.

In infants the mouth should be carefully sponged after each feeding. A mouth-wash of borax or the glycerine of borax may be used, and in severe cases, which tend to become chronic, a dilute solution of nitrate of silver (three or four grains to the ounce) may be applied.

(2) **Aphthous Stomatitis.**—This form, also known as *follicular* or *vesicular* stomatitis, is characterized by the presence of small, slightly raised spots, from two to four millimetres in diameter, surrounded by reddened areolæ. The spots appear first as vesicles, which rupture, leaving small ulcers with grayish bases and bright-red margins. They are seen most frequently on the inner surfaces of the lips, the edges of the tongue, and the cheeks. They are seldom present on the mucous membrane of the pharynx. This form is met with most often in children under three years. It may occur either as an independent affection or in association with any