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IMPETIGO CONTAGIOSA: ITS CLINICAL FEATURES. *

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IN a period of three years and a half, out of a total of twenty-seven hundred consecutive cases of skin disease, eighty-eight have been examples of the disease known as impetigo contagiosa. The cases have been, as a rule, of a uniform type, although occasional deviations in regard to the character of the lesion, distribution, and course were met with. The affection as commonly observed is well illustrated by the following case:

CASE I.—R. A., male, aged 3. On face were several scattered flat vesicles and vesico-pustules and bullæ, varying in size from a pin head to a dime, the larger ones showing a tendency to umbilication and already beginning to dry in the centre into a thin crust. The contents of the lesions were in some purely vesicular, in others vesico-pustular, all becoming vesico-pustular sooner or later. The lesions were superficial in character, surrounded by a narrow red band, and but slightly inflammatory. One of the bullæ had already dried, and appeared as a small crusted patch, the crust being thin, granular, yellowish, and wafer-like. The eruption had existed three days and had been preceded by slight malaise, and had begun as little "water-blisters," which rapidly enlarged. At the present time the child was apparently in perfect health, and there seemed to be no subjective symptoms. A brother had the same disease, as also had several children in the same neighborhood. In a few days new patches were seen on the face, one or two in the scalp, and several on the hands. The enveloping membrane of one of the new pea-sized bullæ had been rubbed off, and the surface appeared like a shallow erosion or burn, secreting a thin sero-purulent fluid. The older bullæ were drying rapidly; two or three had become confluent, making a patch as large as a silver half-dollar, covered with the same peculiar crust as already noted. When seen two days later, the more recent vesicles had grown into bullæ, flat, um-

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bilicated, and beginning to dry. One small vesicle had appeared on the conjunctiva of the left eye, causing slight hyperæmia and a trifling sero-purulent discharge. The confluent patch and the older bullæ were covered with a dry, yellowish and brownish-yellow, thin, granular, wafer-like crust, somewhat turned up at the edges only slightly adherent, and appearing as if imperfectly pasted on. Several new vesicles had appeared, but showed less tendency to enlarge. One or two had been rubbed, and seemed like superficial abrasions. Forty-eight hours later all the bullæ had given place to simple crusted patches of the character already described. At the margin of the oldest patches the crust had begun to crumble off. Two days afterwards, the disease was fast disappearing; the crust of the discrete patches, with few exceptions, had entirely fallen off, leaving erythematous spots. On some of the patches a few small fragments were still clinging. At the end of a few days nothing was seen of the disease except the erythematous spots showing the site of the eruption; these gradually faded. The disease had run its course in about two weeks.

This case pictures the typical disease. At times the eruption is confined to the face, as occurred in fifteen of my cases. In others, in addition to the face the scalp shows some patches, or the disease may begin on the scalp. In others, again, the hands and arms, and not infrequently the legs and feet, are affected. The mucous membranes of the eye and nose are sometimes the seat of vesicles. Beginning usually on the face, it may extend to all parts; the trunk seems the least vulnerable. Ordinarily the eruption is seated upon the face and hands. On the extensor surface of the fingers, near or around the nail, is a favorite locality for the eruption when attacking the hands. Occurring here, it closely simulates a burn, and the lesion is, moreover, apt to be more persistent.

The disease was occasionally ushered in by fever and malaise, which subsided as soon as the eruption appeared. The sub-maxillary glands were in a few instances observed to be enlarged. In most of the cases, however, constitutional symptoms were entirely absent, or so slight as to escape notice. The disease is usually unattended with any subjective symptoms. Occasionally the eruption is a little itchy in the beginning; but even this is an exception. The eruption, when occurring in children with a tendency to eczema, may, if improperly treated or irritated, develop into that disease. This occurred in three of my cases, in which the primary eruption was unquestionably contagious impetigo. The lesions are superficial, and begin as vesicles, rapidly becoming vesico-pustular, enlarge by extension at the periphery into bullæ, varying in size from a split pea up to a dime or larger;

at the same time the centre dries, and, in comparison with the surrounding bullous wall, seems depressed. The enveloping membrane is thin. There is no tendency to spontaneous rupture. In some cases the lesions become markedly pustular and have inflammatory borders. The eruption never leaves a scar, nor even a trace, except erythematous spots, which, however, quickly fade away. At times the lesions show very little tendency to enlarge, and then closely resemble varicella. Cracks, fissures, or abrasions are very soon the seat of the characteristic vesico-pustules and bullæ.

The disease was observed entirely among dispensary patients,—among the poorest class of dispensary patients, in fact. It may and does occur, however, among people well-to-do. In almost all of the cases the subjects were children; in only three instances was the eruption observed in adults, and in these it occurred in an abortive form, or was limited to two or three patches about the hands and face, and had been, moreover, contracted from younger members of the family. With but few exceptions, the children in whom the disease was observed were under ten years of age, and two-thirds of these under five.

The characteristic color of the crust—the straw-yellow—was often seen, but a brownish tinge, at times quite decided, was more common, depending probably upon the presence of dust and dirt.

Deviations from the typical disease were occasionally seen. The lesion itself may be somewhat anomalous in character, as the following case illustrates:

Case II.—M. A., male, aged 5. On the face were a few scattered vesico-pustules, about the size of a split pea, flat, and showing but little tendency to enlarge, and having inflammatory borders. On the arms were lesions of the same character. All were slightly umbilicated, and as the centre dried, and became thereby more and more depressed, the elevation of the surrounding bullous wall became comparatively more marked. The contents had become milky, and later decidedly purulent, so that the lesion was not unlike a large "pock." Crusting gradually took place, yellow and brownish in color, being thicker and darker at the periphery, and with a persistent inflammatory areola. New lesions appeared from time to time, and presented the same characters. One or two typical patches were seen on the face.

Such cases, although not frequent, are not uncommon, and, when occurring, are much more inclined to be chronic and to repeated outbreaks than the typical disease. Moreover, in cases showing this character the eruption seems to have a predilection for the arms and legs, a few characteristic patches being usually seen about the face. In some instances a few such lesions were seen in cases in which the

eruption in the main was typical. The eruption differs from that commonly seen in the more marked umbilication, prominence of the peripheral bullous wall, the thicker and darker crust, the inflammatory areola, the slow maturation, and, finally, in the tendency to repeated outbreaks.

At times cases are seen in which the bullæ, instead of being flat and umbilicated, are somewhat distended, and resemble very closely the eruption of pemphigus, as in the following case :

Case III.—C. R., female, aged 7. On face and forearm were several well-marked bullæ, with very little areola, and showing different degrees of distention, in some the contents tolerably clear, and in others milky. Several small vesico-pustules were scattered over the face, and a large, characteristic, crusted patch was seen on the nose. The eruption had begun as small blisters, and developed rapidly into blebs. Two children in the same family had the disease, but the eruption presented nothing unusual. Later the bullæ flattened and gradually dried, forming a thicker crust than ordinarily seen. Several new vesico-pustules and bullæ appeared, and finally the disease yielded to treatment.

Cases in which this peculiarity, the more or less distended bleb, occurs, are comparatively rare. More often one or two such lesions will be seen in patients otherwise showing the common form of the eruption. If the bleb is ruptured, the enveloping membrane sinks and becomes blended with the sero-purulent secreting base, and dries into a yellowish or brownish-yellow crust, which in time falls off, leaving an erythematous spot, which gradually fades. If the bleb-wall is rubbed off, the underlying surface appears as a simple discharging shallow ulceration or burn. When no rupture takes place, the bleb gradually sinks and dries, forming a crust somewhat thick, and resembling the crust of ecthyma, except that it is not so dark. In some instances, especially when the lesion has an inflammatory border, the resemblance at the maturing stage of the lesion to ecthyma is quite striking. This is never seen in all the lesions ; one or two may exhibit this peculiarity and the rest of the eruption be characteristic. These, then, are the modifications of the lesion commonly observed, and exemplified in some of my cases.

In the distribution of the eruption anomalies were noted. The first case narrated in this paper gives that usually observed,—the face, scalp, hands, and arms ; it may extend to the legs and feet. In typical cases of the disease the eruption never spares the face ; beginning here, it may extend to all parts, but commonly to the scalp, hands and forearms. Deviation from this may, I think, be properly considered

as irregular. The most common one met with is that in which the eruption is seated mainly on the limbs. In the cases under my care the limitation of the eruption to these parts was noted in six instances; in a number of others, although there were a few patches elsewhere, the limbs were the parts chiefly attacked. The characters of the eruption were about the same, except that the lesions were scattered, and consequently there was no tendency to the formation of confluent patches. One or two of the bullæ may be somewhat distended and dry into tolerably thick crusts. Indeed, the eruption may assume any of the characters as observed in the cases already noted.

The eruption may occasionally begin on the hands or other parts. In one case the eruption began on the knee, and subsequently the hands were affected, but no other part became involved; at the end of two weeks the disease had run its course. In another instance the eruption began on the buttocks, and subsequently appeared on the face and hands. In several cases the eruption first showed itself on the hands, and then extended to the face and other parts,—spontaneously or by auto-inoculation.

The course of the disease, as may be inferred from the histories of the cases quoted, varies. In my cases the average was about twenty days. Other observers have noted about the same average duration. In some instances the eruption was prolonged to several months. Even if let alone, the affection is apt to be self-limited, but not always so; for in some cases, and in spite of treatment, new lesions continue to appear, and the affection persists for two or three months. It does not lose its contagious properties, however, as I have clinically and experimentally observed. Cases in which the limbs are chiefly involved seem to be most disposed to chronicity. The following case is an example:

Case IV.—R. M., male, aged 9. One characteristic crusted patch on face, several small flat vesico-pustules on the hands and arms, which later developed into small flat and slightly umbilicated bullæ with sero-purulent contents. Subsequently several appeared on the legs. Old patches crusted and disappeared. One of the flat bullæ had inflammatory borders, and the contents were markedly purulent, and dried into a thick brownish-yellow crust. New lesions continued to appear on the limbs, going through the same phases as the typical lesion. One or two appeared on the left ear, dried and crusted rapidly. In this manner the disease continued for two months, and then gradually disappeared. In this time two other children in the family were attacked, in whom, however, the disease ran a shorter and more typical course.

In their main features, my cases have agreed more or less closely with those described by other writers, both in this country and abroad. All observations go to prove that, although the affection is a comparatively simple one, and the eruption usually typical, it at times presents irregular and anomalous characters.

Recapitulating, we have a contagious, auto-inoculable eruption, of a vesico-pustular type, superficial in character and but slightly inflammatory, occasionally preceded by slight fever, the lesions varying in size from a pin-head to a dime or larger, always beginning as small vesicles or vesico-pustules, and enlarging by extension of the peripheral wall, with a thin enveloping membrane and a tendency to umbilication, and no inclination to rupture; drying into a thin, granular, wafer-like crust, appearing as if stuck on; seated usually on the face and hands, not infrequently on the scalp and limbs, and rarely on the trunk; tending towards spontaneous disappearance in about fifteen days; at times lesions appearing, and the disease persisting several weeks or even months; having no influence upon the general health, and usually unaccompanied with any subjective symptoms; and observed mainly in children under ten years of age.