5. **Eruptions.**—That the skin of childhood should be the subject of irritative changes is certainly only what is to be expected, and that variations in condition do most frequently occur is as true as that they are thus expected.

Certain general considerations of the subject give us the key-note. Thus, in the beginning, a momentary thought directed to the great change which must result in the passage from intra- to extra-uterine life, would naturally lead to the anticipation of a cutaneous hyperæmic condition at once to be developed. In intra-uterine life we not only have the delicate and susceptible skin lubricated with the soft, bland smegma, but pressure on any and every part is jealously guarded against by the surrounding amniotic fluid. A single minute, frequently, and the most irritative changes occur: the waters pass away, the uterus crowds and presses upon every part of the child, while the outside world, still less considerate, receives it on its birth, its atmosphere stimulating and irritating, its rough points jagging and abrading, while unnecessary and too frequently ill-advised appliances and applications add to the common discomfort.

Cutaneous hyperæmia—erythema, as it is generally called—is a child's primary skin trouble. Such an erythema is certainly nothing more nor less than the variegated blush of an overstimulated circulation. Perhaps if the smegma were left undisturbed for a few hours, just as nature puts it over the body, or until the skin had become somewhat accustomed to its new atmosphere, such hyperæmia would be avoided; but as such excitability seems to do no immediate harm to the child, neither nurse nor mother are likely to be found satisfied with such an arrangement. But does this hyperæmia do no harm? Does it not provoke an excitability in the skin which would be better absent? Certainly children are most susceptible to cutaneous impressions, as witnessed not only in colds so easily taken, but by the variety of local manifestations, to the relief of which the practitioner is so frequently called. Dental irritations pertain to these troubles only as they act as excitants to the existing predisposition, or as they keep up an excitability which overmasters the corrective force natural to the *vis vitæ*.

Hyperæmia running into an excess is inflammation. Inflammation of the skin finds a primary expression in the term Dermatitis. A dermatitis has secondary signification, as it presents peculiarities which lead us to look for reasons for such expressions. Thus, one inflammation in the skin is a simple sthenic increased vascularity, having the phenomena of redness, heat, pain, and swelling. A second is not regular and honest in its expressions, but throws out claw-like expansions, and looks dusky and threatening, throwing to the surface, here and there, blebs of serum. We distinguish this second from the first by the subterm erysipelas, or erysipelatous inflammation. Then we have an inflammation which presents the peculiarity of studding the face of the skin with pustules, and this derangement we distinguish by the term pustulæ or pustular inflammation. Another form covers the inflamed surface with vesicles; another throws out groups of nodules,—

papular; another circumscribes its redness to patches,—rashes; another presents raised or elevated wheals,—urticaria, etc. All have alike the primary signification of a perverted circulation, but differ in presenting distinctive phenomena, these marking differences in local or constitutional circumstances.

That dental irritation develops or creates the distinctive features in a skin disease is sheer nonsense. All that such irritation can have to do with the matter is that it exhausts the system, just as any pain exhausts and tires, and reduces, as remarked, the ability of the vital force to guard or protect itself against an enemy or enemies in waiting at the threshold. It does not make the enemy, it only lets him in by weakening the bars.

That a skin disease is thus introduced, and continued in an ability to resist applied medication, would seem to be true beyond the shadow of a doubt; and it is for such a reason that the consideration of dental irritation, in connection with infantile skin diseases, is important; and yet this study, as the evolution of the teeth is concerned, differs in no wise from its study in relation to stomatitis, diarrhœa, or spasm, as certainly any intelligent mind must at once appreciate.

Skin diseases belong to one of eight orders:

1. Pimples.
2. Scales.
3. Rashes.
4. Bullæ.
5. Pustules.
6. Vesicles.
7. Tubercles.
8. Spots.

1. **Pimples—Papulæ.**—Small and pointed elevations of the cuticle, with an inflamed base—very seldom containing fluid, seldom suppurating, and commonly resolving as scurf.

Three primary divisions of papules are made: strophulus, lichen, and prurigo.

Secondary divisions.—Strophulus intertinctus.
S. albidus, S. confertus, S. volaticus, S. candidus.
Lichen simplex, L. pilaris, L. circumscriptus.
L. agrius, L. lividus, L. tropicus.
Prurigo mitis, P. formicans, P. senilis.
P. pudendi muliebris.

2. **Scales—Scaly Diseases—Squamæ.**—Scales or laminæ form upon the skin. Scales are of various forms,—in some cases, as in pityriasis, resembling a scurf; in other cases, as in ichthyosis, being broad and flattened, and bearing likeness to fish-scales. To mark the various prominent differences, four varieties are enumerated: Psoriasis, Lepra, Pityriasis, Ichthyosis.

Subdivisions.—Lepra vulgaris, L. alphoides, L. nigricans.
Psoriasis guttata, P. diffusa, P. gyrata.
P. inveterata.
Pityriasis capitis, P. rubra, P. versicolor, P. nigra.
Ichthyosis simplex, I. cornea.

3. **Rashes—Exanthemata.**—Irregular, variously figured patches, appearing on various parts of the body, leaving interstices of a natural color, and terminating in exfoliations of the cuticle. The designation is generally limited to efflorescences originating in fevers, as for example measles and scarlet fever.

Bateman, however, includes, and perhaps more philosophically, Erythema, Urticaria, and Purpura in the division.

The first division is, then, according to Bateman, Rubeola, Scarlatina, Urticaria, Purpura, Erythema.

Subdivisions.—Rubeola vulgaris, Scarlatina simplex.
S. anginosa, S. maligna, Urticaria febrilis, U. evanida.
U. persistans, U. conferta, U. subcutanea.
U. tuberosa, Purpura simplex, P. hæmorrhagica.
P. urticans, P. senilis, P. contagiosa, Erythema læve.
E. papulatum, E. tuberculatum, E. nodosum.

4. **Bullæ.**—A condition in which effusion occurs on the true skin, separating the cuticle in the form of blebs or blisters. An effusion developed by a blister comes justly in its consideration under this head, for it is surely not less a bleb because a blister has produced it. The difference between such a bleb and one resultant from an erysipelatous inflammation is that one has strictly a traumatic signification, while the second is a specific offence. Blebs or bullæ have three primary classifications: Erysipelas, Pemphigus, Pompholyx.

The subdivisions are into Erysipelas phlegmonodes, E. œdematodes, E. gangrænosum, E. erraticum, Pompholyx benignus, P. dinuturus, P. solitarius.

5. **Pustules—Pustulæ.**—An inflammation of the skin, resulting in the formation of purulent matter, which accommodates itself by throwing up little circumscribed tumors. Whether one or many of these pustules rise on a common inflamed base depends on the fundamental or exciting cause; and because the conditions which produce pustular inflammation vary, so have we various names by which to distinguish and appreciate these causes. Five primary pustular inflammations exist: Impetigo, Porrigo, Ecthyma, Variola, Scabies.

The subdivisions are numerous, depending on peculiarity of features. Impetigo figurata, I. sparsa, I. erysipelatodes, I. scabida, I. rodens, Porrigo larvalis, P. furfurans, P. lupinosa, P. scutulata, P. decalvans, P. favosa, Ecthyma vulgare, E. luridum, E. cacheticum, Variola, Scabies papuliformis, S. lymphatica, S. purulenta, S. cachectica.

6. **Vesiculæ—Vesicles.**—Vesicles differ from pustules in containing lymph—they look like little water pimples, although it is very frequently the

case that the contained lymph is quite opaque; the end of a vesicle is by scurf or scab. There are seven primary varieties: Varicella, Vaccinia, Herpes, Rupia, Miliaria, Eczema, Aphtha.

The subdivisions are Varicella lenticulus, V. conoidæ, V. globate, Herpes phlyctænodes, H. zoster, H. circinatus, H. labialis, H. præputialis, H. iris, Rupia simplex, R. prominens, R. escharotica, Eczema solare, E. impetiginodes, E. rubrum, Aphtha lactantium, A. adultorum, A. anginosa.

7. **Tubercula—Tubercles.**—These are small, hard, circumscribed tumors—they may be fixed in a state of integrity, or they may be degenerative. There are eight kinds of these tumors—or, to express it differently, there are eight distinctive differences: Phyma, Verruca, Molluscum, Vitiligo, Acne, Sycosis, Lupus, Elephantiasis, Frambœsia.

Among these, subdivisions seem only necessary with acne and sycosis. Thus, there are three peculiarities in acne, which are marked by the terms Simplex, Indurata, Rosacea. In sycosis, Sycosis menti, and S. capillitii, designating the location of the tubercles.

8. **Macula—Spot—Mother-Mark—Freckles, or Ephelis—Nævus.**

These eight classifications, after Bateman, with his subdivisions, make out of skin diseases all that concerns a present consideration of them. It is for the student to comprehend the primary divisions, as their pathological differences are concerned; the radii, or subdivisions, will be found to take care of themselves. Without an understanding of the general subject one could scarcely expect to appreciate any accidental or positive dental relations. The subdivisions will be remarked, on examination, to be simply as family surnames distinguishing one child from another; it is true, of course, that there are peculiarities of character, just as each child is peculiar, and by such peculiarities are these modifications on the primary condition named. Now, it is not by any means common to associate all these conditions with dental irritations; yet it is certainly true that any one of them may have such association: therefore, if the student would understand one he must understand all. (See *The Face and its Diseases.*)

CHAPTER VII.

ANOMALIES OF SECOND DENTITION AND THEIR SURGICAL RELATIONS.

UNDERSTANDING and appreciating the characteristics and relations of a normal dentition, we are prepared to pass to the consideration of abnormal, or pathological, conditions. Such conditions may be justly grouped under the head of anomalies.

Anomalies in second dentition are classifiable under seven heads:

1st. Teeth common to the age, but erupting external or internal to the arch.

2d. Teeth denied space in the arch, because of natural or surgical interference with the process of maxillary enlargement.

3d. Germs developing in positions where their product must remain encysted.

4th. The production of supernumerary teeth.

5th. Third dentitions.

6th. Teeth the periodonteum of whose fangs associate with the periosteum of the maxillary sinus.

7th. Germs with heterogeneous development.

These seven conditions, then, because they differ from a just, or normal, dental evolution, we call anomalies.

ANOMALY FIRST.—A tooth external or internal to the alveolar arch not infrequently gives origin to an ulcer or locates epithelioma. Yet close as is this primary to the secondary lesion, and evident as such relationship would seem to be, the writer has known ulcers of the tongue, lips, and cheeks treated for months—of course, without success—where it has never seemed to strike the practitioner that a tooth could have any association with the disease; indeed, in one case, where the patient was remotely connected with himself, death was the result of cancer located in the cheek from this very anomaly. Many cases of like character are familiar to the experiences of every surgeon.

Note.—Even where there is excess of room, the permanent teeth not infrequently erupt irregularly; indeed, this applies so directly to the inferior incisors, that it may almost be said to be the rule rather than the exception. Unless, however, specially indicated, it is the best practice to leave such teeth to nature; they will almost always be found to come right of themselves. Such eruptions are to be classed with the anomalies only as derangement is marked and permanent.

ANOMALY SECOND.—*Teeth denied space in the arch.* This anomaly has perhaps the largest associative pathological connection.

It is to be remarked that this lesion, if we may term it such, is more frequently the fault of the surgeon than of nature. If, for one moment, we refer to the physiological relations existing between the first and second dentures, we may find that it is within our power to prevent the many ills that follow so frequently in this train, and this simply by doing little, or, more commonly, nothing.

The deciduous dental arch is filled, as we are all aware, completely by its ten teeth. The second, or permanent, set is to comprise in number sixteen, and each tooth certainly quite as large again as its predecessor. This increase in number and size of the teeth, it is evident, must be provided for in an enlargement of the alveolar arch. This provision is always attempted by nature in the process described by the physiologist as the elongatory.

This process of maxillary enlargement is to be illustrated by considering the ten milk-teeth as so many wedges placed in a springy arch. This arch it is designed to lengthen by additions to either end. If, now, these wedges should be removed before others were ready to take their place, it is evident that the elongation, being made at the ends, would, to a greater or less extent, be counterbalanced by the springing together of the parts at the sites of the removed wedges. The process of maxillary, or rather alveolar, absorption, is truly represented by this retraction of an arch. In proportion to the number of deciduous teeth removed prematurely, will be the curtailment in size of the arch; at least of its alveolar face.

Let us, then, look at the results of such abridgment,—approximal caries of the teeth, periodonteal troubles, trismus, odontocele, necrosis, the violent inflammations attendant on the development of the dentes sapientiæ, etc.

Note.—If there be a pathological Pandora's box, it is certainly the lesion of an overcrowded maxillary arch.

The condition of overcrowding is made evident to a practitioner the moment he looks into the mouth of his patient: the teeth are jammed into the most uncomfortable-looking positions; the deformity, however, mostly existing in the front of the mouth,—either the central incisors override, or the laterals are thrown back, or otherwise the cuspidati take a tusk position, standing out prominently from the arch, the bicuspidati occupying too anterior a location, approximating, indeed, not infrequently with the lateral incisors.

Treatment.—To abort the ill consequences of such a contracted arch, extract at as early a period as possible the first bicuspidatus of either side. This very simple operation will frequently not only secure against secondary lesions, but will occasionally correct the most annoying deformities. Let it be remembered, however, by the practitioner who prefers prophylactic to operative surgery, that on his treatment of the deciduous mouth depends, in a measure, the health and comfort of the adult.

If the question be asked, What is to be done with the deciduous aching