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ON NOSE-BLEEDING.*

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LADIES AND GENTLEMEN,—When in this hour I shall tell you something about nose-bleeding, I am taking for granted that you have beforehand a clear understanding of the fact that in nose-bleeding we are not dealing with a definite disease, but with a symptom. We are standing at a stage historically earlier and more primitive, that might be characterised as "symptom diagnosis"—as distinct from "disease diagnosis." In the modern clinic, this is really the fact to a much greater extent than one is inclined to think. We talk of ischias, lumbago, metrorrhagia, cephalalgia, and indeed many other examples could be mentioned. Even an apparent "disease diagnosis" as "angina" (*i.e.*, choking) is really just an old symptom diagnosis that is kept up for practical reasons.

But you are certainly cognisant, too, that we are trying as far as possible to break these symptom diagnoses in pieces; and when we do succeed in cleaving such a designation into a number of definite disease diagnoses, we have attained what we aimed at: the formulation of definite clinical entities on a scientific basis.

How is it, then, with nose-bleeding in this respect? Have we been able on this point to take the step from symptom diagnosis to disease diagnosis? The answer is both Yes and No.

Yes—in as far as a thorough examination (including both

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rhinological and general physical examination) as a rule will enable us to ascertain the origin of the hæmorrhage. But, on the other hand, we have to answer with a No, so far as most instances of nose-bleeding are not cleared up in this way. If they come under medical care at all, they are diagnosed and treated as nose-bleeding, entered in the record under the finer name "epistaxis"; and that is usually the end of it. Clinically and scientifically, however, this is not quite satisfactory; we ought by all means try to get to the back of the symptom, down to the underlying disease.

First, I want to remind you that, popularly speaking, the nasal mucosa is an organ that bleeds readily, not only from the cavernous tissue of the conchæ—which you at once will think of in this connection—but also from the septal mucosa, nay, the matter stands even so that by far the most cases of nose-bleeding come from the septum itself.

The nose, then, is a readily bleeding organ, *per diapedesin* as well as *per rhexin*. But, apart from the menses, no spontaneous hæmorrhages are normal physiological processes; and this applies too to nose-bleeding. Spontaneous hæmorrhage from the nose is not a physiological process; and, still, it is not so far from the physiological border—nearer hereto, probably, than are hæmorrhages from most other organs. From this it follows:

(1) That general causes of any sort that increase the fragility of the vessel-walls or lower the coagulability of the blood, are particularly apt to manifest themselves in nose-bleeding, a fact of which we will find many illustrations in the following; and—

(2) That even in individuals who are otherwise in good health, nose-bleeding may be produced by various factors that exceed the normal physiological limits but very little—as, for instance, nose-bleeding in soldiers on excessive fatigue; nay, this fact—the readiness with which nose-bleeding may occur—is so well known to the general public that it may even be of forensic significance. Prisoners suspected of homicide make use of this fact to explain the blood stains on their clothes, just because they know that it is a general experience that the nose may bleed for a mere trifle.

(3) Further, this fact implies the consequence that the physiological tendency to epistaxis, which is subject to a great deal of physiological variation, is evenly and gradually going

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on to the pathological hæmorrhagic diathesis and, through all possible degrees hereof, to pronounced and real hæmophilia.

It should further be mentioned that milder degrees of hæmophilia no doubt are more frequent than is generally supposed, a fact that is borne out every now and then in rhino-surgical treatment.

These factors — the marked tendency to bleeding, the individual differences, the many milder forms of hæmorrhagic diathesis that through gradual transitions lead on to a constantly increasing degree of hæmophilia, as well as many other pathological conditions of similar effect (lesions that give rise to hypertension, vascular fragility and coagulation anomalies)—all these are naturally of the greatest importance as contributory causes of the nose-bleeding in given cases. And, when later on we will mention a number of cases of nose-bleeding, occasioned, for instance, by external influence or by local diseases of the nose, etc., it should be emphasised once for all that it is only with this distinct reservation, that is, our insistence on the importance of the general condition and the frequent interaction of concurring and combined factors, that we now will go on to discuss the many different causes of epistaxis.

Before we leave the real physiological or nearly physiological field, I shall merely mention some conditions that are highly suggestive of epistaxis from physical exertion because they imply a physiological strain, although this strain in some way is of a negative nature, in contrast with that just named. I am talking of the nose-bleeding that may come on in mountain-climbers and aeronauts, or in divers and caisson-workers when the high pressure ceases.

Nose-bleeding after violent sneezing is also bordering on the field of physiology.

A. Nasal Lesions.

I. **Traumatic Lesions.**—These lesions constitute really the most frequent cause of nose-bleeding. It is not so much a question of the large traumas, however, but rather of the small ones, the abrasions. These have a very definite origin. They start out as a *rhinitis sicca anterior*, which is brought about by various particles, dust, coal dust, etc. (in bakers, flour; in cement-workers, cement dust, etc.), that lodge in the vestibule of the nose, especially near the border of the cartilaginous

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septum. Attempts to remove these particles give rise to excoriations, which are covered with crusts that again are removed by scratching, and so on. Larger ulcerations develop by and by. These are surrounded by teleangiectasies, which further contribute to the bleeding and eventual extension of the ulcer. Once in a while the final result of this process will be the so-called bleeding septal polyp, or it may result in perforation of the septum.

The various stages of this process offer plenty of opportunities for attacks of nose-bleeding, and this lesion—bleeding from the so-called Kieselbach's area—is really the *most frequent cause of nose-bleeding in children as well as in adults.*

At times these bleedings may be very profuse, particularly in arteriosclerotic individuals, but they are usually slight and stop by themselves or on some slight treatment which the patient institutes himself. Practically everybody has had that experience; and it is doubtful, I think, whether there is anybody at all who has not at some time met with such a case.

In the crust-covered stage, the act of forcibly blowing the nose may sometime have a traumatising effect, as it may dislodge the crust so that bleeding sets in.

As mentioned, the ulceration may end in *perforation.* As a rule, such a perforation is small—*ca.* 5 to 6 millimetres in diameter—and it should be kept in mind that such a perforation is never syphilitic, which it often is taken to be. It may, on the other hand, be of a tuberculous nature; but the typical syphilitic perforation is located farther back, in the bony part of the septum.

A special form of this lesion is found in *chrome-workers.* All such workers are said, without exception, to get perforation of the septum; and this lesion is ushered in during the first working days by very profuse nose-bleedings.

Larger traumas.—This heading covers any injury that may be counted as an accident, that is, the largest and most complicated lesions—whether external or internal—injuries in motor-car accidents, war injuries, kicks by a horse, also blows in fighting or boxing. The last ones are frequent sources of traumas.

Various slang phrases testify that nose-bleeding from fighting or boxing is well known to the common people, even to schoolboys. Here, perhaps, a certain national psychological moment is putting itself forward. The bleeding is a visible

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proof of something having happened. The flowing blood puts a certain drastic stamp on the situation, and a certain humanity asserts itself at the same time—"It does not amount to much," one will say, and one does not attach much importance to a trauma of this kind. And this is right too, in general. Serious complications set in but rarely. Such a trauma, however, may involve another risk, namely that of *disfigurement*. This may develop in two ways:—

(1) From a *fracture of the nasal bones* that is not recognised on account of the swelling. If, in such cases, the fracture is not reduced at once, there will be a marked disfigurement when the swelling subsides. Special rhinological technique is desirable in this condition, but one can make do by introducing a slightly curved hæmostat that is wound with cotton or gauze, while the fingers of the other hand are controlling the reduction from the outside, on the ridge of the nose.

(2) From a *septal hæmatoma*, which appears as a dark-red cherry-like swelling that completely fills out both nostrils. This is due to a fracture of the cartilage with hæmatoma, which is always bilateral and always becomes infected later on, so it may result in necrosis and sequestration of the cartilage, and subsequently a most disfiguring sinking of the nasal ridge, just behind the tip of the nose.

Treatment of the septal hæmatoma consists in immediate operation, preferably with excision of a triangular piece of the mucous membrane and insertion of a piece of gutta-percha tissue for drainage after letting out the accumulated blood; then packing of both nares.

So, in these cases, it is not enough merely to stop the bleeding; it is essential, too, to make a thorough examination of the field and prevent the impending eventualities—fracture deformity and septal hæmatoma with sinking of the nasal ridge.

In *fracture of the base of the skull* nose-bleeding is a typical symptom which appears when the cribriform plate or the walls of one of the sinuses are fractured. In itself, the bleeding is of diagnostic significance, provided that there is no direct trauma of the nose; and the diagnosis is clinched if there is also some oozing of cerebrospinal fluid.

This condition is sometimes masked by the blood running down the throat when the patient is lying on his back. One should therefore look at the throat of such patients to see whether there be any hæmorrhage. Furthermore, it is important

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to remember that this sort of nose-bleeding calls for no treatment, neither packing nor irrigation.

A special form of traumatic nose-bleedings are the *operative and post-operative hæmorrhages*, which may often be very troublesome to the rhinologist. As general practitioners, however, you are not very likely to be annoyed by this emergency, and I shall not discuss it here. On the border line of traumata we find:—

II. **Foreign Bodies.** — In nose-bleeding, especially in children, one should always think of foreign bodies, even though the history is not at all suggestive of any such cause. Very often the children will not say a word about the foreign body (peas, shoe buttons, beads, etc.) introduced into the nose. Naturally, the extraction of the foreign body may also give rise to nose-bleeding. Special phenomena that border on foreign bodies are *rhinoliths* and *animal parasites*.

III. **Inflammations.**—*Non-specific*, *simple acute coryza* may be associated with hæmorrhage, which is, however, of no particular importance. This hæmorrhage may be occasioned in three ways—early, at the onset of the coryza, by sneezing; later, by vigorous blowing out of the secretion; and still later, through crust formation and subsequent excoriation.

Chronic non-specific inflammations are of no particular consequence in this connection. Among the *chronic specific inflammations*, *ozæna* seldom causes nose-bleeding, but these may be very profuse when they occur.

In their ulcerative destructive stages, *tuberculosis*, *lupus*, and *syphilis* may naturally give rise to hæmorrhages, but, on the whole, these are not frequent. A particular form of syphilis, however, is of great importance in this connection, namely, the so-called *coryza luetica neonatorum* which, according to some authors, is constant in all cases of congenital syphilis. In this condition, the secretion is often blood-tinged, and there are scabs and rhagades in the nares. It is a question in dispute whether this form of coryza is to be considered a secondary or a tertiary phenomenon; but this question is not so very important, and it is hard to settle because congenital syphilis does not allow of any sharp distinction between the two stages. It is more important to keep in mind that *any persistent coryza in a poorly-nourished infant is suspicious of syphilis, especially when accompanied by bloody secretion and rhagades at the nostrils.*

Sinusitis has still to be mentioned. It is seldom that this

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condition gives hæmorrhages, but it may happen through dislodgment of a crust around the middle meatus or in Kieselbach's area, by forcible blowing of the nose or, perhaps, through caries.

IV. **Tumours.**—Fibromas of the nose and pharynx are of great importance in this connection, as they are known and dreaded for their tendency to very profuse hæmorrhages. Adenoids, on the other hand, are not particularly given to spontaneous hæmorrhage. Nasal polyps may give hæmorrhages, but they do not often do so. The aforementioned bleeding septal polyp, however, and various other vascular new growths in the nose, may more readily give rise to bleeding.

Malignant tumours in the nose and adjacent sinuses are of particular interest. In such cases, spontaneous nose-bleeding is a well-known classical symptom that was recognised even before the early days of rhinoscopy, and its frequency is emphasised in the large text-books of recent years. Of course, the physician ought to make sure by rhinoscopy that the nose-bleeding is not a mere case of arteriosclerotic hæmorrhage in patients who are past middle age. And, in modern diagnostic, the main stress will be laid upon another point of the examination, as the early diagnosis is made on basis of rhinoscopy together with X-ray examination and microscopy of an excised piece of tissue from the bleeding area. Still, this does not detract from the significance of unilateral nose-bleeding as a suspicious symptom, especially when associated with obstruction of one side of the nose. In older individuals these two symptoms are always suspicious. And suspicion of malignancy is attached not only to the spontaneous nose-bleeding but also to copious bleeding on removal of apparently benign polyps.

B. Internal Diseases.

There are, above all, a large number of *acute infectious diseases* that may give rise to nose-bleeding, such as severe cases of diphtheria and scarlatina, smallpox (where nose-bleeding is said to mean a bad prognosis), measles, sepsis, and, as you know, particularly influenza.

Among other infectious diseases that give rise to nose-bleeding, one may mention pertussis (in which the coughing spells probably form a contributory factor in the bleeding),

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remittent fever, rheumatic fever, and several others. In typhoid fever, nose-bleeding is one of the classical symptoms in the incubation period, where it is very frequent and of diagnostic significance. Nose-bleeding also occurs in para-typhoid fever, but not nearly so often as in typhoid fever.

General medicine affords a number of other important lesions, in which epistaxis occurs as a prominent symptom. Particularly important in this respect are *diseases with increased blood-pressure*, often associated with vascular lesions. Here I shall mention acute and chronic nephritis, essential hypertension, and nephrosclerosis. The polycythæmias may also be classed in this group: and likewise arteriosclerosis.

Nose-bleeding may further be caused by several conditions that give rise to stasis in the head, especially in plethoric individuals—tight clothing, heart lesions, tumours of the neck and mediastinum, besides certain liver lesions (cirrhosis) that will be discussed later on.

The next important group is made up by the *diseases of the blood*, in a more restricted sense. Nose-bleeding is here a frequent occurrence, either as an isolated phenomenon or in connection with hæmorrhage in other organs. This applies above all to the leukæmias, and particularly to the myeloid forms, where epistaxis occurs in the chronic forms as well as in the acute ones, but most frequently in the latter. Nose-bleeding is also met with in pernicious anæmia, but here it is usually less conspicuous than other hæmorrhages which are more typical of this lesion.

Nose-bleeding is also observed in the *hæmorrhagic diatheses* (in a more restricted sense). This group includes the various forms of purpura (purpura simplex, morbus maculosus Werlhoffii, thrombopenic purpura), scurvy, and hæmophilia.

Nose-bleeding is also a symptom of some *liver lesions*, especially atrophic cirrhosis; but it is also met with in the hypertrophic cirrhoses, the syphilitic and the cardiac cirrhoses. It is also a well-known fact that nose-bleeding may occur in the more severe forms of *icterus*, particularly in the terminal stage of acute yellow atrophy of the liver. And in this connection I may also mention *acute phosphorus poisoning* and other intoxications (alcoholism).

So we find nose-bleeding in a great many internal diseases of very different nature but, largely, of marked clinical

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importance. However, the causes of hæmorrhage in these internal diseases differ very much.

In some of the lesions—the acute infectious diseases, for instance—the cause is to be attributed to some toxic effect on the vessels. In these lesions, however, other factors may assert themselves—as, for instance, marked local hyperæmia of the nasal mucosa. Toxic effect on the vessel walls also plays an important rôle in the various diseases of the blood, such as the leukæmias, pernicious anæmia, and the hæmorrhagic diatheses. Here, however, changes in the composition of the blood may be contributory factors. As is known to be the case in pernicious anæmia, some forms of leukæmia and liver cirrhosis, and in hæmophilia.

In other diseases with epistaxis, it is the increase of blood pressure that is the predominant factor—as in nephritis, essential hypertension, and nephrosclerosis. In these conditions, however, we often meet with an additional decrease of the resistance of the vessel walls, be it from some toxic effect—which is presumably the case in nephritis, at any rate—or particularly, perhaps, from arteriosclerotic changes in the vessel walls. As to these circumstances, however, I will have to refer you to the text-books of internal medicine. The time does not allow me to discuss them in this place.

Apart from the actual loss of blood, the occurrence of nose-bleeding in the various internal diseases is significant in a double sense, as it bears on the diagnosis as well as on the prognosis. With regard to the diagnosis, the nose-bleeding comes on not infrequently as an initial symptom, the symptom that makes the patient consult a physician. So it may be the occasion of the discovery and treatment of a previously unnoticed nephritis, a hypertension, or perhaps a leukæmia. In another instance, the occurrence of nose-bleeding at the onset of a severe febrile disease may give the physician a valuable suggestion as the condition being a case of typhoid fever. But the nose-bleeding may also give us some significant hints with respect to the prognosis. Its occurrence in a severe case of diphtheria, smallpox, or scarlet fever is a bad sign. In leukæmia, epistaxis is not infrequently the most serious form of all the hæmorrhages; and it should be kept in mind that copious nose-bleeding is particularly apt to occur in the terminal stage of this disease.

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C. Special Forms of Nose-Bleeding.

Among the special causes of epistaxis that do not come under the aforementioned ones, we have, *olfactory hæmorrhage* that is brought about by the patient's smelling some substance or other, but this phenomenon is more of a curiosity than anything else. Greater importance is attached to *menstruation, pregnancy, and climacterium.* A particularly interesting phenomenon is the bleeding from the nose that appears as "substitute menstruation." Finally, there is the so-called *habitual nose-bleeding.* But this is hardly to be taken as a special form of epistaxis. It is just the outcome of one or several of the aforementioned causes.

Diagnosis.—The presence of nose-bleeding is such an easy diagnosis that any patient can make it himself. Our efforts should first aim at finding its location and cause. In most instances both these questions may be answered on rhinoscopy which shows a bleeding area in Kieselbach's area, with pus, scabs, crusts of blood, bleeding, ulceration, and more or less dilated veins. Such are the most frequent findings. In other cases, the bleeding area is found to be further back in the nares; and one will sometimes see a fine arterial shoot—like a streak straight across the nasal cavity. In other instances, one finds scattered parenchymatous bleeding points, especially on the middle and inferior conchæ. The inspection is facilitated greatly by the application of a 5 to 10 per cent. solution of cocain. This has also a marked hæmostatic effect. In other cases one may readily see the cause of the hæmorrhage to be a tumour, a foreign body, or a rhinolith. But, in some instances, even the most careful examination may fail to reveal the real source of the hæmorrhage, perhaps because it is hidden, perhaps because it is located in the nasopharynx (nasopharyngeal fibroma).

And there is still a problem that comes under the diagnosis of epistaxis, namely to diagnose a nose-bleeding that simulates some other lesion, particularly hæmoptysis and certain forms of melæna—both in adults and in the new-born.

Treatment.—In modern therapy it is our ideal, as you know, to treat all lesions not only symptomatically but also etiologically. But, since the diagnosis in nose-bleeding very often is limited to a "symptom diagnosis," so the treatment is often restricted to symptomatic treatment. As a matter of course, it is also quite right that the first thing to do in such a case is to stop the hæmorrhage. It holds good here as

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anywhere else, that every hæmorrhage must be stopped, even though it requires the most heroic measures. Fortunately, fatal nose-bleeding is a rare occurrence, but it has been recorded.

Let us, to begin with, take the very mildest forms of nose-bleeding where the hæmorrhage as a rule comes from Kieselbach's area. Most of these bleedings will stop by themselves, and many of the existing household remedies have probably gained their reputation by the fact that the hæmorrhage usually stops by itself after a short time.

The psychic moment is undoubtedly a very essential factor in all nose-bleeding; in fact, many profuse hæmorrhages stop when the patient is admitted to the hospital, or when the physician arrives, or on the injection of morphin. Often, however, it is necessary to institute a more direct therapy. One may begin by placing the patient in the position most suitable to the purpose—let him lie down, the head-end of the bed being elevated, loosen tight-fitting clothing around the neck and the waist, see that the air in the room is good but not too warm, forbid any visitors, etc. These measures will often bring the hæmorrhage to a stop. But sometimes this effect is only an apparent check of the hæmorrhage while the blood really runs down the pharynx on account of the reclining position; so one should never consider the hæmorrhage checked until one has inspected the throat of the patient. If these measures prove ineffective, local treatment has to be instituted.

The simplest form of local treatment is the introduction of a plug of absorbent cotton, moistened with cocain-adrenalin, that is firmly pressed against the bleeding area. This may be partly accomplished from the outside by pressing the ala nasi against the septum. The next remedy is firm packing with iodoform gauze, xeroform gauze, or plain sterile gauze. Application of chromic acid or trichloracetic acid may sometimes prove effective, and irrigation with hot water is useful in some cases.

When the hæmorrhage is situated more deeply, the local treatment likewise consists in plugging the cavity with cocain tampons, cotton pledgets, or gauze tampons that are packed firmly against the bleeding area. It is best to use long and fairly narrow strips of gauze, and it is important to push them all the way back to the bleeding area under direct inspection with a nasal speculum and reflecting mirror. Often the beginner is apt to place the whole packing in the vestibule. Proper packing should not produce any external bulging of

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the nose. Iodoform gauze and xeroform gauze have often an excellent hæmostatic effect, but there are many other styptics that are recommended by many rhinologists, and which are used both in powder form and in solution. If the hæmorrhage comes from one single point, galvano-cauterisation is the treatment of choice.

In severe cases it may be necessary to proceed to posterior tamponage. I take it for granted that you are familiar with the technique of this treatment. Still, I wish to remind you that instead of Bellocq sound one may use a thin œsophageal bougie or a urethral bougie, which have even certain advantages (I always use these instruments myself); for one thing, the bougie has the advantage that it is never broken when one wants to use it. In addition to these remedies there are numerous others that are highly recommended: rubber sponges, rubber finger cap filled up with gauze, packing with various kinds of prepared gauze, etc.

In more severe cases it may be necessary to ligate the external carotid artery (compression of the common carotid artery may also be necessary as auxiliary means during the earlier attempts at checking the hæmorrhage), and, of course, one may also have to employ all the well-known surgical means of combating hæmorrhage and anæmia: injection of gelatin, injection of coagulin, hæmoplastin, serum, transfusion of salt solution or blood, and many other remedies.

After-treatment.—How long is a tamponade to be left in? As far as I know it used to be an old-established rule that a tamponade should be removed after twenty-four hours. But this is not necessary at all. A packing of iodoform gauze may often be left in for several days without the least harm being done. This has even the advantage that the tampon then is easier to remove, as it will be coated with a layer of mucus and, consequently, slip out more readily. And, finally, if the tampon really should give rise to some discomfort (fever, headache, tenderness over the frontal sinuses), it is always easy to take it out.

Not infrequently, the removal of the tampon gives rise to some bleeding; and one should therefore be very cautious in removing the tampon in serious cases. It is best to soften the tampon with oxydol and cocain and loosen it very slowly by means of the nasal speculum. If the bleeding persists, it is best to cut off the loosened gauze and leave the rest in for

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twelve to fourteen hours before completing the removal of the tampon. A certain amount of patience is often required.

In dealing with a severe hæmorrhage we cannot sometimes begin to think of finding its cause—the underlying condition—until later, when the bleeding is completely checked. No matter of what nature this disease might be—heart lesion, kidney lesion, disease of the blood—it goes without saying that the condition is to be treated in the appropriate way.

We have now surveyed symptomatic nose-bleeding in all the different lesions where it may occur, and if you did assume beforehand (what I took for granted) that nose-bleeding is a symptom that may come from many causes, your assumption will certainly have been confirmed—perhaps even more so than you had expected. A survey of nose-bleeding is really a review of the entire pathology of the nose, together with large and important sections of internal medicine, particularly the pathology of the blood and of the circulatory organs.

Such a survey of the occurrence of a single symptom and of its forms and degrees in all possible diseases is undoubtedly of great interest and of great practical importance; at the same time, it gives an interesting sort of cross-section through the entire field of rhinology. Still, there is one drawback in such an enumeration of diseases, and this is, that you be overwhelmed too much by the large mass of details which can be of no particular use to you, and which you will soon forget. For what good does it do to learn that epistaxis is observed in this and that infectious disease, in a few cases where no one can be sure that the epistaxis is due to that particular disease and not to an accidental coincidence between the disease and one of the ordinary septal bleedings.

It is certainly of much greater importance to you from this throng of observations to *gather the main points* which are of particular clinical significance to you with reference to diagnosis and treatment.

(1) The most frequent cause of nose-bleeding is rupture of vessels in Kieselbach's area—anterior dry rhinitis, excoriation, blood crusts, ulcer, teleangiectases, and perforation.

(2) This is the most frequent cause of septal perforation; and such a small perforation in this area, that only involves the cartilaginous part of the septum, is never syphilitic, but either the result of an anterior dry rhinitis or a tuberculous process.

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(3) In traumatic nose-bleedings, two things should be kept in mind:—(*a*) that a fracture of the nose calls for a reduction of the fracture, and that the external swelling as a rule will make it impossible to decide whether any disfigurement of the nose will result; (*b*) that a septal hæmatoma ("half a cherry" in each nostril) requires immediate operation.

(4) Among infectious diseases nose-bleeding is particularly frequent in typhoid fever, influenza, and smallpox.

(5) Sanguinous purulent coryza is present in cases of foreign bodies, diphtheria and congenital syphilis of infancy. Every persistent coryza in a poorly-nourished infant, especially when the secretion is blood-tinged, is suspicious of congenital syphilis.

(6) In diseases of the nose, severe spontaneous nose-bleedings are most often due to nasopharyngeal fibroma, ozæna, or tumours.

(7) Spontaneous unilateral epistaxis in an elderly individual, especially with concurrent unilateral blocking of the nasal passage, is strongly suggestive of a malignant tumour.

(8) In diseases outside the nose, the greatest importance is attached to chronic nephritis, arteriosclerosis, heart lesions and various diseases of the blood — leukæmias, anæmias, hæmorrhagic diatheses, etc.

Briefly to characterise the clinical significance of nose-bleeding one may state: that as a rule, nose-bleeding is a harmless symptom; but in a certain number of cases it may be an important symptom of some most dissimilar diseases, sometimes of a very serious nature.

The organs whose diseases may manifest themselves by nose-bleeding are the heart, the vascular system, the blood, kidneys, and liver.

The diseases of which epistaxis may be a symptom, are acute and chronic infectious diseases of the most significant kind—typhoid fever, scarlet fever, smallpox, diphtheria, and syphilis; and, in addition, malignant tumours.

In a great many of these cases, the nose-bleeding may be the initial symptom that brings the patient to the physician. It is therefore the physician who is first consulted that is responsible for not only the checking of the hæmorrhage, which may often be a serious matter, but also for the recognition and subsequent treatment of the underlying lesion.

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