with compliments

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CLINICAL LECTURE

ON

SYPHILITIC GUMMATA.

DELIVERED AT THE HOSPITAL DE LOURCINE.

BY

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TRANSLATED FROM THE FRENCH BY

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Reprinted from the Edinburgh Medical Journal for October 1874, and January and April 1875.

EDINBURGH: OLIVER AND BOYD, TWEEDDALE COURT.

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CLINICAL LECTURE ON SYPHILITIC GUMMATA.

GUMMATA are described under various names (subcutaneous tubercles, nodes, apostemata dura, ganglions, tophi). They may be defined thus:—*Nodular and circumscribed tumours, at first solid and non-inflammatory, they soften very slowly, ulcerate by an inflammatory action in the surrounding parts, and discharge a very characteristic, whitish, purulent material, somewhat resembling sloughed flesh.*

These gummata consist of solid tumours of variable size, of a rounded or flattened form, situated in the subcutaneous cellular tissue. The tumours are not contained in a cyst, and are only limited by cellular tissue condensed on their periphery. In the early stage, these tumours are formed of tissue, sometimes uniformly gray and semi-transparent, at other times grayish-red with or without rather opaque grayish striæ. They are at this time tolerably firm and dense, and their consistence may be compared to liver slightly indurated. Later, the tumours change their appearance, and become more opaque and whiter. In a still more advanced stage they become quite white, yellowish-white, or even almost yellow. They are at this time like tubercle. At a still more advanced period of the second stage they begin, usually at the centre, to soften. The characters presented by the softened material are very various; at one time it is a yellowish, opaque, pretty thick fluid, like pus, but, as we shall see afterwards, not pus; at another time it is a yellowish-brown, viscid filamentous fluid resembling a thick solution of gelatine or gum. In this manner the gumma begins by being entirely solid; later on, it undergoes degeneration and breaking up of its elements.

What the microscope reveals is:—1st, Gummy tumours do not consist, as was formerly believed, of a simple liquid exudation. They are always, on the contrary, organized and constituted of well-defined morphological elements. 2d, These growths, notwithstanding the specific cause which gave them birth, have no special anatomical element. What is found with them is also found in morbid growths having no specific origin. This absence of special anatomical element is all that can be said of their actual histology. 3d, Gummata are constituted solely of a proliferation

of connective tissue. From this purely anatomical point of view, they differ in no way from other growths, which, clinically and nosographically, are known to be different. The gummy tumour is constituted simply as follows:—*A*. A very accessory portion of cellular tissue forming scarcely one tenth of the whole tumour. *B*. Cells of various dimensions forming seven or eight tenths of the whole mass. *C*. An amorphous intercellular stratum, finely granular. *D*. A few vessels. Such are the characters of a gumma in process of formation.

4th, This structure of the gumma is, however, not permanent, it is destined to a rapid fatty degeneration. The cells become small and are transformed into fatty granules, which compose the yellowish tubercular-like masses. Afterwards, the gumma either degenerates into dry, cheesy, tubercular-looking masses, or softens.

The clinical history of the gumma divides itself into four periods. 1st, Period of formation (gumma increasing, solid, non-inflammatory); 2d, Period of softening with consecutive inflammation of the vicinity; 3d, Period of ulceration; 4th, Period of reparation.

I. Period of Formation (*gumma increasing, solid, non-inflammatory*).—The cellular tissue gumma commences as a small subcutaneous nodule. This nodule, very small at first, like a lead pellet or a pea, gradually increases to the size of an olive or a small nut. It then increases more slowly to the size of a nut, a small egg, or even as large as a hen's egg.

The following are the characteristics of the gumma at this period, —1st, It is distinctly defined, neither incorporated with the skin nor the subjacent tissues. 2d, In form, this tumour is generally globular ovoid. It resembles an olive, or more nearly a ganglion. 4th, Finally, this tumour is essentially non-inflammatory; it enlarges very slowly.

2d Period.—*Softening, with consecutive inflammation of the vicinity.* To the solid gumma succeeds, after a certain lapse of time, the softened gumma, and it is this work of softening which constitutes the second stage. At first the gumma is firm, consistent, manifestly solid. A time comes when this consistency diminishes; the gumma becomes less firm under the touch; the hard sensation which the tissue furnished gives place to a sensation of flabbiness, and finally fluctuation is perceived.

This softening of the gumma commences at the centre of the tumour. But before long, to this central phenomenon is added, an inflammatory action of the more superficial parts on a level with the integument. The tissues become red and inflamed, analogous, for example, to those which cover a subcutaneous adenitis approaching suppuration. At the same time, the patient feels a certain amount of tension and uneasiness. The tumour is less mobile, and the reddened integument becomes progressively thinner. Finally, the cutaneous pellicle ruptures, and the stage of ulceration begins. Such is the second stage of the existence of

gummata. The pathological phenomena are, to sum up,—1st, Progressive softening of the tumour from the centre to the periphery, with no elevation of temperature, pain, or inflammatory phenomena. 2d, More slowly, peripheral inflammatory phenomena, resulting in ulceration of the integuments on the surface of the tumour, and producing an outlet.

3D PERIOD.—*Stage of Ulceration.* This is the most important of all the stages which constitute the gumma; and it is of these among the least well known. At first, after the tumour opens, the discharge of fluid is very trifling. Often only a few drops appear, and ooze out rather than flow; sometimes no more than a small spoonful of fluid is evacuated. After opening, the tumour remains much the same size as it was before, on account of the small quantity of matter that has come from it. The nature of the evacuated fluid is, more rarely than is generally supposed, of a viscid, gelatinous, syrupy, transparent or semi-transparent gum-like character. Much more frequently it is a sero-sanious, yellowish fluid, *pyöide* rather than purulent, containing in suspension organic detritus and grumous debris of cellular tissue, fatty granules, oil and blood globules, and leucocytes. Yet again, but more rarely, it is a distinctly purulent fluid, yellowish-green, or still oftener a reddish, unhealthy pus. The gumma once opened, its aperture tends to enlarge. The small opening on its summit enlarges more and more by ulceration of the surrounding skin, until after some days it has the diameter of a lentil, a twenty-centime piece, or greater still. This circular orifice occupies the most central and prominent position. On examining the interior of the cavity, a solid, whitish, fleshy substance presents itself, resembling the flesh of a cod. This substance has the appearance of dead tissue, is without feeling, becomes disintegrated, and fibrilliform; portions of the size of a filament of vermicelli become spontaneously separated from the mass. This substance is the actual tissue of the tumour, having passed, or passing into the condition of a slough. The largest portion of the tumour is made up of this solid mass, and it is for this reason that the evacuation of fluid is so small, and the diminution in size of the tumour so slight.

The progressive elimination of the heart of the gumma proceeds thus:—From day to day, portions of greater or less size are detached from the mass by suppuration; and after the total evacuation of the core, all that is seen is the loss of substance sustained by the healthy tissue. This loss of substance, more or less deep, constitutes a real cavity dug out of the healthy tissues, and has received the name of a *caverne gommeuse.* Then by progressive ulceration of the edges of this cavity an ulcer soon forms of variable dimentions, according to the original size of the gumma.

The ulcer is characterized by being excavated; its borders are sometimes sharply defined and cut out, or prominent, and raised by

infiltration of gummy products. It is surrounded by a dark-red areola, and furnishes a pretty abundant sanious or sero-sanious discharge, mixed with organic detritus.

So far, there is nothing special about its appearance, nothing that may not be observed in a variety of ulcers, and notably among tertiary syphilitic ones. The floor of the ulcer has an unhealthy aspect, is irregular, broken up, with depressions here and there, and covered with adherent detritus and sloughy putrescent particles like a wound partially affected with gangrene. On account of these divers characters and its unhealthy appearance, the gummatous ulcer may be mistaken, at first sight at least, for a cancerous ulcer. This appearance does not last long, for with slight attention the gummatous ulcer soon cleans itself, and enters the stage of reparation.

4TH PERIOD.—*Reparation.* When the gummy debris is eliminated, the ulcer becomes clean, and takes on an improved aspect. The edges flatten, the red areola diminishes, the floor becomes raised and covered with fleshy granulations, the discharge gets thicker and more like pus from simple sores. The resulting cicatrix is at first red, gradually, however, becoming white, and always being depressed on account of the irreparable loss of substance. Such is the normal evolution of the gumma, which may be summed up in a few words.

1ST PERIOD.—The gumma appears under the form of a solid, hard, indolent, non-inflammatory tumour.

2D PERIOD.—The tumour becomes soft and fluctuating. A subacute inflammatory process attacks it; its surface reddens like a ripe abscess.

3D PERIOD.—The tumour opens, ulcerates, and discharges its core; then by destruction of its cutaneous investment it transforms itself into an ulcer of unhealthy aspect.

4TH PERIOD.—The ulcer becomes cleaner, repairs itself, and cicatrizes.

What is the duration of a gumma?

1st, The duration is always long; three to four months at least; usually six to eight months, sometimes longer.

2d, The duration is very variable. The variations occur during the two first periods, more especially during the first of these; for the two last (in general, at least, with exception of certain cases, to which reference will presently be made) evolve themselves in a tolerably equal, regular, and relatively rapid manner.

The first period, or period of formation, is the most unequal in its duration. There are cases in which the matured gumma remains for a long time stationary without perceptible modifications. The second period is also irregular. There are some gummata which soften rapidly, fluctuating as soon as formed; while in others softening occurs very slowly and partially in isolated parts of the tumour.

When once peripheral inflammation shows itself, things proceed tolerably quickly and regularly in all cases. A few weeks suffice to empty the gumma and change it into the condition of an ulcer. With a little simple local treatment, the cleaning and reparation of the ulcer goes on in a somewhat rapid manner.

VARIETIES.—What has just been described is the gummy tumour under its simplest form, unaffected by any accident or complication. It is subject, however, to some varieties of symptoms and evolution, which require to be pointed out. Amongst the variety of symptoms, two points alone require to be noticed.

1st, The gummy tumour has been represented as essentially indolent, causing no pain, and being insensible to pressure. This happens in the majority of cases, at least ninety-five times out of a hundred. But it should also be known that in certain cases the tumour, so far from being indolent, gives rise to sharp pain, which is sometimes even violent and excruciating. This pain is produced when the tumour either compresses or invades a nerve trunk or branch. This occurred in a case of M. Ricord, a gummy tumour of the groin giving rise to painful crural neuralgia, which extended over the whole thigh from the groin to the knee; in another case, by the same author, two gummata, situated over the course of the ulnar nerve, provoked sharp pains radiating from the forearm to the last two fingers, thus following the distribution of the nerve.

2d, In most cases the gummy tumour is not in itself the cause of any functional disturbance. But it is otherwise, as when, for example, a large tumour, by its volume alone, becomes the origin of functional derangements; or when a tumour, situated over a movable part like the jaw or hand, interferes with the movements. But this is of secondary interest to what must now be considered, viz.:—

VARIETIES IN NUMBER.—There is usually observed only one gummy tumour, or at most two, three, or four gummy tumours in the same patient. It is very rare for this number to be exceeded; but in some cases, and especially in patients who have suffered from a severe form of syphilis, *multiple* gummy tumours are met with, and when they begin to multiply, they go on increasing with amazing facility. There may then be seen from eight to fifteen of them, unequal in size, disseminated or collected in groups, and of different degrees of development. One patient had a group of six tumours on his back. Another, a woman, presented four tumours on the head, three on the legs, two on the forearm, and one on the shoulder-blade.

We now leave the ordinary cases, and enter upon the exceptional. On some patients, gummy tumours to the number of twenty, thirty, thirty-five, and fifty, have been met with.

M. Corvisart has recorded a case where, besides several other

incontestably syphilitic lesions, more than one hundred tumours occurred on the breast, belly, and arms.

Lastly, We shall describe some extraordinary cases.

In the *Bulletin de Thérapeutique*, 1845, a case was recorded by Lisfranc, in which a patient presented one hundred and sixty gummy tumours on the arms, forearms, and thighs. "The smaller ones were the size of a small nut, the more developed as large as a small pear." Iodide of potassium was administered, and after eight months' treatment only forty tumours remained; the one hundred and twenty had been cured by resolution.

Still more important are the variations in size, which remain to be described.

Varieties in Volume.—It has been shown that the gummy tumour has usually a small size, commonly that of a nut. The size may, however, increase to that of a hen or turkey's egg, and in certain rare cases to even a considerably larger size. To cite only two extreme cases, I have observed a gumma of the thigh as large as half the head of a fœtus. Dr Mendeville observed at Val-de-Grâce a gummy tumour larger still. It occurred on the head, and implicated the entire lower half of the face, a large part of the neck, and the whole inferior half of the skull. On account of the rarity of such cases, and their excessive size, these tumours are liable to be mistaken for growths of another nature, especially cancerous ones, and are thus exposed to the risk of grave surgical interference.

Complications.—The principal complications of the gumma arise either through the evolution of the gummy ulcer, or the reaction exercised by the tumour on the surrounding integuments.

In some cases, the ulceration of the skin, following the evacuation of a gumma—especially when neglected—persists for a long time. The gummy ulcer may progress and extend itself, destroying the whole thickness of the integument, and may even take on a phagedænic action. Gummata can also create complications in their vicinity.

Thus, gummata of the head, when overlooked, may determine ostitis and necrosis of the skull, with the possible dangers attendant on such lesions.

Revival of Gummata after Healing.—When a gumma has gone through all its phases, and cicatrized, ulceration may yet recommence in the cicatrix.

One of our patients, severely affected with syphilis, had, among other lesions, a gumma of the foot. This gumma went through its stages, and cicatrized. Then some time after, cicatrization being well establishd, the cicatrix opened at several points; new ulcers were produced, deep, with sharply-cut edges and sloughy floors; in a word, exactly resembling the ulcer which had cicatrized.

Diagnosis.—As in every other syphilitic lesion, the diagnosis of the gummy tumour rests upon three kinds of considerations—

knowledge of antecedents, consideration of concomitant symptoms, and the special characters of the lesion. At present we have to investigate the special characters of the lesion. The characters specially distinctive of the gummy tumour are its pathology and its evolution. Its peculiar pathological feature consists in the presence of the gummy core, a white and filamentous substance like slough, to which we have above referred. The evolution is still more characteristic: *a tumour at first solid, softening slowly and forming an ulcer having a very distinctive aspect.*

Tumour solid, tumour softened, consecutive ulceration—this is the triple phase through which the gumma passes. Although one of these stages of evolution may not be in itself pathognomonic, their combination is, without doubt, characteristic of the gumma. Add to these certain attributes of secondary importance; the rounded form of tumour; indolence at commencement; size in general, medium; central softening; nature of fluid evacuated; hollowed-out aspect of consecutive ulcer; sluggish progress of the ulcer; etc. It is in these divers symptoms that we find useful aids to diagnosis. In the differential diagnosis of syphilitic gummata, the separation of this affection from cancer is the most important.

Four kinds of considerations help the diagnosis:—1*st*, etiological considerations; 2*d*, differences in the symptoms proper to each lesion; 3*d*, state of the glands; 4*th*, influence of treatment.

1*st*, *Etiology.*—The gumma is always preceded by specific accidents, and may be accompanied by *actual specific* lesions. Nothing of the kind occurs in cancer—always reserving the possibility of cancer occurring in a person previously syphilitic.

Cancer more commonly becomes developed in persons of advanced age, and among those hereditarily predisposed. The gumma, on the contrary, has no special age of predilection.

2*d*, *Clinical characters of the lesion.*—

Cancer.	*Gumma.*
Tumour almost always single.	Sometimes single, often multiple.
Tumour of any size, and generally large.	Tumour small, or at most medium size.
Tumour irregular in form, not circumscribed, with indented surface.	Tumour regularly ovoid, rarely indented.
Tumour adherent, or rapidly becoming adherent, to the skin.	Tumour not adherent to the skin.
Tumour painful, lancinating pains.	Tumour indolent.

In the stage of ulceration there are also distinctive differences between cancer and the gumma. Thus, the cancerous ulcer makes its way from the surface to the centre, is irregular, fungoid, fetid, hæmorrhagic, large in extent, etc., and is very different from a gummy ulcer, which is the result of central softening, subsequent elimination of a slough, and never presents appearances resembling cancerous granulations, etc.

3d, Condition of the Glands.—

In Cancer.	*With the Gumma.*
Glands affected very rapidly.	Glands intact.

An excellent sign, which, with very few exceptions, suffices (for a certain period at least) to distinguish cancer from the gumma.

4th, Treatment.—In cancer, no action is obtained with the iodides or mercurials. With the gumma, these remedies have a rapid resolutive action, with rare exceptions.

PROGNOSIS.—Gummata of the cellular tissue are not in general grave affections directly. Suppuration more or less prolonged, destruction of the skin to a greater or less extent, and permanent cicatrices are what they lead to. But gummata are grave, chiefly on account of the condition of which their presence is the evidence. They show that the syphilis has entered on that stage in which serious lesions may occur. From this point of view, however, there is a distinction to establish. An isolated gumma, two or three gummata even, have no more prognostic significance than any other tertiary lesion. They are evidence of the tertiary stage, and that is all. They do not announce a specially grave form of syphilis.

Multiple gummata, on the contrary, coming on simultaneously, or succeeding each other at short intervals, have an extremely grave significance. They are evidence of a severe form of syphilis, and the proof of this is, that multiple gummata figure habitually and in the first rank in the *cortége* of accidents which accompany the syphilitic cachexia.

Isolated gummata (or at least gummata that are not multiple) show a great tendency to resolution under specific treatment. They are cured by iodide of potassium.

Multiple gummata, again, are much more rebellious, often removed at one place, only to appear somewhere else, sometimes resisting treatment altogether.

TREATMENT.—Before mentioning what ought to be done to combat the lesions we are considering, we commence by detailing what ought *not* to be done.

1st, Gummata ought not to be removed. It is a perfectly useless operation, when iodide of potassium can take the place of the bistoury. Gummata have also been observed to return shortly after ablation.

2d, The application of caustics is as useless for the same reasons as the preceding operation.

3d, Abstain from opening a gumma, even when fluctuation is present. And why? Because resolution of the gumma is possible in all its stages, even during the period of softening and when the tumour fluctuates. Examples abound where fluctuating gummata,

on the point of opening, have been seen to diminish and become absorbed under the action of iodide of potassium.

These negative precepts having been set forth, let us see what the treatment to be adopted is. It is very simple; administer iodide of potassium at once in sufficient doses (one, two, three grammes), and in strong and rapidly increasing doses when the gumma is in an advanced stage of development. This resolves the gumma, and causes it to disappear with a rapidity truly astounding. It resolves gummata even of the largest size.

The iodide of potassium must, in the first instance, be always prescribed by itself; this in general suffices for the cure. It is rarely necessary to combine it with mercury. The indication calling for the administration of mercury along with the iodide, only presents itself in two orders of cases:—1*st*, Against precocious gummata when the syphilis is in an early stage, the time when mercury is most active; 2*d*, Against gummata rebellious to other treatment.

In such cases it is also necessary, along with specifics, to administer tonics, for the production of gummata is frequently combined with a low state of the organism, either anterior and foreign to the diathesis, or engendered by it.

Lastly, A word on the local treatment of gummata.

During the first and second periods, treatment plays a very secondary part. There have been proposed, and often employed at this stage, certain local means as adjuvants to treatment, mercurial frictions, painting with tincture of iodine, blistering, etc. It is difficult to speak with certainty of the amount of benefit derived from these applications, as they are never employed alone. When the gumma opens, however, local treatment becomes most necessary. Whenever the gumma is on the road to elimination, some hygienic care is indispensable, as bathing and emollient cataplasms to moderate the peripheral inflammation, detergent lotions injected into the gummy cavity. Lastly, when the gummy ulcer is formed, dressings are required, the most useful being the plaster de Vigo.

With the cure of the gumma the task of the physician is not completed; it is still necessary to watch the patient and to continue the treatment of the diathesis long after the local affection is cured.

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