Syphilis depicted by the Greek moulages: a picture of skin manifestations in former times

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Introduction
Former times’ severe manifestations of syphilis disappeared gradually from a European dermatologist’s daily work when penicillin treatment was introduced in the late 1940s. Within the last 10 years there have, however, been successive outbreaks of syphilis in most western European countries.1 Diagnoses may be missed, as health care professionals are not familiar with the clinical signs of the different stages of syphilis. The recent outbreaks have not been restricted to the well-known risk groups, especially not in Eastern Europe, reporting a relative high proportion of syphilis among heterosexuals with the consequence that congenital syphilis has been reported in countries with inadequate prenatal care.2

The natural picture of syphilis may, however, be seen three-dimensionally, if visiting museums with medical wax moulages.3 The so-called moulages were made as teaching objects for local use during the nineteenth century, at the same time that medical photography had its birth.4 The educational benefit of the moulages, however, led to the production of thousands of figures all over Europe in the first decades of the last century, when syphilis showed all its faces from the primary sign to the chronically severe invalidating if not fatal stage.

The often cited words by Sir William Osler in 1897: ‘Know syphilis in all its manifestations and relations, and all other things clinical will be added unto you’5 may still be worth remembering when looking upon the varied clinical picture presented by the syphilis moulages at an almost forgotten hospital museum in Athens.

The art of moulages
Wax has been used as an ideal material when making models of the human body for thousand of years, with the anatomical wax models6,7 as the forerunners for the medical moulages. Moulages were made from a mould of plaster in which wax was poured in order to get a direct print of what had been cast; diseases of the skin were, therefore, an obvious theme for the medical moulages.3

The poet Johann Wolfgang von Goethe seems to have given the first written note about syphilis moulages when referring to a young man from Jena in Germany casting wax figures around 1810 showing signs of syphilis.8 Inspired by the Florentine wax figures, Goethe advocated for the establishment of a wax museum in Berlin so that education in anatomy would not depend on bodies for dissection. His attitude against dissection is reflected in his novel about Wilhelm Meister,7 where Wilhelm declines to...
dissect a body with ‘the loveliest female arm that had ever encircled the neck of a young man’. Wilhelm Meister actually learned the art of casting anatomic wax figures, but Goethe did not succeed in having a wax museum in Berlin.

At the first International Congress for Dermatology and Syphilolog at l’Hôpital Saint-Louis in Paris in 1889, the meeting hall was decorated with moulages, stored in glass-fronted cabinets and showcases, which had been cast at the hospital during the preceding decades. This event became a turning point for the production of these three-dimensional tools for teaching.

Apart from being teaching objects for students, midwives, nurses, and doctors, moulages depicting venereal diseases also became a public health tool in the fight against venereal diseases not least in Germany, where the local produced moulages were shown to the public at the International Hygiene Exhibitions in 1911 and 1930 to 1931 in Dresden. This city housed a large moulage collection and its own production in the Deutsches Hygiene-Museum. The public health tool, however, reached a turning point from 1933 when it became an instrument for the National Socialists in their racial propaganda.

The moulage museum at ‘A Sygros’

The moulage production in Berlin became of decisive importance for the collection in Athens. The Greek dermatologist Georges Photinos (1876–1958) had a 5-year period of further training at various dermatological departments in Europe, starting in Paris in 1903 and ending up in Berlin in 1908, both places with a flourishing moulage production at that time. Photinos became inspired, impressed, and convinced about the need of moulages as the new three-dimensional tool for teaching and obtained the necessary knowledge about the technical production when attending one of the courses held in Berlin. During his stay in Berlin, he wrote the first paper in German with a very detailed argumentation for and description of the art of moulaging that could so naturally express every detail of the diseased skin. Photinos cast his own moulages in Berlin and brought them back to Athens in order to establish his own collection at the ‘A Sygros’ Hospital for venereal and skin diseases that opened in 1910, with Photinos as the first chairman.

All moulage workshops had to rely on their own mouleur, not a doctor, but an artist specialized in the technical casting process but also eminent in expressing the varied morphology of normal and diseased skin when painting the moulages. The mouleur in Athens was K.M. Mitropoulos, the signature of whom is written on a great part of the mounting boards. Among the more than 1660 moulages at the museum in Athens, around one quarter depicts syphilis in its many clinical manifestations. The museum can be visited if contacting the staff at the hospital library.

Venereology in Greece

In Greece, as in other European countries, syphilis was one of the most significant diseases at the turn of the last century, causing ~20 000 deaths annually. Available figures from the ‘A Sygros’ hospital state that during the first years of this new hospital, exclusively for patients with skin and venereal diseases, as many as 50% of all patients examined had syphilis. There are no data about the frequency in the following decades, but it is well known that syphilis remained a disease of major importance among the patients until the beginning of the 1960s when penicillin was adapted as the only drug of choice at this hospital. This explains that signs of syphilis are so well represented in the Greek moulage collection.

Photinos regarded moulages as important objects not only for teaching medical personnel but also as a tool when educating the general population about venereal diseases and its consequences.

As a result of his constant calling attention to the consequences of the high incidences of venereal diseases, a new act for the fight against these diseases was adopted in 1922, and thousands of pamphlets about venereal diseases were given out especially to school teachers and sailors. Photinos devoted his life to his job and was well known outside Greece for his constant fight against the venereal diseases. Economic constraints and an unstable political situation, however, hindered the opening of several venereal clinics otherwise passed by the government in 1923.

Syphilis moulages

Primary

The typical lesion, the chancre, most often solitary but also as multiple chancres with pronounced regional oedema, is depicted on numerous moulages in Athens. The area of infection varies from the ano-genital region to the tongue, the lip, the nipple, and the cheek. According to the inscription a raised swollen index finger with a big ulcer (fig. 1) depicts a chancre of a midwife, reminding us that high-risk practice has had many definitions. Today, midwives and all other medical staff members have adapted the rules for protection in their professional work, but certain sexual practices may still carry a risk of infection of the hand and fingers in persons otherwise adapting safe sex rules.
Secondary

The secondary stage of syphilis is a manifestation of widespread haematogenous and lymphatic dissemination of the infection. The typical papular eruption in the palms and soles, the well-known helpful diagnostic sign, is depicted side by side with roseola syphilitica, moth-eaten alopecia, and leukoderma. However, the more devastating signs are the striking ones, such as faces with disseminated maculopapular syphilis and the moulage of a face with blepharitis, split papules of the nasal folds, and large pustular and necrotic syphilids mimicking smallpox and therefore also called the ‘great pox’ or ‘malignant syphilis’ (fig. 2). In the era of arsenical and mercury therapy, skin lesions would often relapse during the first years after infection; some lesions caused lifelong sequelae, and the ‘malignant syphilis’ could be fatal.

Latency

The visitor inspecting the syphilis moulages in Athens should consider a while for contemplation in the little courtyard in front of the museum remembering that ‘The Oslo study of the natural history of untreated syphilis’ was published as late as in 1955. In the beginning of the last century, syphilitic patients were treated with drugs having severe side-effects. Nobody had, however, the present knowledge that around 60% would have lived their life without severe sequelae if they had avoided treatment. When the secondary lesions have disappeared, the arbitrarily defined latency period begins, but a look at the moulages explains the fear of progression that must have been a lifelong follower for those who underwent the first phases of syphilis.

Tertiary

The tertiary stage of syphilis is a chronic destructive infection that can be manifest in all tissues but most frequently in skin and bones. A large number of the moulages depict these changes categorized as late benign syphilis. There are many examples of solitary gummas, the subcutaneous infiltrate that changes to an ulcerative, necrotic process that could be seen almost everywhere on the body yielding sinister destructive changes (fig. 3). The moulages showing an ulcerating tracheal gumma must have been made post mortem, although this affection per definition is part of the benign tertiary stage. As for secondary signs of syphilis, gummas would not only remit...
but also come back on the same or other sides for many, many years.

Late malignant syphilis with destructive processes in the cardiovascular and nervous system, the seldom, but most feared stage of the disease call the textbooks in mind about a stage not possible to visualize as a moulage.

**Congenital**

Skin and bone changes are well represented in the moulage collection; in many cases, however, there is the diagnosis ‘hereditary syphilis’, a reminder of former times’ belief that syphilis could be inherited from father to child leaving the mother as the innocent person in between, a belief that got its final ‘coup de grace’ after the Wassermann reaction was introduced in 1907.

Knowing that the moulage of a face is based upon a plaster cast placed over the face for 10 min, it cannot be of wonder that most moulages of congenital syphilis are late manifestations in grown up children or adults. The fact that most children with congenital syphilis passed undetected through the early phase due to minor symptoms could, however, also be the cause. Whether the few neonatal faces with the characteristic eczematous changes in the middle of the face and the rhagades at the mouth are from stillborn babies or cast when alive cannot be disclosed.

Periostitis, osteomyelitis, and chondritis must have foregone the changes demonstrated in the moulages depicting the severe deformation of the toes and fingers of some grown up children (fig. 4) and the characteristic nose or rather lack of a nose of an adult (fig. 5).
Stigmatization

The devastating syphilis signs mirrored by the moulages bears in mind the stigma that these patients may have dealt with. The same factors well known for the HIV-related stigma must have been prominent for syphilis, being at that time a life-threatening transmissible disease against which effective treatment was not available. Another factor causing stigma among doctors and nurses may have been the fear of exposure as a result of lack of knowledge about the effect of protective equipment. The wards at the ‘A Sygros’ Hospital, previously solely housing female prostitutes with syphilis or other venereal diseases, still have windows with iron fences and, until the mid-1960s, doors that were locked up.14

Conclusion

It could be relevant to recall another aphorism of Sir William Osler:

Syphilis simulates every other disease. It is the only disease necessary to know. One then becomes an expert dermatologist, an expert laryngologist, an expert alienist, an expert oculist, an expert internist, and an expert diagnostici8 – if having studied the moulages Sir William Osler might have added: and a candidate for an expert moulage composing artist.

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