

Om spedalskhed ... Atlas / udgivet efter foranstaltning af den Kongelige Norske Regjerings Department for det Indre. Tegningerne udførte af J.L. Losting.

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Publication/Creation

Bergen : [F.D. Beyer], 1847.

Persistent URL

<https://wellcomecollection.org/works/kb3tz9x7>

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ATLAS
OVER
SPEDALSKHED

[F. 178]



William Edward Charles, Esq.









171

UPPER MIDDLE

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171

OM
SPEDALSKHED

ved

D. C. Danielsen, og
Overlæge ved Hospitalerne
for Spedalske i
BERGEN.

C. W. Boeck,
Lector i Medicin ved
Universitetet i
CHRISTIANIA.

ATLAS,

udgivet efter Foranstaltning af den
KONGELIGE NORSKE REGJERINGS
Departement for det Indre.

Tegningerne udførte af J. L. Lossing.

BERGEN

1847.



FORKLARING OVER PLADERNE.

PLADE VIII.

En 12 Aar gammel Dreng, hos hvem de afrundede, karmoisin-røde, noget i det Blaalige spillende Flekker, der ere egne for den knudede Spedalskhed, ere end tydeligere udviklede, efter flere Gange at have været forsvundne med kortere eller længere Mellemrum. Flekkerne ere her endnu i Niveau med den øvrige Hudflade, og forsvinde ikke længere for Fingertrykket.

PLADE IX.

En Pige, 14 Aar gammel, hos hvem Flekkerne eller de Steder af Huden, de indtage, ere noget eleverede over Hudfladen; de have antaget en mere hvid Farve, der ikke forsvinder ved Fingertrykket. Capillar-Nettet er stærkt blodoverfyldt. Hist og her sees smaa Knuder, der have en meget blegere Farve end Flekkerne. Øienbrynene have begyndt at falde af.

PLADE XIII.

En Pige, 20 Aar gammel, hos hvem Spedalskheden var opstaaet for nogle Maaneder siden og havde udviklet sig acut. Hele Legemet er tæt besat med Knuder, der have en brunlig Farve og næsten overalt ere enkeltstaaende og temmelig faste. Hist og her sees mellem Knuderne enkelte Flekker, der endnu ikke have eleveret sig over Hudfladen for at danne Knuder.

PLADE II.

En 13 Aar gammel Dreng, hos hvem Knuderne ere fuldkommen udviklede, de ere confluerede paa flere Steder, og mange have begyndt at ramollere. Øienbrynene ere affaldne. Han blev spedalsk i sit 6te Aar.

PLADE IV.

En Pige, 28 Aar gammel, hos hvem Knuderne ere confluerede, og bedækkede med tykke graubrunne Skorper, der kunne opnaa indtil 2 Tommers Høide. Bortages disse Skorper, frembyde Knuderne et ulcereret Udseende. Saavel paa Overfladen, som dybere ind i Knudemassen leve Millioner af en Acaride, som vi antage for acarus scabiei. Skorperne bestaa næsten udelukkende af Legemer af det døde Dyr. De enkelte Knuder, der ikke ere bedækkede med Skorper, have, ligesom den endnu sunde Hud, en skiden graubrun Farve.

PLADE X.

De forskellige Udviklingsstadier af Øiets Sygdom i den knudede Spedalskhed:

1. Karinjection i Conjunctiva og Dannelsen af en gulhvid Flek paa Sclerotica henimod den udvendige Rand af Cornea.
2. Flekken paa Sclerotica har begyndt at elevare sig lidt og har udstrakt sig næsten rundt om Cornea.
3. Her har Flekken udviklet sig til en Knude, der strækker sig ind paa Cornea, som er noget fordunklet. Pupillen er temmelig stærkt sammentrukket og vinklet.
4. Knuden er fuldkommen udviklet og indtager en større Deel af Cornea. Pupillen vinklet.
5. Her har Knuden begyndt at ramollere, og indtager en stor Deel af Cornea, der næsten er usjennemsigtig. Knuden gennemtrænger hele Corneas Tykkelse.
6. Knudemassen, der tildeels er ramolleret, indtager hele Øiet, som forstørstedelen er destrueret.

PLADE XII.

Knuderne ere paa flere Steder confluerede saaledes, at de danne en jevn Infiltration i Huden, som er betydeligt fortykket. Mange Knuder ere ramollerede og danne større og mindre Saar, hvoraf enkelte ere bedækkede, dels med tykke brune, dels med tyndere og mere lysebrune Skorper. Paa Haandryggen saavel som paa Fingrene har Knudeinfiltrationen en temmelig dyb livid Farve.

PLADE XXI.

Knuder, som ere bedækkede af tykke, indtil 2 Tommer høje, brune Skorper. Disse ere faste som Hornsubstant, og bestaae ligeledes af døde Dyr. Bortages Skorperne, sees den ulcererede Knude, paa hvis Overflade der, saavel som et Stykke ind i selve Knudemassen, lever Millioner af den formentlige Acaride.

PLADE XXII.

1. Store udbredte Flekker, der have en stærk mørkebrun Farve, ere kun lidt eleverede over Hudfladen, og tilhøre altid den knudede Spedalskhed. De ere forud kaldte Morphea nigra. Enkelte af disse Flekker have sig noget over den sunde Hudflade, ramollere stundom, og danne da temmelig runde ulcera, som vanskelig tilhele.
2. Temmelig udbredte hvide Flekker, som tilhøre den anæsthetiske Form. Hudfølelsen har allerede ved deres første Fremtræden aflaget lidt paa disse Steder. Stundom sees en let Desquamation paa dem.

PLADE III.

- a. Et Stykke af intestinum ileum i Nærheden af caput coli, hvorpaa sees flere gulhvide Knuder; benimod den tykkeste Ende findes en stærk Karinjection, der paa eet Sted er temmelig skarpt begrænset. Mesenterium, hvori sees flere opsvulmede Kjerter, af hvilke kun een har et noget betydeligt Omfang.
- b. Tarmstykket gennemskåret i Nærheden af det injicerede Sted; paa sammes indre Flade sees et ulcus, der har gennemført hele Tarmens Tykkelse paa Peritaenium nær.
- c. En Knude af dem, der saaes paa Tarmen, forstørret under Loupen og gennemskåret.
- d d d. Opsvulmede Mesenterialkjerter, isolerede og gennemskårne. I den ene har en stærk Pigmentafsetning fundet Sted, hvorved den har faaet nogen Lighed med Bronchialkjerterne.

PLADE V.

- a. En gennemskåren Næse, seet fra forskellige Sider, dels for at vise den betydelige Knudeinfiltration i Huden, dels for at fremstille Knudedannelsen paa septum nasi og dettes Perforation.
- b. En Strube, aabnet efter den bagerste Flade, for at vise den betydelige Forengelse af isthmus laryngis, samt hvorledes selve cavitas laryngis er næsten udfyldt af Knudemasse.
- c. En Strube med et Stykke af velum palatinum, hvorpaa sees en Mængde smaa Knuder, samt den for en stor Deel destruerede uvula. Epiglottis er i høj Grad besat med ramollerede Knuder, og trukket ned mod isthmus laryngis, som er forsnævret indtil et Hampefrøs Omfang.

PLADE VI.

- a. Livmoderen med Eggestokke og Modertrumpeter samt dens brede Baand, paa hvilke sees mange smaa gulhvide Knuder. Modertrumpeterne ere aldeles udfyldte af Knudemasse, der danner ligesom en Rosenkrands.
- b. En Modertrumpet, aabnet i en lille Udstrækning og den deri afsatte Masse seet under Loupen.
- c. De smaa gulhvide Knuder seete under Loupen.
- d. Et Stykke af Leverens store Lap. Det er dennes underste Flade tilligemed den noget udfyldte Galdeblære. Saavel paa denne, som i selve Substanten af Leveren sees større og mindre Knuder, hvoraf de fleste ere temmelig haarde, enkelte ere ramollerede uden at være brudte op, alle have en stærk gul Farve.

PLADE VII.

Ventriculus, Colon transversum og lidt af Omentum.

- a. Colon transversum, paa hvis udvendige Flade sees mange smaa gulhvide Knuder, der paa enkelte Steder ere confluerede.
- b. En eneste Knudemasse, der udfylder næsten hele Omentum. Denne Masse er gulhvid, fast, smaaakornet, og paa dens Overflade er afsat mindre Knuder, der bestaae af samme Masse.
- c. Ventriculus, paa hvis udvendige Flade sees afsat en overordentlig stor Mængde større og mindre Knuder, der have samme Udseende og Consistence, som de i Colon transversum og Omentum.

PLADE XI.

Luftrøret med Lungerne. Luftrøret er gennemskåret for at vise de paa dens Slimhinde afsatte større og mindre Knuder, der have en bleggul Farve. Ved Siden af Luftrøret, mellem dette og den venstre Lunge sees nogle stærkt opsvulmede Bronchialkjerter, som ere gennemskårne. I begge Lungespisser sees en lille Tuberkelinfiltration, der i den venstre er indskåret. Denne Tuberkelinfiltration er jævnt haard og enkelte Kalkdepoter findes i den.

PLADE XXIV.

1. Et Embryo i sit Eggchylster af den i de for afbildede hvide Knuder levende Acaride.
2. Dyrets Rygside.
3. Dets Bogsider. Alt hevet 300 Gange forstørret.
 - a. Et noget forstørret Forbeen med sit lethedværgelige ambulacrum, paa hvis Ende sidder en tallerkenformig Sugeskive.
 - b. To forstørrede ledede Vorter, af hvilke der paa den øverste Deel af Dyrets Ryg findes 6.
 - c. To ligeledes forstørrede Pigge, af hvilke der paa den nederste Deel af Dyrets Rygsider findes 14. Disse Pigge staae i 4 Rader, 3 Pigge i hver af de to midterste og 4 i hver af de to yderste.
 - d. De lidt forstørrede Pigge, hvormed næsten hele Dyrets Ryg er besat.
 - e. To lange Endebørster.
4. Celler, saadanne som de findes i de fuldkommen udviklede Knuder, seete under Mikroskopet med 300 Ganges Forstørrelse.
5. De samme Celler, 400 Gange forstørrede, imellem hvilke sees enkelte endnu ikke udviklede.

6. a a a. De samme Celler, omtrent 800 Gange forstørrede.
b b b. De formodentlig endnu ikke udviklede Celler.
7. Et vertikalt Hudlag, placeret under Mikroskopet.
a. Overhuden.
b. Læderhuden (Corion).
c. En Haarskede, hvis nederste Deel er fuldkommen destrueret.
d. Et Haar, der har spaltet sig paa Midten, hvor det er noget opsvulmet.
e. En Talgfollikel, hvis Udførselsgang kun kan forfølges et lille Stykke.
f. Resten af Haarskeden og Haarfolliklen.
g. Et Haar, der er ligesom afsedt, dets Skede for en stor Deel destrueret.
h. Et Haar, hvis Skede er afsedt et lille Stykke.
8. Atter et vertikalt Hudlag.
a. Overhuden.
b. Læderhuden.
c c. Haar, der ere temmelig fortykkede og spaltede i Fire; deres Skeder næsten destruerede.
d d d. Knudemasser, leirede i Corion.
e e e. Mutilerede Haar.
f f. Talgfollikler, af hvilke den enes Udførselsgang er destrueret.

PLADE L

- a. En Haand, tilhørende den anæsthetiske Spedalskhed, paa hvilken de fleste Fingre ere bortstødte ved total Necrose af Phalanges.
- b. En Tunge med Epiglottis og lidt af Struben, tilhørende den knudedede Spedalskhed. Paa Tungen og paa Randen af Epiglottis sees flere gulhvide Knuder.

PLADE XXIII.

1. En Rygmarv med dens Hinder, tilhørende den anæsthetiske Spedalskhed.
a a a. Den stærkt blodoverfyldte dura mater, som er slaaet til Siden.
b b. Den bagerste Flade af tunica arachnoida, i hvis seröse Væv er afsat et tykt gelatinöst Exsudat, og som er sammen-vokset til pia mater. Disse Hinder, imellem hvilke Exsudatet findes, er gjenemskaaret i en lille Udstrækning, dels for at vise den betydelige Fortykkelse, de have undergaaet, dels for at fremstille selve Rygmarven. Det gelatinöse Exsudat sees ligeledes at strække sig ud over Nerverødderne.
c c. Selve Rygmarven, lidt injiceret.
2. Et Ansigt, paa hvilket Huden er kunstigen injiceret, og hvor Knuderne vise sig at være udenfor Injectionen, der forresten har gjen-nemtrængt Capillærnettet. Paa den bagerste Deel af Kinden sees et Par smaae Ulcerationer efter forhenværende Knuder, der ere destruerede ved Ramollering, og hvorigjennem Injectionsmassen er penetreret.
3. En af Knuderne paa Kinden forstørret; randtom den sees Injectionen.
4. Samme Knude gjenemskaaret. I Dybden af Indsnittet, det vil sige i det subcutane Cellevæv, hvor Knudemassen ikke findes, sees atter Injectionsmassen at være trængt ind i Capillærnettet I selve Knudemassen derimod findes ikke Spor af den.
5. Et vertikalt Hudlag af den kunstig injicerede Hud, lagt under Mikroskopet og seet med 100 Ganges Forstørrelse. Hele Capillærnettet sees injiceret.
a a a. Injicerede Kar.
b b b. Knudeleier i Corion, imellem de større injicerede Kar.
6. Atter et vertikalt Hudlag, seet under Mikroskopet med 200 Ganges Forstørrelse.

- a a. Injicerede Kar.
b b. Knudeleier i Corion, imellem de større Kar.
c c c. Tre mutilerede Karskeder, af hvilke de to ere tomme, i den tredje sees et ligesom afsedt Haar.
d. En Talgfollikel, hvis Udførselsgang er destrueret.

PLADE XX.

En Kone, hvis Ansigt fremviser en stor Mængde forskelligt formede, mere eller mindre ophøjede Ar efter forhenværende Knuder. Hun har i henved 12 Aar været aldeles frisk; for den Tid var hun i høi Grad angreben af den knudedede Spedalskhed. Knuderne ramolledes successivt, indtil de paa denne Maade ganske destrueredes, hvorefter der indtraadte spontan Helbredelse. En Fordunkling, Spor efter en Knude, har næsten tilintetgjort Synsevnen paa det høire Øie. Det øverste venstre Øielag danner paa Midten en temmelig skarp Vinkel som Følge af Ar efter ødelagte Knuder.

PLADE XIX.

En 26 Aar gammel Pige, der lider af Spedalskhedens begge Former. Man seer Knuder fuldkommen udviklede, enkelte endog ramolledes, paa samme Tid, som man seer Fordreininger af Munden og Slaphed i Kinderne.

PLADE XIV.

En 38 Aar gammel Mand, der lider af den anæsthetiske Spedalskhed.

PLADE XVI.

En 40 Aar gammel Mand, der ligeledes lider af den anæsthetiske Form. Hos ham er Sygdommen endnu mere udviklet.

PLADE XVIII.

Udviklingsstadierne af Øiets Sygdom i den anæsthetiske Spedalskhed.

1. Det nederste Øielag har tabt noget af sin turgor. Blikket er mat.
2. Her viser dette sig end tydeligere; den indvendige Øienvinkel er bleven bredere, lidt af Conjunctiva palpebræ infer. er synlig, og Øiet er temmelig tørt.
3. Et begyndende Ectropium. Den indvendige Øienvinkel betydelig bredere. Svag Fordunkling paa den nederste Deel af Cornea.
4. Et fuldkomment Ectropium. Den nederste Halvdel af Øieaehlet bliver uhedækket ved Forsøg paa at tilkukke Øiet.
5. Fordunklingen paa Cornea er betydeligere. Synet er næsten tabt. Øiet er tørt.
6. Cornea er aldeles fordunklet, Synet tabt. Conjunctiva palpebræ infer. er fortykket, har antaget Udseendet af den ydre Hud og er fuldkommen tør, hvilket og er Tilfældet med selve Øiet; al Taarsesection er standset.

PLADE XV.

En Haand, tilhørende den anæsthetiske Spedalskhed. Ryggen af Haanden er nedsjunken forfra bagtil, og der var en Sprække opstaaet ved Stramningen af den yderst tørre Hud, der har tabt sin Elasticitet. Fingrene ere krummede.

PLADE XVII.

En Fod, tilhørende den anæsthetiske Spedalskhed. Ved Ankelledet sees et meget dybt og stort Ulcus, hvorigjennem Articulationsfladen af Tibia stikker frem. Her er en spontan Luxation tilstede, opstaaet efter en complet Necrose af samtlige Ligamenter og Tendines, der omgive Ledet. Kun en ringe Deel af Huden binder endnu Foden til Lægbenet. De fleste Tæer ere forhen bortnecrotiserede.





Tegnet efter Naturen af Løsting

Tegnet af Frøholm lith. Inst. i Bergen





Figur. after Saturni at Lening

Figur. i Dyklo. h. h. h. i Bergen.









11



PL. IV.



Tegnet efter Naturen af Læsting.

Tykt i Prahls lith. Anst. i Bergen.



Pl:Z.



Tegnet efter Naturen af Løsting.

Tegnet i Frahlde lith. Inst. i Bergen.





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Tegnet efter Sauerens af Løsting

Tegnet i Poulle'ske Institut i Bergen.





Legion after Nature of Lancing



Ericks & Phokle Ink (no. 1) Bepres





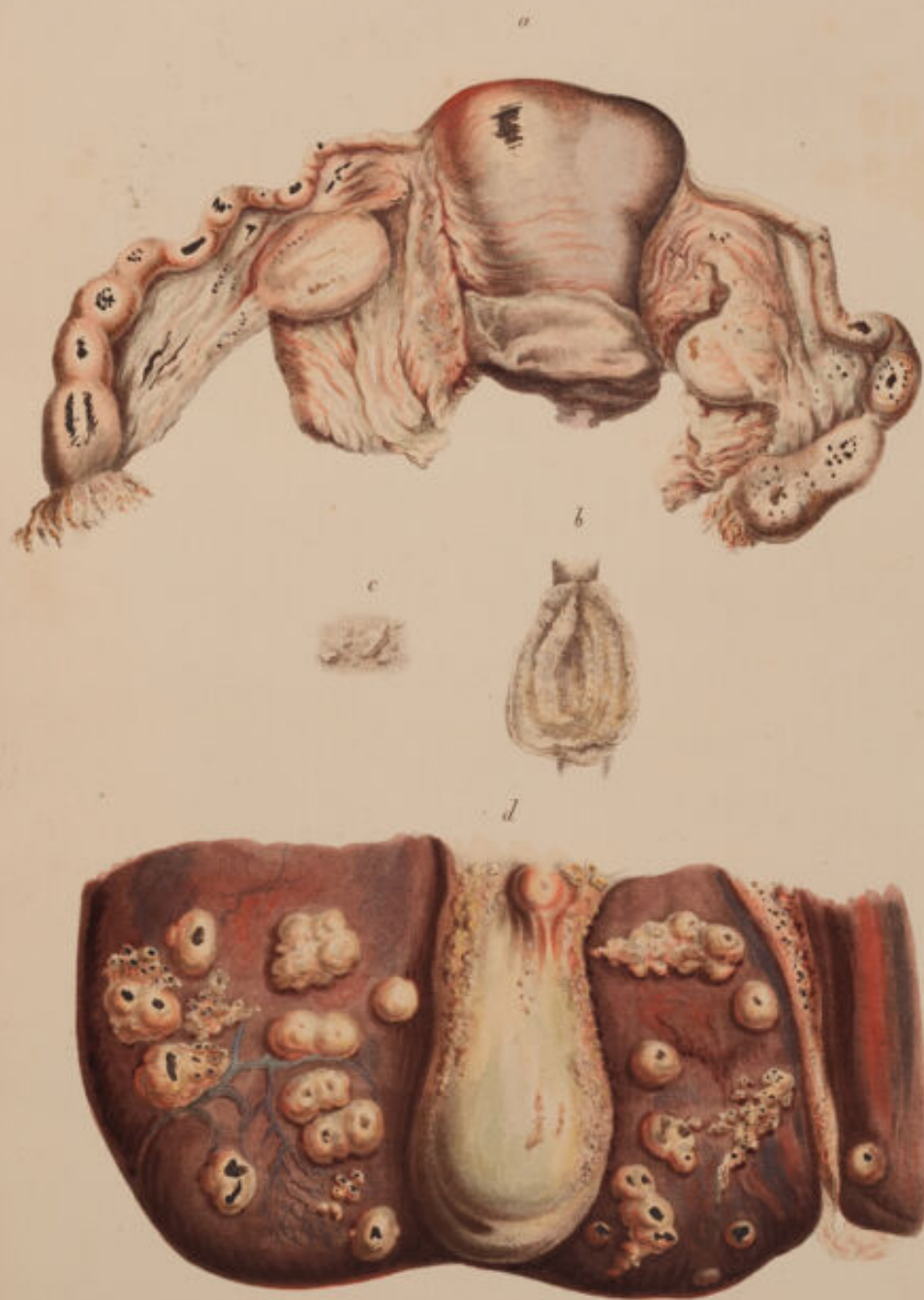


Pl:V.



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PL. VI.





Pl. 7.



Trilobite from the Devonian.

Trilobite from the Devonian.





Typh. & Pock. (left test.) & Hæmorrh.

Tumour after Necrosis of Testis







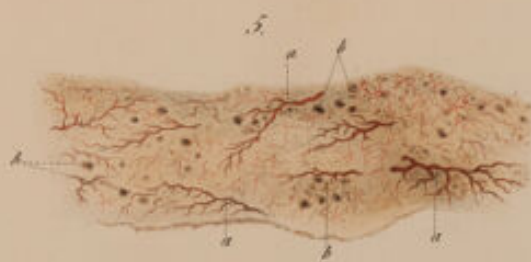
Pl: I.



Tegnet efter Naturen af Løvting

Trykt i Frøhls lith. Inst. i Bergen.



















PL. XVI.





Pl. XVIII.



Trykt i Drabls lill. Inst. i Bergen.

Tegnet efter Naturen af Løsting.







PL. XVII.

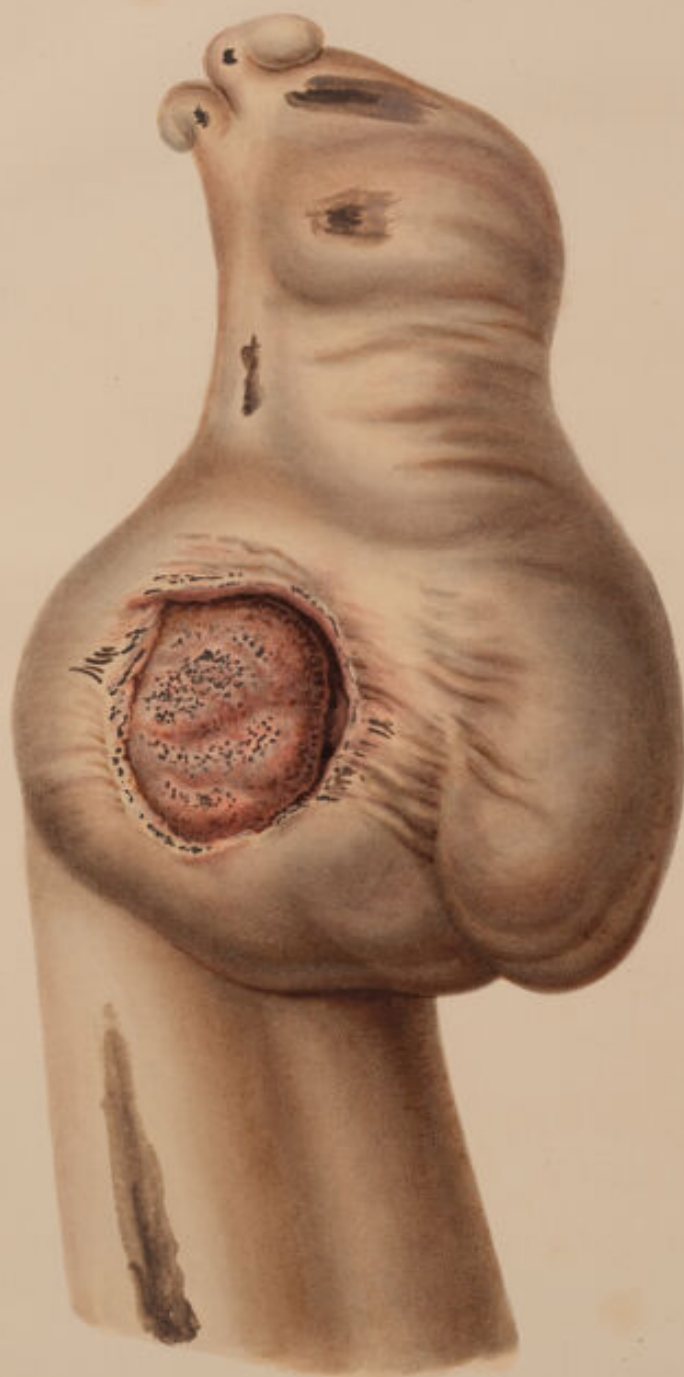


Fig. 1. Double cyst, head 1. Enlarged

Fig. 2. After dissection of the cyst







Atlas of Spedalskhed, Elephantiasis Græcorum, or True Leprosy.

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Published by order of the Home Department of the Norwegian Government. The drawings by J. L. Lestring. Bergen, 1847.

Explanation of the Plates.

Page 1. - Plate VIII.

A boy 12 years old, in whom the roundish, crimson, somewhat bluish-looking blotches, peculiar to the Tubercular Leprosy, have now become more plainly developed, after having several times disappeared at a shorter or longer interval. The blotches are here now at a level with the surrounding skin, and no longer disappear on pressure with the finger.

Page 2. - Plate IX.

A girl 13 years old, in whom the blotches, or the portions of skin they occupy, are somewhat elevated above the level of the skin around them. They have acquired a paler color, and do not disappear by pressure with the finger. The capillary network is much gorged with blood. Here and there small tubercles are seen, which have a much paler color than the blotches. The eye-brows have begun to fall off.

Page 2 1/2. - Plate XIII.

A young woman 20 years old, in whom Leprosy came on some months since, and has shewn itself severely. The whole body is thickly studded with tubercles, which have a brownish color, and are nearly all isolated and tolerably firm. Here and there among the tubercles are a few scattered blotches, which have not yet raised themselves above the skin to form tubercles.

A boy, Aet: 13, in whom the Tubercles are fully developed. They are confluent in several places, and many have ~~softened~~ begun to soften. The eyebrows have fallen off. He became the subject of Leprosy in his 6th year. (Leontiasis.)

A young woman Aet: 28, in whom the Tubercles have become confluent, and are covered with thick greyish-brown crusts, which sometimes reach the height of 2 inches. These crusts being removed, the Tubercles present an ulcerated appearance. Both on the surface and in the interior of the Tubercles, reside millions of acarides, which we believe to be identical with *Acarus scabiei*. The crusts are almost wholly composed of the dead bodies of these animalcules. The detached Tubercles which are not covered with crusts, have, as well as the still sound skin, a dirty greyish-brown color.

Different stages of development of the affection of the eye in Tubercular Leprosy.

1. Vascular injection of the conjunctiva, and formation of a yellowish-white patch on the sclerotic just at the outer margin of the cornea.
2. The patch on the sclerotic has begun to be a little elevated, and has extended itself nearly round the cornea.
3. Here the patch has developed into a tubercle, extending itself in upon the cornea, ~~Pupil angular~~ which is somewhat obscure. The Pupil is pretty strongly contracted, and angular.
4. The Tubercle is fully developed, and occupies a larger portion of the cornea. Pupil angular.
5. Here the Tubercle has begun to soften, and occupies a good deal of the cornea, which is nearly opaque. The Tubercle penetrates the whole thickness of the cornea.

6. A mass of Tubercle, partly softened, occupies the entire eye, of which the greater part is destroyed.

Page 6. - Plate XII.

The Tubercles are in many places so confluent, that they cause an uniform infiltration of the skin, which is considerably thickened. Many of the Tubercles have softened and formed ulcers, large and small, whereof several are covered with thick brown crusts, and others with thinner ones, of a paler brown. On the back of the hand as well as on the fingers the Tubercular infiltration is of a tolerably dark livid color.

Page 7. - Plate XXI.

Tubercles covered with thick brown crusts 2 inches high. These are as firm as horn, and consist of dead animalcules. The crusts being removed, the ulcerated Tubercle is seen, on the surface and in the substance of which live millions of the Acari before-mentioned.

Page 8. - Plate XXII.

1. Large diffuse blotches, of a strong dusky-brown color, and but little elevated above the skin, which always belong to the Tubercular Leprosy. They were formerly called *Morphæa nigra*. Several of these blotches raise themselves somewhat above the sound skin, sometimes soften, and then form roundish ulcers, which heal with difficulty.

2. Tolerably extensive White Blotches, which belong to the Anæsthetic Leprosy. From their first appearance the sensibility of these portions of the skin was impaired. A little desquamation is here and there observed upon them. (*Morphæa alba*.)

a. - A portion of the ileum near the caput coli, whereon several yellowish-white Tubercles are visible. Towards the thickest end the vessels are much injected, especially on one side. In the Mesentery some enlarged glands are visible, one of which has rather a large circumference.

b. - A piece of intestine near this injected part, on the inner surface of which is an ulcer, which has eaten through the whole thickness of the intestine as far as the peritonaeum.

c. c. - A tubercle from the intestine magnified. The same cut across.

d. d. d. d. - Enlarged Mesenteric Glands, dissected out and cut across. In one of them is a dark pigmentary deposit, which gives it some resemblance to the bronchial glands.

Page 10. - Plate V.

a. a. - A nose cut open, viewed from both sides, partly to shew the great tubercular infiltration of the skin, and partly to exhibit a formation of tubercle upon the septum nasi, and its perforation.

b. - The Larynx opened from behind, to shew the thickening (?) of the isthmus laryngis, and also how the cavity of the larynx itself is nearly filled with a mass of tubercle.

c. - The Larynx with part of the soft palate, on which are seen a multitude of small tubercles which have nearly obliterated the uvula. The epiglottis is thickly studded with softened tubercles and is pressed down towards the isthmus laryngis, which is narrowed to the size of a hemp-seed.

Page 11. - Plate VI.

a. - The Uterus with the Ovaries, Fallopian Tubes, and Broad Ligaments, on which are seen many small yellowish-white tubercles. The Fallopian Tubes are quite filled with masses of tubercle disposed like roses in a wreath.

b. - A Fallopian Tube opened for a short distance, and the mass
(of Tubercle)

(of Tubercle) concealed therein displayed under a magnifying glass.

c. - Small yellowish-white tubercles seen under a magnifying glass.

d. - Part of the large lobe of the liver; the under surface, with the gall-bladder partially filled. Both on this, and in the substance of the liver, are seen large and small tubercles, whereof the majority are tolerably hard, but some, being about to break up, have softened externally. They all have a strong yellow color.

Page 12. - Plate VII.

The Stomach, the transverse Colon, and part of the Omentum.

a. - The transverse colon, on which are seen many small yellowish-white tubercles, in some places confluent;

b. - A single mass of tubercle occupying nearly the whole Omentum. This mass is yellowish-white, firm, fine-grained, and on its surface are set lesser tubercles, which spring from the mass.

c. - The Stomach, on the outer surface of which is an extraordinary number of large and small tubercles, which have the same aspect and consistence as those on the Colon and Omentum.

Page 13. - Plate XI.

The Lungs and Trachea. The Trachea is laid open to shew its mucous surface studded with large and small tubercles of a pale yellow color. At the side of the Trachea, between it and the left lung, are some bronchial glands much swelled, which are cut across. In the upper part of both lungs is seen a little tubercular infiltration, which in the left lung is cut into. This tubercular infiltration is uniformly hard, and scattered calcareous deposits are found in it.

Page 14. - Plate XXIV.

1. An embryo in its envelope, of one of the Acari living in the raised tubercles before mentioned.

2. The back of the animal.

3. Its belly. All magnified about 300 times.

a. - A somewhat

6.

a. - A somewhat magnified fore-leg with its light moveable ambulatory, on whose termination is placed a disc-like sucker.

b. - Two magnified jointed (bedded) warts, of which six are found on the upper part of the animal's back.

c. - Two similarly magnified spikes, of which fourteen are found on the lower part of the animal's back. These spikes stand in four rows; three spikes in each of the two central rows, and four in each of the two outer ones.

d. - A magnified view of the small spikes with which nearly the whole back of the animal is covered.

e. - Two long terminal bristles.

4. - Cells such as are found in the fully developed Tubercles, magnified to 300 diameters.

5. - The same Cells 400 times magnified, among which some are seen not yet developed.

b. - a.p.a.a. - The same cells magnified about 800 times.

b.b.b. - Cells probably not yet developed.

7. A vertical section of the skin placed under the microscope.

a. - The Cuticle.

b. - The Corium or true skin.

c. - The sheath of a hair, of which the lower part is quite destroyed.

d. - A hair which has split in the middle, where it is somewhat swelled.

e. - A sebaceous follicle, whose excretory duct can only be traced a little way.

f. - The rest of the hair-sheath and follicle.

g. - A hair similarly eaten off, its sheath also much destroyed.

h. - A hair the sheath of which is eaten off a little way.

8. - Another vertical section of skin.

a. - The cuticle.

b. - The corium or true skin.

c.c.c. - Hairs considerably thickened and split in four: their sheath nearly destroyed.

d.d.d. -

d. d. d. - Tuberculous matter deposited in the corium.

e. e. e. - Mutilated hairs.

f. f. f. - Sebaceous follicles, whose united excretory ducts are destroyed.

Page 15. - Plate I.

a. - A Hand which has lost most of the fingers from complete necrosis of the phalanges, in the anæsthetic form of Leprosy.

b. - The Tongue with the epiglottis and part of the larynx, in the tubercular form of Leprosy. On the Tongue, and margin of the epiglottis, are many yellowish-white tubercles.

Page 16. - Plate XXIII.

1. The Spinal Cord with its membranes, in the anæsthetic form of Leprosy.

a. a. a. - The dura mater much congested (some a slaact-til siden, are the words untranslated here.)

b. b. - The posterior surface of the arachnoid membrane, on whose serous texture rests a thick gelatinous exudation. The arachnoid is adherent to the pia mater. These membranes, in which the exudation is found, are laid open to a small extent, partly to shew the considerable thickening they have undergone, partly to display the spinal cord. The gelatinous exudation is likewise seen to extend itself over the roots of the nerves.

c. c. - The Spinal Cord itself, a little congested.

2. The Face, in which, the skin being artificially injected, the tubercles shew themselves to have no connection with the injection, which has thoroughly penetrated the rest of the capillary network. On the back part of the cheek are two small ulcerations from former tubercles destroyed by softening, and through which the injection has oozed out.

3. One of the tubercles on the cheek magnified; round it is seen the injection.

4. The same

8.
4. The same tubercle cut across. In the bottom of the incision, that is to say, in the subcutaneous cellular tissue, where the tubercular matter does not extend, the injection is again seen pervading the capillaries. In the substance of the tubercle itself, on the contrary, no trace of it is found.
5. A vertical slice of the artificially injected skin, placed under a microscope and seen with a magnifying power of 100 diameters. All the capillaries are seen injected.

a. a. a. - Injected vessels.

b. b. b. - Tubercular nuclei in the corium, in the midst of the more highly injected vessels.

b. Another vertical slice of skin, magnified 200 times.

a. a. - Injected vessels.

b. b. - Tubercular nuclei in the corium, amongst the larger vessels.

c. c. c. - Three mutilated hair-sheaths, two of which are empty, and the third contains the stump of a destroyed hair.

d. - A sebaceous follicle, the excretory duct of which is destroyed.

Page 17. - Plate XX.

A woman whose face displays many different forms of more or less elevated cicatrices after former tubercles. She has been quite well for twelve years; but previously to that time, she was very severely affected with Tubercular Leprosy. The tubercles softened in succession, and the result has been a spontaneous cure. An opacity, the remains of a tubercle, has nearly destroyed the sight of the right eye. The left upper eyelid forms a pretty sharp angle in the middle, owing to the cicatrix of destroyed tubercles.

Note. - The patient just described was shewn to me in the Leper-hospital at Bergen, in 1850, and the photo is a very accurate likeness of her.

W. B. C. Nourse.

A young woman Aet: 26, who is affected with both forms of Leprosy. Here are seen tubercles fully developed and some even softened, co-existing with distortion of the mouth and slackness of the cheeks.

A man Aet: 38, the subject of Anaesthetic Leprosy.

A man Aet: 40, who likewise suffers from the Anaesthetic form. In him the disease is more developed.

The successive stages of development of affections of the eyes in Anaesthetic Leprosy.

1. - The lower eye-lid has lost some of its fulness. The sight is dim.
 2. - Here the same is more plainly seen; the inner angle of the eye has become broader, a little of the inferior palpebral conjunctiva is visible, and the eye is considerably dried.
 3. Incipient ectropium. The inner angle of the eye evidently broader. Faint obscurity on the lower part of the cornea.
 4. Complete ectropium. The lower half of the eye-ball has become turned upwards from the efforts to cover the eye.
 5. The opacity of the cornea is greater. The sight is nearly gone. The eye is dried up.
 6. The cornea is quite opaque, and the sight gone. The inferior palpebral conjunctiva is thickened, has assumed the appearance of the outer skin, and is completely dry, which is also the case with the eye itself; and all secretion of tears is stopped.
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The hand, in a case of Anaesthetic Leprosy. The back of the hand, from before to behind, is sunken, and a fissure has been produced from the tension of the outer dry skin, which has lost its elasticity. The fingers are bent up.

A foot, in Anæsthetic Leprosy. At the ankle is seen a very deep and large ulcer, through which projects the articular surface of the tibia. Here is spontaneous dislocation after complete destruction of all the ligaments and tendons round the joint. A small portion of skin still connects the foot with the leg. Most of the toes have formerly sloughed off.

Note. These Plates were colored in 1847, and some of the colors have since then changed and become blackish, and not as they were at first. With this exception the plates are exceedingly accurate.

Leprosy is found in two forms: the Tubercular, and the Anæsthetic: the one affecting principally the skin and mucous membranes, and in its morbid anatomy reminding us of scrofula, - the other attacking in a more insidious manner the nervous centres, and producing various peripheral lesions as a consequence. Both run a chronic course, subject to occasional febrile exacerbations, and both tend to an increasing disorganization. In rare cases, Tubercular Leprosy runs an acute course; the other never.

The first appearance of Tubercular Leprosy is preceded by heaviness in the limbs, drowsiness, indisposition to exertion, melancholy, slight rigors, flying pains, and mal-aise. After a while these symptoms recede, and there appears an eruption of rounded blotches, red or brownish, slightly elevated above the skin. These blotches are at first transient, vanishing and reappearing, for some months or years. At length they become permanent, and more of a bluish tint, as shown on Pages 1 and 2. The patient now feels better. After a time, the blotches become prominent; new blotches appear; and the hair falls off from the affected parts. The blotches become tubercles; the change being preceded by general indisposition and pyrexia. The tubercles frequently soften, open, and form deep ulcers. The glands of the neck, axilla, and groin, swell. The mucous membranes are also attacked. When the mouth, throat, and nostrils are affected, the tubercles soon soften, and the parts are destroyed by ulceration. See Pages 10, 13, and 15. Wherever the Tubercles are, whether within or without the body, their tendency is to softening and ulceration. These processes go on

at intervals, sometimes in one part of the body, sometimes in another. Sometimes an infinity of tubercles soften all at once. This is preceded by indisposition, strong rigors, severe head-ache, thirst, loss of appetite, and full pulse. The tubercles soften, open, discharge a yellowish-white substance, and leave numerous discharging ulcers. The Eyes are often attacked in Tubercular Leprosy.

During the premonitory symptoms of Tubercular Leprosy, the blood is found to contain a diminished quantity of serum, and an increase of fibrin and albumen. When the eruption appears, the blood nearly recovers its normal constitution. When a new access of the malady approaches, the condition of the blood again changes: and so on throughout the disease. If the above-named Ulcers heal, the patient generally dies.

The Anæsthetic Leprosy is ushered in by similar premonitory symptoms, but more insidious. After some months or years, bubble like pemphigues appear, leaving ulcerated surfaces when they burst. This is repeated for some years. The ulcers, when healed, leave white shining cicatrices, a little sunk in the skin, and slightly insensible, and any hairs on them are turned white. This condition is described in Leviticus XIII.

After an interval of ease, rigors come on, with hyperæsthesia of portions of the skin. These increase, and cause suffering. The hyperæsthesia may continue for several years, then subside, and gradually complete anæsthesia takes its place. From time to time there are deep piercing pains in the head, centering about the root of the nose: also dryness of the surface of the eye. The eyes become affected, and sight is slowly destroyed. The cheeks become pallid and slack, the mouth is drawn to one side, and the lower lip hangs open. The nasal cavity dries up, and the septum nasi is perforated by ulcers. The Anæsthesia advances pari passu with these changes, and at length not only may the eyeballs, cheeks, lips, gums, and inside of the nostrils, be touched without the patient's perceiving it, but incisions may even be made without causing the least pain. The sense of taste is dull, but the hearing is not affected. Constant coldness is felt by the patient. Wherever anæsthesia exists, the part becomes emaciated. The anæsthesia extends to all the parts below the skin, and becomes so complete that the limbs may be burnt or amputated without pain. The power of motion becomes impaired. In the course of the disease, after premonitory indisposition, with headache, thirst, and precordial oppression, a painful bluish spot appears on the sole of the foot. It soon opens, and discharges; and the symptoms are directly relieved. The skin is

12. Skin is undermined, an ulcer forms, laying bare the muscles. This may extend and lay bare the bones, some of which often perish and come away. These ulcers usually last the patients' life, sometimes diminishing with scanty discharge, when there ensue headache, fever, thirst, vomiting, and local pain. If the ulcers heal, the patient dies insensible. But when the ulcers increase and discharge, the health improves. The Anæsthesia being fully developed, necrosis sets in, usually attacking the bones of the fingers or toes. Fingers and toes are lost one after another, and the metatarsal bones are destroyed, leaving a clubbed stump of hand or foot. The patient goes on for years with increasing symptoms, and the mind fails gradually. After death, some part of the spinal cord is found to have an albuminous exudation in the subarachnoid cellular tissue; the same is found in the sheaths of nerves, which are sometimes atrophied; and also in the brain, especially about the base, and at the origin of the 5th, 6th, 7th, and 8th pairs of nerves. The cerebellum, pons varolii, and medulla oblongata, are commonly normal. Albuminous effusions are often found about the pleurae, sometimes on the surface of the liver. Such are the two forms in which true Leprosy (or Spedalskhed) appears. One form sometimes passes into the other; in some cases both forms co-exist: but most commonly they are distinct from first to last.

This brief sketch of Leprosy is condensed from the full detailed account of it by Danielsen and Boeck, entitled "Om Spedalskhed, Christiania, 1847," a volume of 500 pages, with ample bibliography down to that date.





