Les bistouris, les sondes et les curettes chirurgicales d'Hippocrate / [Skevos G. Zervos].

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Les bistouris, les sondes et les curettes chirurgicales d'*Hippocrate*.

Par le

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Avec 48 figures.

Une simple étude des fouilles archéologiques faites au cours des cent dernières années à l'île de Cos (Dodécanèse), patrie d'*Hippocrate* (fig. 1), où se trouvait le fameux temple d'*Esculape* (fig. 2—3), de même que l'étude des objets archéologiques mis au jour dans cette même île et dans celle de Calymnos, située en face, ainsi qu'à Rhodes, à Cnide, à Halicarnasse, dans les îles grecques, tout autour de la Mer Egée, et en général dans tout l'Orient, a fait constater d'une façon indéniable qu'à l'âge de la pierre l'homme se servait, dans ces parages, de couteaux, de hâches, de marteaux, de scies etc. en pierre (fig. 4—10). Même ses instruments de chirurgie, quand il se trouvait dans la nécessité de recourir à une intervention chirurgicale sur son semblable, étaient en pierre (fig. 11).

Plus tard quand, avec ses premiers progrès, quittant les cavernes, il put découvrir le métal, il ne tarda pas à remplacer tous ses outils et tous ses instruments par le cuivre et par le bronze. Il sut les perfectionner non seulement dans l'art primitif de la guerre (fig. 12—15), non seulement dans son industrie rudimentaire (fig. 16), mais aussi dans la médecine et dans la chirurgie, pratique et empirique. Une infinité de faits sont là pour nous en convaincre (fig. 17).

Il faudrait une longue étude pour suivre l'évolution de la chirurgie des temps préhistoriques. Mais aussi la chirurgie des siècles suivants, jusqu'à *Hippocrate*, telle qu'elle apparaît aujourd'hui à la suite des recherches et des découvertes archéologiques, pourrait remplir tout un grand volume d'une importance exceptionnelle. Déjà *Hippocrate* lui-même dit à ce sujet:

"*Ἰατρικῇ πάντα πάλαι ὑπάρχει, καὶ ἀρχὴ καὶ ὁδὸς εὑρημένη,*
"*καθ'ἣν καὶ τὰ εὑρημένα πολλά τε καὶ καλῶς ἔχοντα εὕρηται ἐν πολλῷ*
"*χρόνῳ, καὶ τὰ λοιπὰ εὑρεθήσεται, ἢν τις ἱκανός τε ἐὼν καὶ τὰ εὑρη-*

"μένα εἰδώς, ἐκ τουτέων ὁρμώμενος ζητέῃ. Ὅστις δὲ ταῦτα ἀποβαὼν "καὶ ἀποδοκιμάσας πάντα, ἑτέρῃ ὁδῷ καὶ ἑτέρῳ σχήματι ἐπιχειρέει ζη- „τέειν, καὶ φήσει τι εὑρηκέναι, ἐξηπάτηται καὶ ἐξαπατᾶται· ἀδύνατον γάρ[1])." ("Mais la médecine est, dès longtemps, en possession de toute chose, en possession d'un principe et d'une méthode qu'elle a trouvées: avec ces guides, de nombreuses et excellentes découvertes ont été faites dans le long cours des siècles, et le reste se découvrira, si des hommes capables, instruits des découvertes anciennes, les prennent pour point de départ de leurs recherches. Mais celui qui, rejetant et dédaignant tout le passé, tente d'autres méthodes et d'autres voies, et prétend avoir trouvé quelque chose, celui-là se trompe et trompe les autres; car cela est impossible.")

Fig. 1. *Hippocrate.* — La statue, d'un art exquis, a été découverte dernièrement à l'île de Cos, non loin de l'Asklepieion (Dodécanèse).

Aussi nous-mêmes, épargnant cet espace tellement précieux, croyons-nous devoir laisser de côté ces deux chapitres de la Chirurgie pré-hippocratique, pour ne pas, involontairement, allonger outre mesure la présente étude. Nous aborderons donc tout de suite notre sujet principal.

Lorsque *Hippocrate* fit son apparition sur la petite île de Cos (Dodécanèse), en 460 avant notre ère, la médecine, que l'on croyait jusqu'alors un simple art, était exercée de la façon la plus mul-

1) *Hippocrate:* De l'ancienne médecine 2. Vol. 1 p. 573. Edition *E. Littré.*

Fig. 2. Vue générale de l'Asklepieion d'*Hippocrate* dans son état actuel.

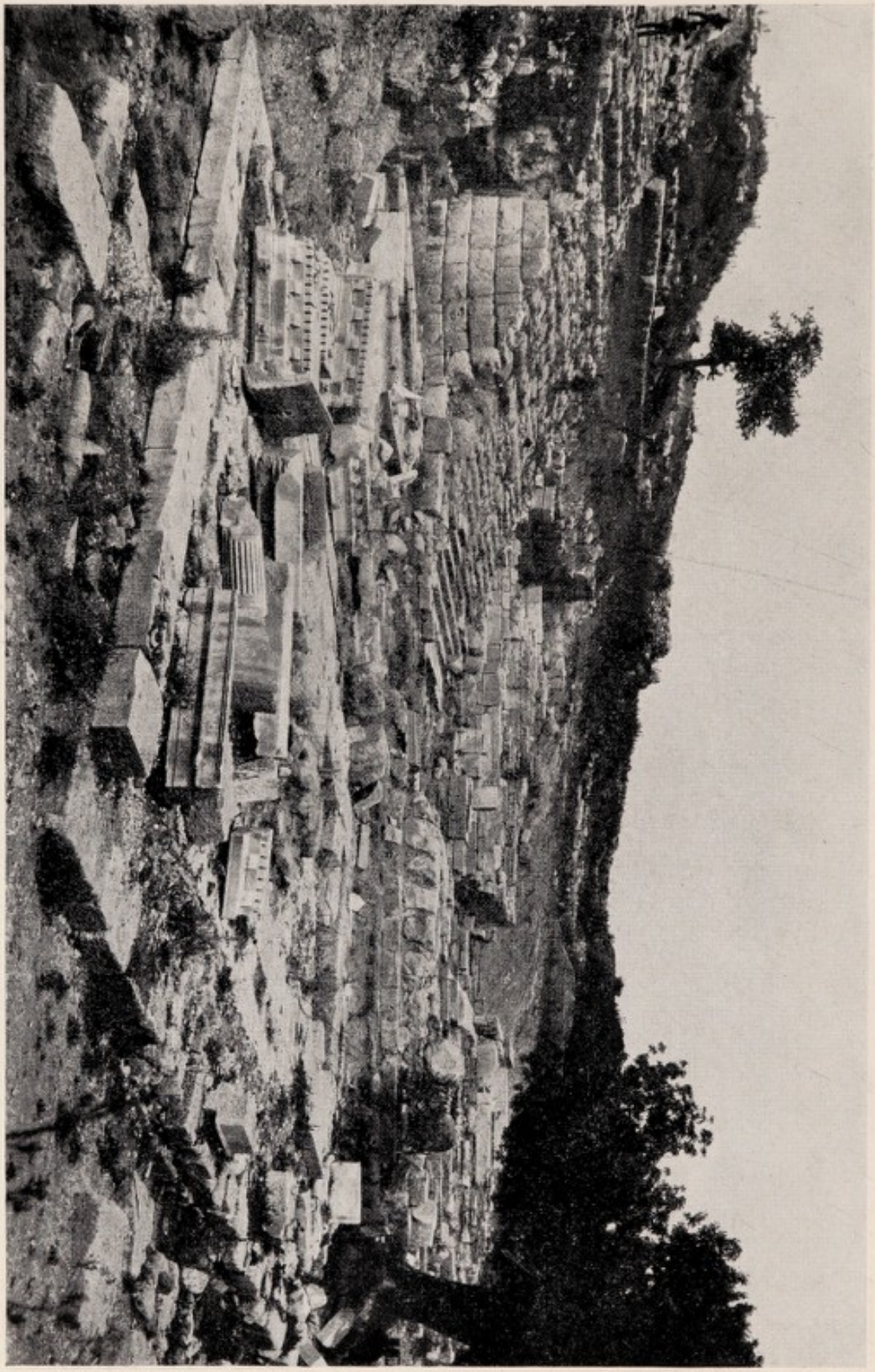


Fig. 3. Vue de la partie la plus haute de l'Asklepieion d'*Hippocrate*.

tiple et selon les systèmes les plus variés. La médecine magique guérissait les patients qui avaient recours à elle par des sorcelleries

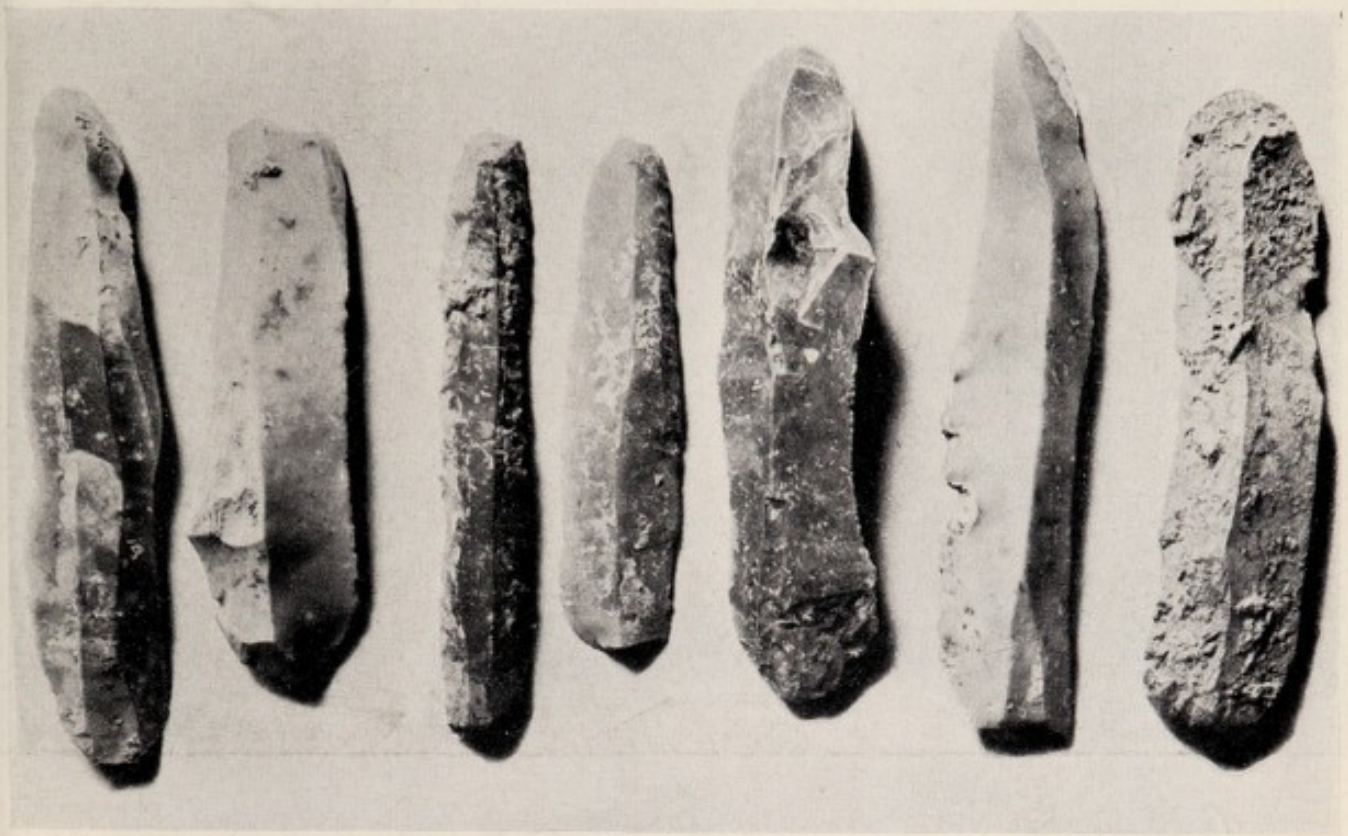
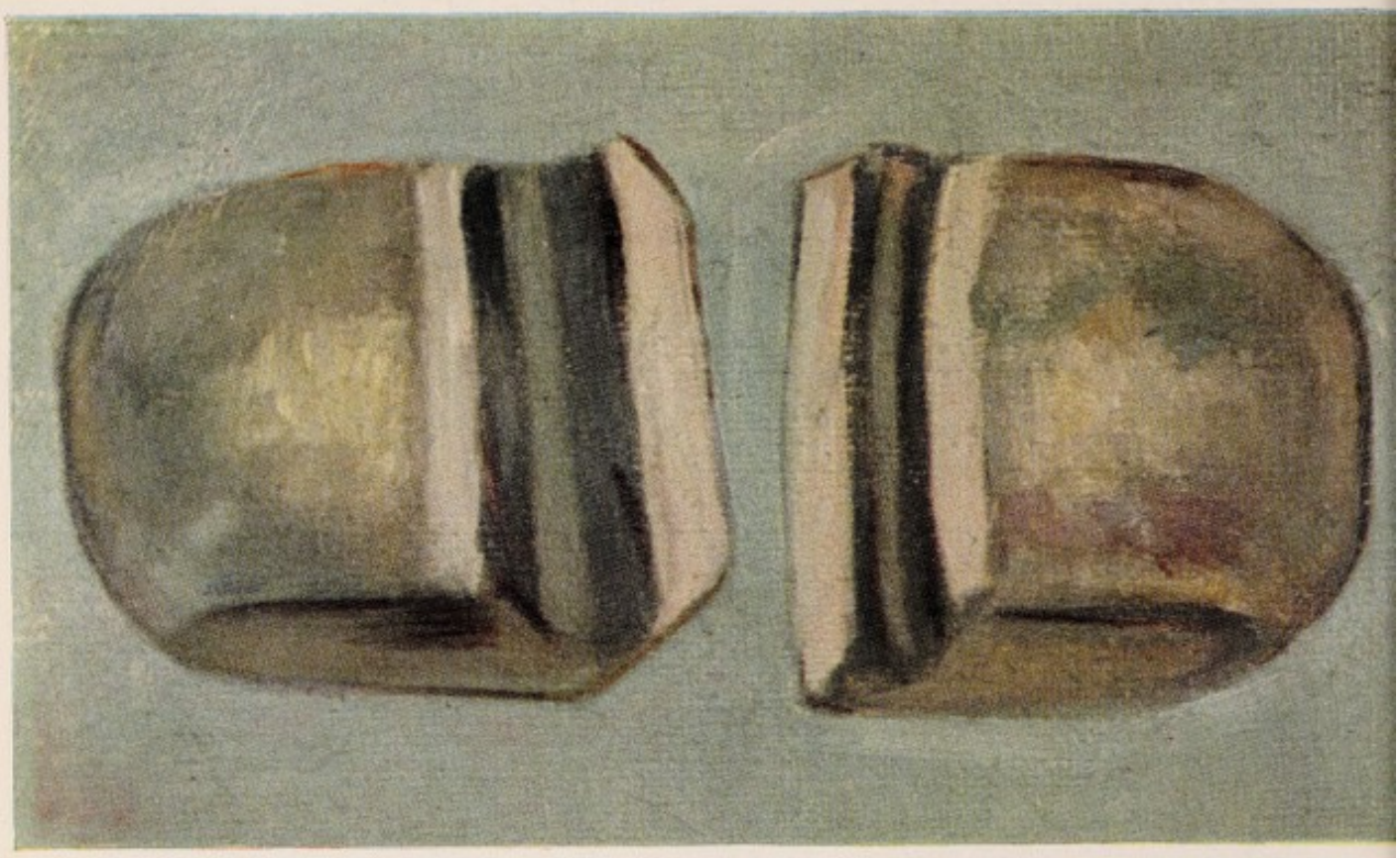


Fig. 4. Couteaux en pierre (de l'âge de la pierre au Dodécanèse).

Fig. 5. Hâches en pierre (âge de la pierre, au Dodécanèse).

et par des envoûtements, par des incantations, des prières et des paroles magiques. La médecine hiératique, qui s'abritait dans des temples magnifiques, tel que celui d'*Esculape*, traitait les



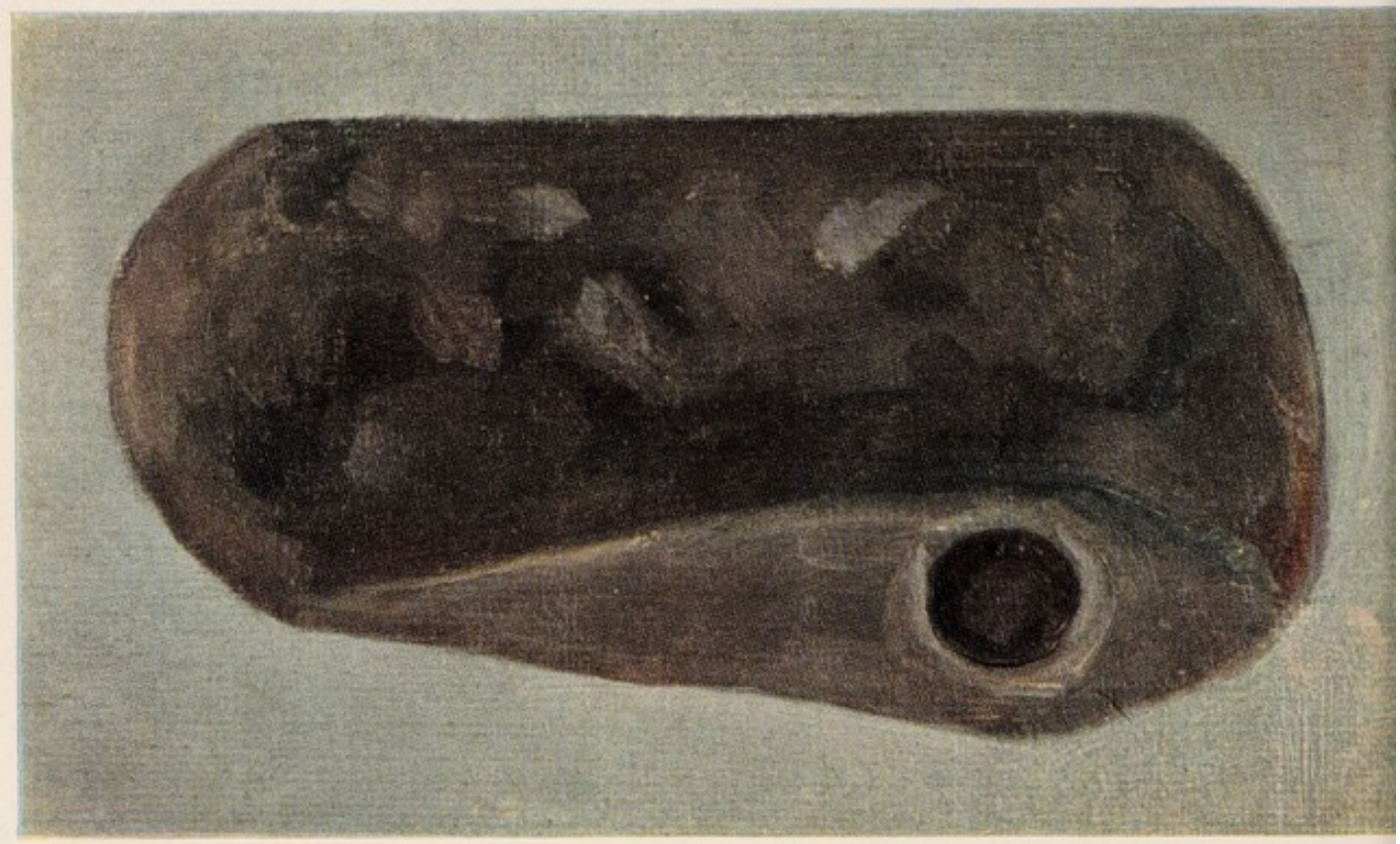


Fig. 6 et 7. Grandes hâches en pierre (âge de la pierre au Dodécanèse).

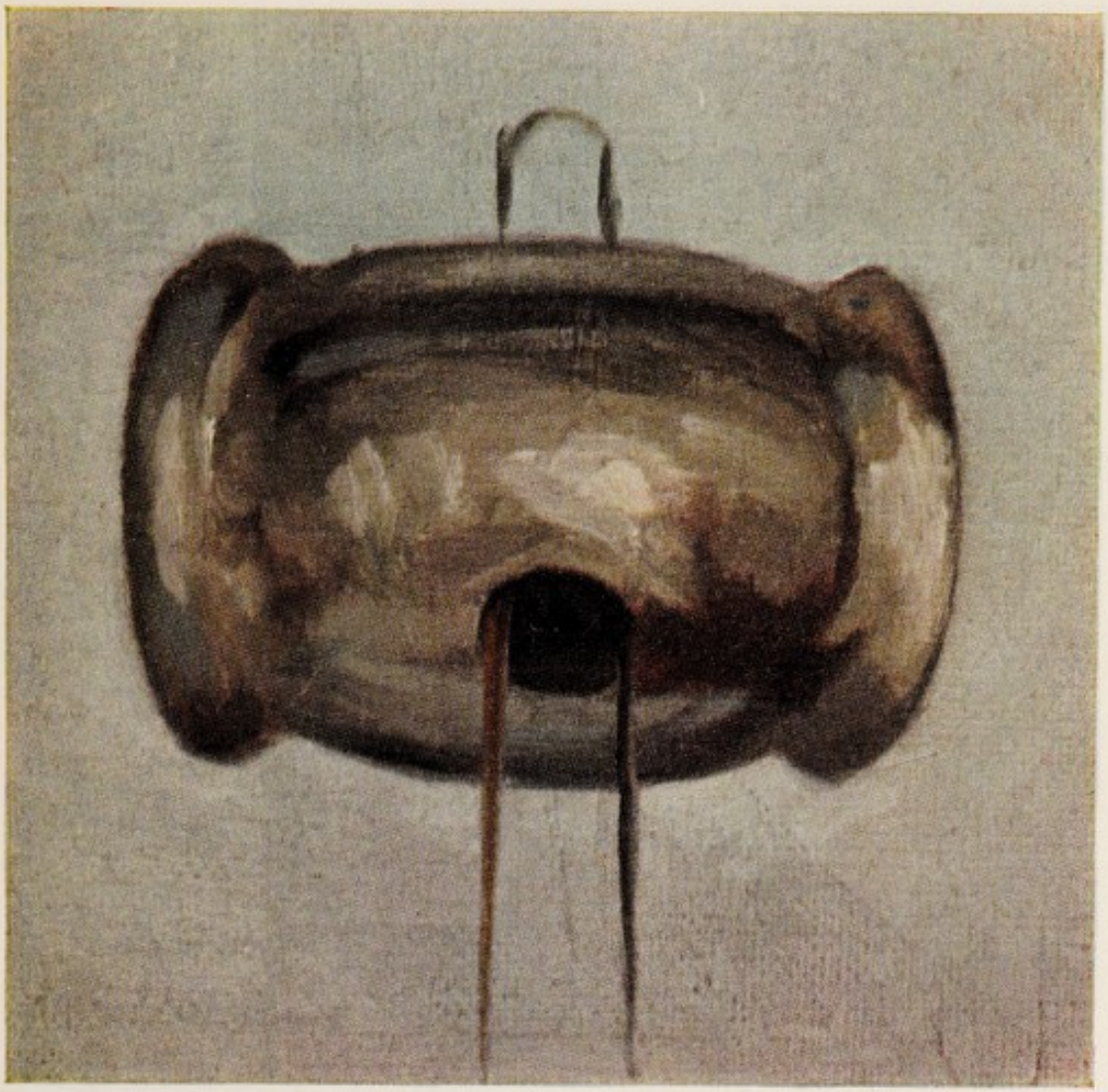


Fig 8. Marteau en pierre (âge de la pierre au Dodécanèse).

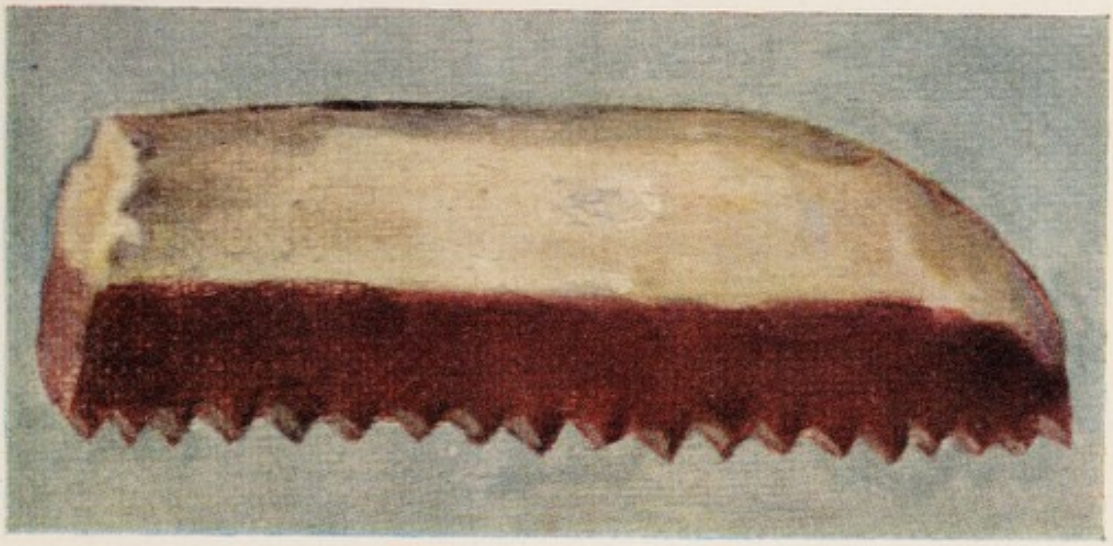


Fig. 9. Scie en pierre (Epoque lithique au Dodécanèse).

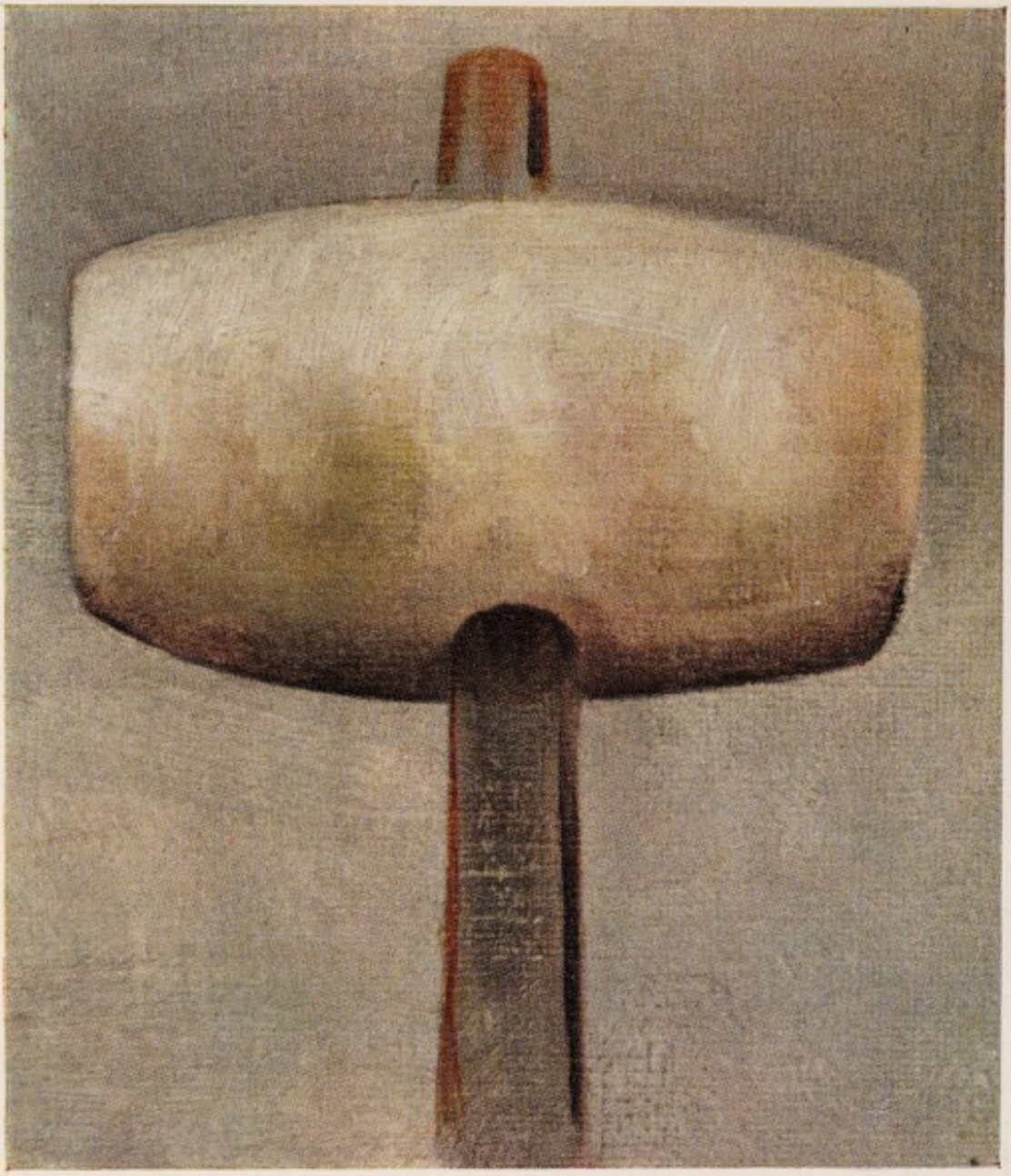


Fig. 10. Marteau en pierre (âge de la pierre au Dodécanèse).

malades par les prêtres qui avaient certaines notions d'hygiène, connaissaient quelques médicaments pratiques, faisaient quelques opérations chirurgicales. De plus, dans certaines conditions particulières, ils se servaient de la suggestion sur quelques personnes névropathiques. La médecine des gymnastes soignait la santé et s'occupait d'athlétisme et de diète. Elle comprenait les médecins qui s'occupaient de la beauté du corps humain, pratiquaient quelques petites opérations chirurgicales, réduisaient des dislocations et des fractures etc. En outre, des médecins em-

piriques, publics ou privés, exerçaient l'art médical et, de plus, nombre d'anciens malades, ayant souffert de telle ou telle maladie, ne se faisaient pas faute de se donner comme médecins.

Fig. 11. Deux opérations de circoncision avec des couteaux en pierre.

Il y avait en outre les docteurs-philosophes qui, s'occupant de l'étude de la nature, firent entrer l'homme et l'étiologie des maladies dans le domaine de leurs recherches.

Ayant étudié toutes ces sortes de médecine, leurs méthodes et leurs systèmes, *Hippocrate* s'est surtout appliqué à les contrôler. Son zèle scientifique n'en fut pas satisfait. Mais cela ne le découragea point. Au lieu d'abandonner la lutte, il s'engagea dans une voie jusqu'alors inconnue. Grâce à son génie, il chercha, trouva et traça un nouveau mode d'étude des maladies et de leur traite-

ment. Il scruta avec attention l'organisme humain et étudia avec ardeur la nature. Imitant celle-ci avec soin, il s'appliqua à la

Fig. 12. Armes en bronze de l'époque proto-minoenne (Tombeaux de Cnossos).

reproduire par l'expérience et il s'en servit comme d'un guide savant, comme d'un médecin très expérimenté, d'un maître insurmon-

table. Il put transformer l'art médical en une science nouvelle, d'une parfaite unité, d'une clarté stricte, d'une expérience sûre et d'un jugement facile.

Fig. 13. Armes en bronze. Des poignards à large lame, une épée à oreillettes, autres poignards, un rasoir etc. dont les blessures étaient soignées et guéries par la chirurgie post-minoenne.

C'est ainsi que, par ses œuvres immortelles, *Hippocrate* devint un célèbre médecin praticien, en même temps qu'un théoricien renommé et un auteur incomparable. Il sut s'attirer le respect de tous et jouissait partout d'une telle autorité, que des personnalités

comme *Platon* et *Aristote* puisaient dans ses opinions et copiaient ses observations [1]).

Fig. 14. Pincette, poignard, rasoir en bronze, pierre à aiguiser (Epoque mycénienne).

Et si tous les auteurs anciens, médecins ou non, appellent *Hippocrate:* "Ἀστέρα καὶ φῶς τῆς Ἰατρικῆς" (Une étoile et la lumière

1) *Skevos Zervos:* L'obstétrique et la gynécologie à travers les siècles jusqu'à *Aristote* (Prix de la Dotation *Symvoulidès*). Athènes 1914. p. 1—334.

de la médecine), "*Θειότατον*", "*Θαυμασιόν*" ("très divin", "très admirable") ou "*Πάντων τῶν ἀγαθῶν εὑρετὴν*" et "*Πάντων ἡμῖν τῶν καλῶν παρασχόντα τὰ σπέρματα*" ("Celui qui a trouvé tous les biens" ou "Celui qui nous fournit les germes de tous les biens"), si la science médicale le considère et l'appelle son "Père" — car c'est à lui, en effet, qu'elle doit son existence en tant que science positive et nette —, c'est qu'*Hippocrate* est celui qui fut le premier à étudier, d'une façon inimitable, la nature au point de vue médical, qui appliqua dans la médecine les lois éternelles de la nature et les vérités scientifiques immuables. C'est lui qui, d'une manière vraiment merveilleuse, a enseigné que l'observation faite au chevet du malade, l'épreuve et l'expérience attentive, sont les vrais maîtres du médecin, le trépied sur lequel est fondée la véritable science médicale.

Fig. 15. Couteau et rasoir en bronze. Temps post-mycénienne.

Ayant reconnu que la connaissance exacte de l'anatomie de l'homme devait, d'ores et déjà, constituer la science fondamentale et la base médicale solide sur laquelle devrait s'élever l'édifice de la chirurgie et de toute intervention chirurgicale, il s'adonna avec une ardeur exceptionnelle à l'étude de l'anatomie de l'homme. Mais comme ceci était alors interdit sous peine de mort, il se voyait obligé de passer ses jours et ses nuits dans les cimetières pour y faire des études anatomiques sur des cadavres, tandis que, d'autre part, il se mit à disséquer des animaux pour faire des recherches comparées de leur organisme

et suivre le fonctionnement des viscères. Etant donné que la vivisection était strictement interdite, l'anatomie d'*Hippocrate* n'est certainement pas extrêmement claire et méticuleuse. Tout de

Fig. 16. Outils et instruments en bronze de l'époque méso-minoenne (3500 ans avant notre ère): scies de différentes grandeurs, ciseaux pour la pierre et le bois. Vrilles, hâches, clous, une lime, découverts à Gournia (Crète), avantcoureurs des instruments similaires de chirurgie.

même, elle n'est pas à dédaigner comme travail fait au hasard. Au contraire, c'est un instrument sérieux dans la science médicale

Fig. 17. Exvoto en terre (époque méso-minoenne).

et dans la pratique chirurgicale. *Hippocrate* connaît les artères et les veines de l'homme et croit que les premières contiennent le „pneuma" (esprit), tandis que les veines contiennent le sang.

Il connaît les fibres, les nerfs, les muscles, les tendons, les os, les articulations, la structure du crâne, le cœur, le péricarde, les cavités cardiaques, l'aorte, les artères pulmonaires, les valvules sigmoïdes. Il énumère tous les viscères de l'homme et les différents os du squelette, et quand, au prix de tant de peines, il put

Fig. 18. Malades se rendant à l'Asklepieion pour se faire soigner aux temps d'*Hippocrate*.

enfin se trouver devant le squelette complet de l'homme, il en fut tellement ému, qu'il en fit une réplique en or et la dédia à l'oracle de Delphes. Son expérience, par laquelle il introduisit dans le museau d'un porc un liquide coloré pour résoudre la question de savoir si les substances peuvent descendre dans l'œsophage et dans

Fig. 19. Esculape avec ses fils Machaon et Podalirius, et ses filles Hygieia et Iasso, reçoivent des malades.

Fig. 20. Esculape, à sa gauche la Santé, reçoit des malades.

Fig. 21. Esculape reçoit des malades qui lui apportent des cadeaux. Derrière lui, son serpent sacré.

l'estomac par les narines et par les voies respiratoires, n'est certainement pas sans valeur, surtout si l'on tient compte de l'époque et des conditions du milieu.

La Chirurgie d'*Hippocrate* est également très développée. Après avoir étudié la capacité thérapeutique de la médecine dans son ensemble, il émit l'aphorisme suivant: "*Ὁκόσα φάρμακα οὐκ ἰῆται, σίδηρος ἰῆται· ὅσα σίδηρος οὐκ ἰῆται, πῦρ ἰῆται· ὅσα δὲ πῦρ οὐκ ἰῆται, ταῦτα χρὴ νομίζειν ἀνίατα*" [1]) ("Ce que les médicaments ne guéris-

Fig. 22. Esculape assis (seulement ses pieds et ses mains sont conservés), à gauche la Santé (Hygieia). Devant lui, un autel vers lequel un enfant pousse un bélier qui regimbe. Derrière lui six suppliantes dont la dernière est une servante portant sur la tête une corbeille, recouverte d'un drap et dans laquelle sont les cadeaux apportés au médecin.

sent pas, le fer le guérit; ce que le fer ne guérit pas, le feu le guérit; ce que le feu ne guérit pas doit être regardé comme incurable"). Il réduit les fractures, simples ou compliquées, de tous les os et non seulement de ceux des extrémités, mais aussi de la clavicule, de la mâchoire etc. Il en décrit longuement le traitement, attendant la soudure des os vers le trentième jour, tandis que, selon lui: "*Ῥὶς κατεαγεῖσα ἀναπλάσσεται, ὡς οἷόν τε αὐθωρόν*" ("Le nez fracturé se reforme autant que possible immédiatement").

1) *Hippocrate*: Aphorismes, Section VII. 87, Edition *Littré*, Tome IV p. 609.

Pour la réduction des dislocations il applique des appareils de sa propre invention, cependant qu'il brûle et cautérise l'épaule avec un fer chaud afin de prévenir une rechute de la dislocation. Il exécutait les mutilations des extrémités par l'amputation de l'articulation ou par la section des os des extrémités, supérieures ou inférieures. Il pratiquait également la ponction du thorax et

Fig. 23. Esculape méditant.

la pleurotomie pour les exsudats du thorax ou du pyothorax. Il pratiquait également la ponction de l'abdomen dans l'hydropisie etc.

Il ouvrait par section ou par cautérisation les abcès du foie, du rein etc. Il opérait les fistules de l'anneau et les hémorroïdes. Il pratiquait l'extraction des polypes du nez en les liant autour ou en les arrachant, mais aussi en ouvrant les narines et en les

cautérisant au moyen du thermocautère etc. Il opérait le batrachion et pratiquait la staphylotomie par un instrument spécial, la staphylagre.

Il arrachait les dents au moyen d'instruments spéciaux. Il cathétérisait la vessie par le cathéter. Il en extrayait les calculs au moyen du litholave. Il ruginait les os cariés en se servant d'une curette et il pratiquait la trépanation du crâne par une scie spéciale, selon le cas, avec une assurance parfaite, comme s'il s'agissait d'une opération ordinaire. A cet effet, il se servait d'instruments qu'on n'a pas encore su remplacer dans la chirurgie.

Fig. 24. Esculape visitant un malade alité.

Ayant pour principe de pratiquer toutes les opérations avec des instruments aussi simples et aussi peu compliqués que possible, il en fabriquait la plupart en bronze, quelques-uns en plomb et en bois dur, et seulement les lames des instruments tranchants, les bistouris, les scies etc. en cuivre et en acier.

Si nous étudions attentivement le livre d'*Hippocrate* concernant les articulations — qui est la plus belle des œuvres sorties jusqu'à présent des mains d'un chirurgien — et si nous passons en revue son œuvre tout entière, je crois que nous pourrions donner,

dans les lignes qui vont suivre, un aperçu succinct des bistouris, des sondes et des curettes chirurgicales *d'Hippocrate* (fig. 18—26).

Fig. 25. Amphiaraos et son fils et aide, Amphilochos, visitant un malade alité.

II. Bistouris

Ayant toujours en vue sa propre doctrine, selon laquelle: "*Νόμος μέν πάντα κρατύνει*" (La loi gouverne tout) [1]) et cette autre

1) *Hippocrate:* De la Génération. 1. Vol. VII p. 471.

doctrine qui commande: "*Μηδέν εἰκῇ, μηδέν ὑπερορῇν*" ("Ne rien faire au hasard, ne rien manquer à observer")[1], il donnait à tous le conseil suivant: "*Ὅσα μὲν χειρουργῆσαι δεῖ, χρὴ ξυνεθισθῆναι· τὸ γὰρ ἔθος τῇσι χερσὶ κάλλιστον διδασκάλιον γίνεται*" ("Quand il s'agit d'opérations chirurgicales, on s'y habitue, et il le faut, car l'habitude est pour la main le meilleur enseignement")[2]. Et il commandait à tout médecin que: "*Χαλκώματι δὲ πλὴν τῶν ὀργάνων μηδενὶ χρήσθω· καλλωπισμὸς γάρ τις εἶναί μοι δοκεῖ φορτικὸς σκεύεσι τοιουτέοισι*

Fig. 26. Esculape visitant un malade qui, ne pouvant venir seul, est transporté à l'Asklepieion par deux parents, servants ou infirmiers, ou de médecins assistans, dans un drap de lit.

χρῆσθαι" ("On ne se servira d'airain que pour les instruments; car, employer des ustensiles de ce métal me paraît du luxe déplacé"[3]).

Bistouris de saignée. — Les bistouris les plus importants dont il se servait pour les différentes opérations étaient ceux dont il se servait pour les saignées (phlébotomes), en recommandant: "*Ἐπιτηδεύειν δὲ χρὴ τὰς τομὰς ὡς προσωτάτω τάμνειν ἀπὸ τῶν χωρίων,*

1) *Hippocrate:* Sixième livre des épidémies. Deuxième section. 12. Vol. V p. 285.
2) *Hippocrate:* Des vents I. Vol. VI p. 91.
3) *Hippocrate:* Du médecin. 2. Vol. IX p. 209.

ἔνθα ἂν αἱ ὀδύναι μεμαθήκωσι γίνεσθαι καὶ τὸ αἷμα ξυλλέγεσθαι" ("Il faut pratiquer les saignées; mais il faut avoir soin qu'elles soient aussi proches que possible du lieu où les douleurs se font sentir d'habitude et où le sang se rassemble")[1].

Il pratiquait la saignée générale non seulement dans les maladies aiguës: "Vous saignerez — écrivait-il — dans les maladies aiguës, si l'affection paraît intense" ("*Τὰ δὲ ὀξέα πάθεα, φλεβοτομήσεις, ἢν ἰσχυρὸν φαίνηται τὸ νούσημα*"[2]) et il opinait que: "*Φλεβοτομίη τῶν τοιῶνδε ἡγεμονικόν ἐστιν*". ("La saignée [dans les maladies aiguës] en est le remède capital")[3]. Mais aussi, il se servait de la saignée contre la dyspnée, proclamant que: "*Δύσπνοιαν αἵματος ῥύσις λύει*" (Un écoulement de sang dissipe une dyspnée)[4]. Egalement contre la paraplégie, car "la saignée dissipe cet accident" ("*παραπληγίην λύει φλεβοτομία*")[5]. Mais aussi dans des affections d'une nature vague, telles que "Perte de la voix et de la connaissance, délire . . . la saignée fait disparaître ces accidents" ("*Ἀφωνίη, ἄγνοια, παραλήρησις . . . φλεβοτομίη ἔλυσε ταῦτα*")[6]. Il se servait de la saignée sur ceux qui avaient des maux d'oreille ou de tête: "Ainsi — disait-il — à celui qui souffrit en hiver, de l'oreille et de la tête non médiocrement . . . la veine fut ouverte" ("*Οἷς ἐν χειμῶνι ὠδυνᾶτο καὶ κεφαλὴν οὐ μετρίως . . . φλέβα ἐτμήθη*")[7].

Hippocrate attribuait une importance particulière à l'ouverture des veines d'une femme enceinte, fait qu'il considérait comme une cause immédiate d'avortement. Il y rattacha son célèbre aphorisme: "*Γυνὴ ἐν γαστρὶ ἔχουσα, φλεβοτομηθεῖσα, ἐκτιτρώσκει· καὶ μᾶλλον ἧσι μεῖζον τὸ ἔμβρυον*" ("Une femme enceinte, saignée, est exposée à avorter, d'autant plus que le foetus est plus avancé")[8].

Il pratiquait en outre la saignée contre les maux des yeux, enseignant que: "Dans les maux des yeux . . . saignez-le" ("*Ὀδύνας ὀφθαλμῶν . . . φλεβοτόμει*")[9] et ailleurs: "*Ὀφθαλμίην (θεραπεύει) φλεβοτομίη*" ("L'ophtalmie (se guérit) par la saignée")[10]. Et encore

1) *Hippocrate:* De la nature de l'homme. 11. Vol. VI p. 60.
2) *Hippocrate:* Du régime dans les maladies aiguës. 2. Vol. II p. 399.
3) *Hippocrate:* Du régime dans les maladies aiguës. 3. Vol. II p. 401.
4) *Hippocrate:* Prénotions Coaques. Deuxième section. Paragr. 16, Chap. 305. Vol. V p. 651.
5) *Hippocrate:* Prénotions Coaques. Deuxième section. Paragr. 17, Chap. 340. Vol. V p. 657.
6) *Hippocrate:* Septième livre des Epidémies. 85. Vol. V p. 445.
7) *Hippocrate:* Septième livre des Epidémies. 112. Vol. V p. 461.
8) *Hippocrate:* Aphorismes. Cinquième section. 31. Vol. IV p. 543.
9) *Hippocrate:* Aphorismes. Septième section. 46. Vol. IV p. 591.
10) *Hippocrate:* Deuxième livre des Epidémies. Sixième section. 12. Vol. V p. 135.

"Les maux des yeux se guérissent . . . par la saignée [1]) (*Ὀδύνας ὀφθαλμῶν . . . φλεβοτομίη . . . λύει*"). Il pratiquait la saignée même sur les angineux, quant il y avait des symptômes d'étouffement: Voici ce qu'il dit à ce sujet: "*Τῇ Πολεμάρχου, χειμῶνος, κυναγχικῇ, οἴδημα ὑπὸ τὸν βρόγχον, πολὺς πυρετός· φλέβα ἐτμήθη· ἔληξεν ὁ πνιγμὸς ἐκ τῆς φάρυγγος*" („Chez la femme de Polémarque, prise d'angine, en hiver, gonflement sous la gorge, beaucoup de fièvre; la veine fut ouverte; l'étouffement provenant de la gorge cessa" [2]). Et, d'une façon plus générale, il se prononce ainsi: "*Κυνάγχην καὶ ὀφθαλμίην φλεβοτομίῃ*" ("Pour l'angine et l'ophtalmie, la saignée") [3]).

Il a également enseigné que: "*Δυσουρίην φλεβοτομίη λύει*" („La saignée guérit la dysurie" [4]), que: "*Στραγγουρίην λύει φλεβοτομίη*" ("La saignée dissipe la strangurie" [5]), et il a généralisé ses opinions sous forme d'aphorisme: "*Στραγγουρίην καὶ δυσουρίην ϑώρηξις καί φλεβοτομίη λύει· τάμνειν δὲ τὰς ἔσω*" ("La strangurie et la dysurie se guérissent par le vin et la saignée; ouvrir les veines internes") [6]).

Il guérit en outre l'ischialgie par la saignée: "Les douleurs de la maladie de la hanche — écrit-il —, ne s'étendirent pas beaucoup dans le membre inférieur . . . on lui appliquait des ventouses, on le saignait" [7]). ("*Αἱ δὲ ὀδύναι καὶ ἐς τὸ σκέλος οὐ πάνυ διεφοίτων . . . καί σικύας προσεβάλλετο, καὶ ἐφλεβοτομεῖτο*".) Et ailleurs: ". . . *Ὠδυνᾶτο ἰσχυρῶς ἰσχίον τὸ δεξιόν, καὶ τὸν βουβῶνα . . . Τούτῳ αἷμα ἀφῃρέϑη . . . πολὺ πάνυ, καὶ μέλαν καὶ παχύ*" ("... Souffrait beaucoup dans la hanche droite, dans l'aine . . . on lui tira . . . une très grande quantité d'un sang noir et épais" [8]). Egalement de l'ictère dit épidémique: "Ictère, qui est produit surtout par la réplétion, les excès de vin et après un refroidissement" [9]). ("*Γίνεται δὲ ἀπὸ πλησμονῆς μάλιστα καὶ μέϑης, καὶ ἐπειδὰν ῥιγώσῃ*".) Il se servait aussi de la saignée pour guérir la toux sèche qui accompagne l'orchite, disant au sujet de ce symptôme: "Cela se résout par la saignée" [10]). ("*Λύεται φλεβοτομηϑέντα*".)

1) *Hippocrate:* Aphorismes. Sixième section. 31. Vol. IV p. 571.
2) *Hippocrate:* Septième livre des Epidémies. 28. Vol. V p. 401.
3) *Hippocrate:* Deuxième livre des Epidémies. Sixième section. 12. Vol. V p. 135.
4) *Hippocrate:* Aphorismes. Sixième section. 36. Vol IV p. 573.
5) *Hippocrate:* Deuxième livre des Epidémies. Sixième section. 20. Vol. V p. 137.
6) *Hippocrate:* Aphorismes. Septième section. 48. Vol. IV p. 591.
7) *Hippocrate:* Cinquième livre des Epidémies. 8. Vol. V p. 209.
8) *Hippocrate:* Cinquième livre des Epidémies. 7. Vol. V p. 207.
9) *Hippocrate:* Des affections internes. 37. Vol. VII p. 259.
10) *Hippocrate:* Quatrième livre des Epidémies. 61. Vol. V p 197.

Il opposait, en outre, la saignée contre les brisements du dos: "*Κατὰ τῶν τοῦ νώτου ῥηγμάτων . . . [ἅτινα] φλεβοτομίῃ λύει*" ("Les brisements dans le dos, . . . se guérissent par la saignée")[1]), et "*Τὴν τῆς ῥάχιος διαστροφὴν . . . αἵματος ῥύσις λύει*" ("Un écoulement de sang dissipe une distorsion de l'épine")[2]). Il nous dit, de plus, que: "*Τὰ ἐκ ῥινῶν λαῦρα, βίῃ ἀποληφθέντα, ἔστιν οἷσι σπασμοὺς προσάγεται, φλεβοτομίῃ λύει*" ("Il est des cas où les epistaxis abondantes, supprimées de force, amènent des spasmes; la saignée dissipe ces accidents spasmodiques"[3]).

Hippocrate se servait aussi de la saignée contre nombre d'autres maladies ordinaires et graves, comme d'un principal moyen thérapeutique d'une importance capitale, notamment contre l'érysipèle[4]) et beaucoup d'autres maladies.

Cela fait que le bistouri servant à ouvrir les veines, était, au point de vue de la fréquence de son emploi, un des premiers instruments de chirurgie, voire le tout premier, dont *Hippocrate* se servait dans sa pratique tous les jours et à plusieurs reprises.

Parties pour la saignée. — En fait de parties du corps sur lesquelles il pratiquait, le plus souvent, la saignée, *Hippocrate* avait, sur la tête, trois points: la veine frontale, les veines des tempes et les veines sublinguales. Voici ce qu'il dit à ce sujet: "*Τῷ τὰ ὄπισθεν τῆς κεφαλῆς ὀδυνωμένῳ, ἢ ἐν μετώπῳ ὀρθίῃ φλὲψ τμηθεῖσα ὠφελέει*". — ("Une personne souffrant à la partie postérieure de la tête est soulagée par l'ouverture de la veine perpendiculaire du front")[5]).

Il dit également: "*Κεδμάτων, τὰς ἐν τοῖσιν ὠσὶ φλέβας σχάζειν*" (Pour les fluxions aux parties inférieures ouvrir les veines aux oreilles[6]). Et ailleurs: "*Ὁκόταν ἄρχηται ἡ νοῦσος, ὄπισθεν τοῦ ὠτὸς ἑκατέρην φλέβα τάμνουσιν*" ("Au début du mal, ils ouvrent la veine placée derrière l'une et l'autre oreille")[7]). Tandis que pour l'angine, quand il y a de la dyspnée et des symptômes

1) *Hippocrate:* Aphorismes. Sixième section. 22. Vol. IV p. 569.
2) *Hippocrate:* Prénotions Coaques. Deuxième section, Paragr. 16, 305, Vol. V p. 651.
3) *Hippocrate:* Prorrhétique, livre premier. 145. Vol. V p. 565. V. Prénotions Coaques, 330. Deuxième section. Paragr. XVII. Vol. V p. 657.
4) *Selon Hippocrate:* "Quand il y a érysipèle au poumon . . . on y appliquera une ventouse, on ouvrira les veines des bras.": Des maladies. Livre deuxième. 55. Vol. VII p. 85. et pl. autres.
5) *Hippocrate:* Aphorismes. Cinquième section. 68. Vol. IV p. 561. cf. Sixième livre des Epidémies, deuxième section. 13. Vol. V p. 285.
6) *Hippocrate:* Sixième livre des Epidémies. Cinquième section. 15. Vol. V p. 321.
7) *Hippocrate:* Des airs, des eaux et des lieux. 22. Vol. II p. 79.

d'étouffement: "On ouvrira les veines sublinguales"[1]). (*"Τὰς φλέβας τὰς ὑπὸ τῇ γλώσσῃ τάμνειν"*.)

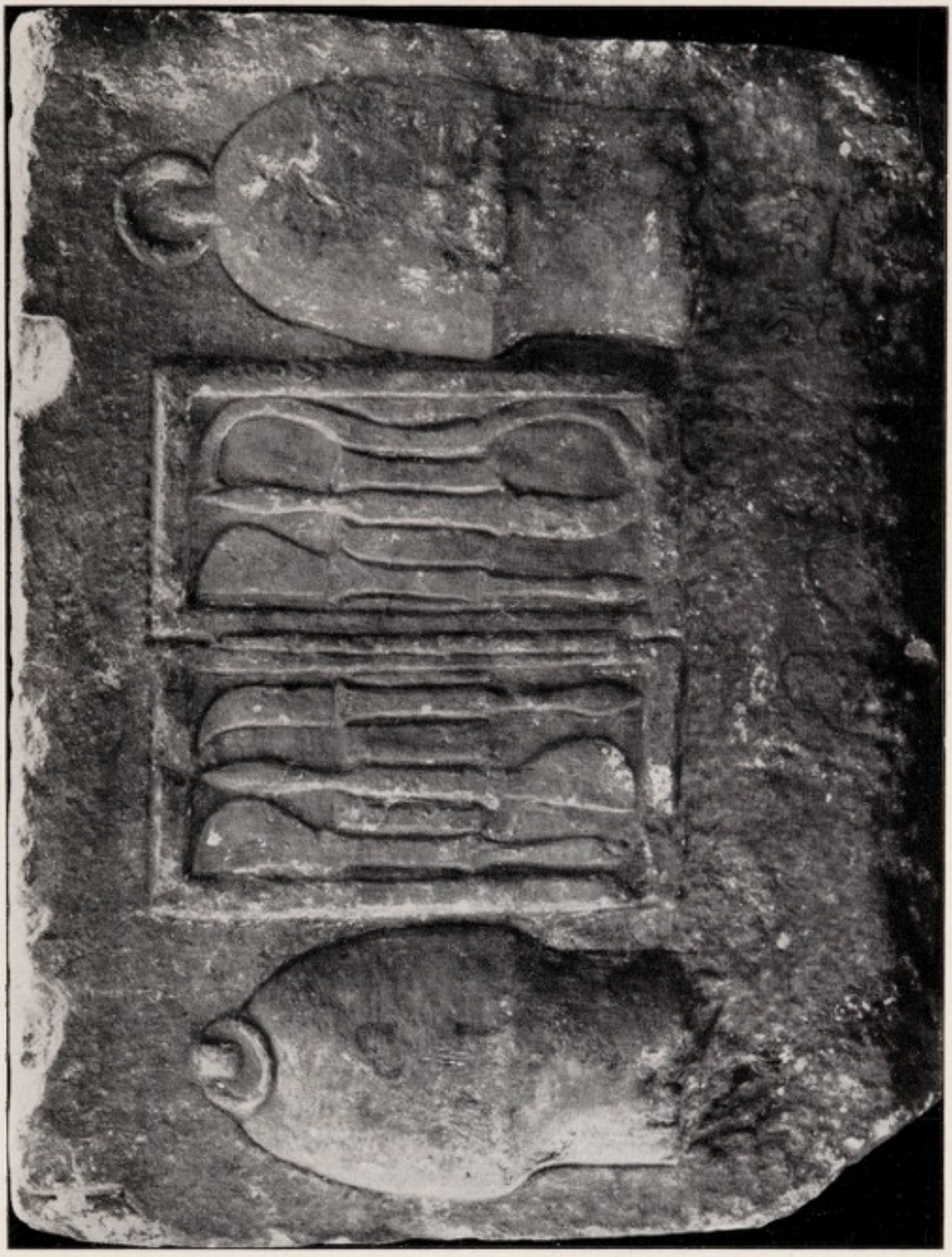


Fig. 27. Etui à instruments, diptyque, ouvert. Il contient deux bistouris fortement recourbés pour les ventouses, les . . . deux sondes ordinaires convexes et une sonde recourbée comme un crochet et, des deux côtés, deux ventouses avec anses.

Les autres parties du corps sur lesquelles *Hippocrate* pratiquait la saignée, étaient, par ordre de fréquence: le pli du bras

1) *Hippocrate:* Des maladies. Livre troisième. 10. Vol. VII p. 131. Cf. De la Génération. 2. Vol. VII p. 473 et pl. a.

"*Φλέβα τε κατ' ἀγκῶνα τέμνεσθαι*" ("La veine du coude sera ouverte" — dit-il) [1]. Et ailleurs: "*Σχάσαι αὐτοῦ τοὺς ἀγκῶνας καὶ ἀφαιρέειν τοῦ αἵματος*" ("On tirera du sang au pli du bras") [2]. De même: "On tirera du sang au pli du bras" [3]) "*Ἀφιέναι δὲ αἷμα καὶ ἀπὸ τῶν ἀγκώνων*" et: "Il faut ouvrir la veine interne du bras droit, et tirer du sang en quantité plus ou moins grande, suivant la constitution et l'âge du malade" ("*Φλεβοτομητέον οὖν χρὴ τὸν βραχίονα τὸν δεξιὸν τὴν ἔσω φλέβα, καὶ ἀφαιρέειν τοῦ αἵματος κατὰ τὴν ἕξιν καὶ τὴν ἡλικίην*") [4]) Enfin, ailleurs, il opine que: "*Ἢν ἐρυσίπελας ἐν πνεύμονι γένηται . . . τὰς φλέβας ἀποτύψαι τὰς ἐν τῇσι χερσίν*". ("Quand il y a érysipèle au poumon . . . on ouvrira les veines des bras") [5]).

Hippocrate ouvrait également la veine de la mamelle, notamment pour les angineux. "Pour l'angine — dit-il — on saignera, surtout sous la mamelle" [6]) ("*Κυνάγχη . . . τοῦτον φλεβοτομέειν χρή, μάλιστα μέν ὑπὸ τὸν τιτθὸν*"). De même la veine du jarret. Ainsi, en cas "d'une douleur pesante au rein . . . purger les jeunes gens par l'hellébore, tirer du sang au jarret, nettoyer avec des diurétiques" [7]). ("*Καὶ ἐς νεφρὸν ὀδύνη βαρείη . . . τοὺς νέους ἐλλεβορίζειν, ἰγνύην τάμνειν, οὐρητικοῖι καθαίρειν*"). Et ailleurs: "*Δεῖ οὖν τὰς φλεβοτομίας τὰς ἐπὶ τῶν ἀλγημάτων τῶν ἐν τῷ νώτῳ . . . ἀπὸ τῶν ἰγνύων ποιέεσθαι*" ("Il faut donc faire à la partie extérieure des jarrets . . . les saignées que l'on pratique pour les douleurs du dos") [8]). Tandis que pour ceux qui ont des douleurs de lumbago ou qui se plaignent de douleurs dans la région ischiatique et dans celle des lombes, il ouvrait la veine externe des malléoles plutôt que celle des jarrets. Pour ceux qui souffraient plutôt aux lombes et aux testicules, il pratiquait la saignée sur les jarrets plutôt qu'aux malléoles internes. C'est ainsi qu'il écrit: "Il faut donc faire à la partie externe des jarrets et des malléoles les saignées que l'on pratique pour les douleurs du dos et des hanches . . . il faut donc, dans les douleurs des lombes et des testicules, faire les saignées au côté interne des jarrets et

1) *Hippocrate:* Des articulations. 50. Vol. IV p. 221.
2) *Hippocrate:* Des affections internes. 37. Vol. VII p. 259.
3) *Hippocrate:* Des Maladies. Livre troisième. 10. Vol. VII p. 131.
4) *Hippocrate:* Du régime dans les maladies aiguës. 4. Vol. II p. 405.
5) *Hippocrate:* Des Maladies. Livre deuxième. 55. Vol. VII p. 85 et Deuxième livre des Epidémies. Deuxième section. 22. Vol. V p. 95.
6) *Hippocrate:* Des Epidémies. Livre troisième. 10. Vol. VII p. 129. 131.
7) *Hippocrate:* Sixième livre des Epidémies. Première section. 5. Vol. V p. 269.
8) *Hippocrate:* De la nature de l'homme. 11. Vol. VI p. 59.

aux malléoles internes" [1]). ("*Δεῖ οὖν τὰς φλεβοτομίας τὰς ἐπὶ τῶν ἀλγημάτων τῶν ἐν τῷ νώτῳ καὶ τοῖσιν ἰσχίοισιν ἀπὸ τῶν ἰγνύων ποιέεσθαι καὶ ἀπὸ τῶν σφυρῶν ἔξωθεν . . . Δεῖ οὖν τὰς φλεβοτομίας πρὸς τὰς ὀδύνας ποιέεσθαι τὰς ἀπὸ τῶν ψοῶν καὶ τῶν ὀρχίων, ἀπὸ τῶν ἰγνύων καὶ ἀπὸ τῶν σφυρῶν ἔσωθεν*") Et ailleurs: "*Εὐπόλεμος ὠδυνᾶτο ἰσχυρῶς ἰσχίον τὸ δεξιόν . . . τούτῳ αἷμα ἀφῃρέθη ἀπὸ τοῦ σφυροῦ πουλὺ πάνυ καὶ μέλαν καὶ παχύ*". ("Eupolème souffrait beaucoup dans la hanche droite . . . on lui tira, à la cheville, une très grande quantité d'un sang noir et épais" [2]).

Le temps de la saignée générale.— Il préconise que: "Ceux à qui il est utile de se faire tirer du sang des veines, doivent être saignés au printemps" [3]). ("*Ὁκόσοισι ξυμφέρει αἷμα ἀφαιρέεσθαι ἀπὸ τῶν φλεβῶν, τουτέοισι ξυμφέρει ἦρος φλεβοτομέεσθαι*").

1) *Hippocrate:* De la nature de l'homme. 11. Vol. VI p. 59.

2) *Hippocrate:* Cinquième livre des Epidémies. 7. Vol. V p. 207.

3) *Hippocrate:* Aphorismes. Septième section 53. Vol. IV p. 593.

Fig. 28. Le Dieu Telesphore. Treizième Dieu du Panthéon Olympien, qui est probablement la "Ventouse" déifiée.

Et ailleurs encore: "*Ὁκόσοισι φλεβοτομίη . . . ξυμφέρει, τουτέους προσῆκον τοῦ ἦρος φλεβοτομεῖν*". ("Ceux à qui la saignée . . . convient, doivent être saignés au printemps") [1]).

Ainsi, le bistouri (phlébotome) servant à ouvrir les veines se trouvait à la première ligne de l'usage du médecin. *Hippocrate* l'avait placé en lieu bien en vue dans son carquois chirurgical, tellement sérieux et tellement important (fig. 27—28).

Autres bistouris.

En dehors du phlébotome, *Hippocrate* se servait aussi du bistouri recourbé, notamment pour scarifier les ventouses: "*Οταν δὲ κατακρύῃ, . . . μαχαιρίοις δὲ τοῖς καμπύλοις ἐξ ἄκρου μὴ λίην στενοῖς*" ("Quand vous scarifiez la ventouse, vous vous servirez de bistouris recourbés et pas trop étroits de la pointe") [2]), tandis que dans ses interventions chirurgicales ordinaires, il avait beaucoup d'autres espèces de bistouris, il en avait d'effilés et de larges, dont il se servait, disant: "*Τοῖς δὲ μαχαιρίοις ὀξέσι τε χρῆσθαι καὶ πλατέσιν οὐκ ἐπὶ πάντων ὁμοίως παραγγέλλομεν*" ("Nous ne recommandons pas de se servir, dans tous les cas également, de bistouris effilés et de bistouris larges" [3]).

Il se servait de bistouris effilés là où il y avait des troncs d'artères, des cirses (varices) et des veines, par conséquent des hémorragies et des dangers. Voici ce qu'il dit à ce sujet: "*Πρὸς δὲ τοὺς ἀκινδύνους τόπους καὶ περὶ οὓς μὴ λεπτόν ἐστι τὸ αἷμα, πλατυτέροις χρῆσθαι τοῖς μαχαιρίοισιν*" ("Quant aux lieux sans danger et où le sang n'est pas ténu, on se servira de bistouris larges" [4]). Il va sans dire que quand il s'agissait d'intervenir dans la partie chevelue de la tête, *Hippocrate* n'opérait jamais avant d'avoir nettoyé soigneusement le champ chirurgical, en rasant avec soin les cheveux de la tête: "*Καθήρας τὴν κεφαλὴν αὖθις, φάρμακον κάιω μεταπῖσαι· ἔπειτα ξυρήσας τὴν κεφαλὴν, καταταμέειν τομὰς ἀραιάς*" ("Purgez de nouveau la tête, puis donnez un médicament évacuant par le bas. Ensuite, ayant rasé la tête, pratiquez des

1) *Hippocrate:* Aphorismes. Sixième section. 47. Vol. IV p. 575. Voir aussi le mode d'exécution de la saignée d'après lequel: "*Αἱ ἀποδέσιες αἱ ἐν τῇσι φλεβοτομίῃσιν ὀρμῶσιν, αἱ δὲ ἰσχυραὶ κωλύουσιν αἷμα*". ("Dans les saignées les ligatures hâtent l'écoulement du sang; fortes, elles l'arrêtent". *Hippocrate.* Deuxième Livre des Epidémies. Troisième section. 14. Vol. V p. 117.) Quant à ce qui concerne le traitement consécutif de la saignée, voir des Plaies, Vol. VI p. 431, où il décrit en détail.

2) *Hippocrate:* Du Médecin. 7. Vol. IX p. 215.

3) *Hippocrate:* Du Médecin. 6. Vol. IX p. 211.

4) *Hippocrate:* Du Médecin. 6. Vol. IX p. 213.

incisions légères" [1]). Et ailleurs: "*Ξυρήσας τὴν κεφαλήν... σχίσαι ἀπὸ τῆς κεφαλῆς τὸ μέτωπον, ἢ ἀπολήγει δασύ· ἐπὴν δὲ τάμῃς*". („On lui rase la tête .. on lui incise le front à partir du point où cessent les cheveux; l'incision faite . . ." [2]).

Manière d'opérer.

Voici ce qu'*Hippocrate* recommande pour les opérations: "*Ἐν οἷς μὲν γάρ ἐσιι διὰ μιῆς τομῆς ἡ χειρουργία, χρὴ ποιέεσθαι*

Fig. 29. Trois représentations d'un traitement. Dans la première Amphiarius exécute, avec un bistouri recourbé une opération sur l'épaule droite du patient. Dans la seconde le malade est endormi, pendant que le serpent sacré — probablement en rêve ou incubation — lèche la plaie pour la guérir. Dans la troisième, le jeune homme, guéri, debout et la main levée, rend grâces à Dieu.

ταχεῖαν τὴν διαίρεσιν . . . Ὅπου δὲ πολλὰς ἀναγκαῖον γενέσθαι τὰς τομὰς βραδείῃ χρηστέον τῇ χειρουργίᾳ· τὸ μὲν γὰρ ταχὺ ξυνεχῆ ποιέει τὸν πόνον καὶ πουλύν· τὸ δὲ διαλιπὸν ἀνάπαυσιν ἔχει τινὰ τοῦ πόνου τοῖς θεραπευομένοις". ("Quand l'opération n'exige qu'une

1) *Hippocrate:* Des Maladies. Livre deuxième. 13. Vol. VII p. 25.
2) *Hippocrate:* Des Maladies. Livre deuxième. 18. Vol. VII p. 33.

Fig. 30. Sphyros, fils de Machaon, ou un autre chirurgien. Près de son pièd droit le marteau chirurgical et deux instruments spéciaux pour la trépanation du crâne. Dans la main gauche, des arbres, des fleurs et des fruits de pavots somnifères, indiquent des stupéfiants, des frigorifiques et des anesthésiques dont on faisait usage pendant cette grande et serieuse opération.

incision, on la fera avec célérité ... une incision rapide. Mais s'il est nécessaire de pratiquer plusieurs incisions, on agira lentement; en effet, la célérité rend la douleur continue et intense, tandis que mettre des intervalles procure quelque relâche aux patients".) [1]). Il recommande en outre de l'attention au chirurgien, car: "*Ἀποθνήσκουσιν ... οἱ ἄνθρωποι ὑπὸ τρωμάτων παντοίων· πολλαὶ μὲν γὰρ φλέβες εἰσί, καὶ λεπταὶ καὶ παχεῖαι, αἵτινες αἱμορραγοῦσαι*

Fig. 31. Un chirurgien lisant devant sa bibliothèque ouverte, dans laquelle on voit divers ouvrages manuscrits de médecine. Au dessus, ses instruments de chirurgie, parmi lesquels on voit nettement des bistouris, des sondes etc.

ἀποκτείνουσιν". ("Le fait est que l'on meurt par toute sorte de blessures. En effet il est beaucoup de veines, petites et grosses, qui tuent par hémorragie" [2]). Aussi recommande-t-il au chirurgien ce qui suit: "*Τάμνοντι δὲ κεφαλήν, τὰ μὲν ἄλλα τῆς κεφαλῆς ἀσφαλείην ἔχει ταμνόμενα· ὁ δὲ κρόταφος, καὶ ἄνωθεν ἔτι τοῦ κροτάφου, κατὰ τὴν φλέβα τὴν διὰ τοῦ κροτάφου φερομένην, τοῦτο δὲ τὸ χωρίον μὴ τά-*

1) *Hippocrate:* Du Médecin. 5. Vol. IX p. 211.
2) *Hippocrate:* Prorrhétique. Livre deuxième. 12. Vol. IX p. 35.

μνειν. Σπασμὸς γὰρ ἐπιλαμβάνει τὸν τμηθέντα". ("Dans les incisions pratiquées sur la tête, tandis que les autres endroits peuvent être

Fig. 32. Asklépios. Le médecin à ses côtés soutient la tête du malade par la main gauche, tandis que par la main droite il exécute une intervention chirurgicale.

incisés en sûreté, la tempe et la portion au-dessus de la tempe, le long de la veine qui traverse cette région, sont des lieux qu'il ne

faut pas inciser; car les convulsions saisissent l'opéré")[1]. Et plus loin il écrit: "*Ἐν δὲ τῇ ἄλλῃ κεφαλῇ ἕλκος οὔτε μοτοῦν χρή, οὔτε καταπλάσσειν, οὔτε ἐπιδεῖν, εἰ μὴ καὶ τομῆς δέοιτο. Τάμνειν δὲ χρὴ τῶν ἑλκέων τῶν ἐν τῇ κεφαλῇ γινομένων*". ("Quant aux plaies du reste de la tête, on n'y mettra ni tentes, ni cataplasmes, ni bandages, à moins que l'incision n'en soit nécessaire. On incisera, parmi les plaies de la tête")[2] (fig. 30). Et en donnant une infinité de savants conseils, en formulant des aphorismes, des recommandations au chirurgien, il cherche à en exciter le zèle et à le rendre habile et adroit. Et voici comment il décrit l'adresse chirurgicale: "*Εὐχειρίη δὲ ἔστι τὰ τοιάδε· ὅταν τις τάμνῃ ἢ καὶ καίῃ, μήτε νεῦρον τάμνειν ἢ καίειν, μήτε φλέβα· καὶ ἢν ἔμπυον καίῃ, ἐπιτυγχάνειν τοῦ πύου, καὶ τάμνοντα δὲ κατὰ τὸν αὐτὸν λόγον· καὶ τὰ κατήγματα συντιθέναι ὀρθῶς· καὶ ὅ τι ἂν τοῦ σώματος ἐκπέσῃ ἐκ τῆς φύσιος, ὀρθῶς ἐς τὴν φύσιν τοῦτο ἀπῶσαι· λαβεῖν τε ἃ δεῖ ἰσχυρῶς, καὶ λαβόντα πιέζειν, καὶ ὅσα ἀτρέμα λαβεῖν, καὶ λαβόντα μὴ πιέζειν· καὶ ἐπιδέοντα στρεβλὰ μὴ ποιέειν ἐξ εὐθέων, μηδὲ πιέζειν ἃ μὴ δεῖ· καὶ ψαύοντα ὅκου ἂν ψαύῃ, μὴ ὀδύνην παρέχειν ἐκ περισσοῦ*")[3]. — ("Il y a adresse de main, quand, incisant ou cautérisant, on n'incise ou ne brûle ni partie nerveuse ni veine; quand, opérant un empyème par cautérisation ou par incision, on arrive au pus; quand on réduit régulièrement les fractures; quand on remet régulièrement en place ce qui a été démis; quand, saisissant ce qui doit être saisi avec vigueur, on comprime; quand, saisissant ce qui doit être saisi doucement, on ne comprime pas; quand on applique un bandage sans rendre tortu ce qui est droit, et sans comprimer ce qu'il ne faut pas; et quand, palpant en quelque lieu que ce soit, on ne cause pas de la douleur inutilement") (fig. 31—32).

Bistouri convexe, pointu et recourbé.

Mais en dehors de ceux que nous venons de décrire, *Hippocrate* a inventé une foule d'autres bistouris spéciaux dont nous présentons ici seulement une partie, soit: le bistouri convexe, le bistouri pointu et le bistouri recourbé.

Il se servait du bistouri convexe pour inciser la peau pendant les opérations d'empyème, d'abcès du poumon, de suppuration de l'exsudat pleurétique etc. Quant à l'ouverture de la cavité thoracique, il pratiquait celle-ci à l'aide d'un bistouri pointu dont

1) *Hippocrate:* Des plaies de tête. 13. Vol. III p. 235.
2) *Hippocrate:* Des plaies de tête. 13. Vol. III p. 233.
3) *Hippocrate:* Des Maladies. Livre premier. 10. Vol. VI p. 159.

Fig. 33. Esculape opérant une malade alité.

il recouvrait la pointe toute entière au moyen d'un morceau de linge, sauf le bout qu'il laissait libre sur une longueur égale à l'ongle du pouce, afin de pouvoir ouvrir la paroi thoracique seulement à l'aide de cette pointe. Voici ce qu'il dit lui-même à ce sujet: "*Τάμνειν δὲ μεταξὺ τῶν πλευρέων στηθοειδέει μαχαιρίδι "τὸ πρῶτον δέρμα, ἔπειτα ὀξυβελέϊ, ἀποδήσας ῥάκει, τὸ ἄκρον "τῆς μαχαιρίδος λιπὼν ὅσον τὸν ὄνυχα τοῦ δακτύλου τοῦ μεγάλου, "καθεῖναι εἴσω· ἔπειτα ἀφεὶς τὸ πῦον, ὅσον ἄν σοι δοκέει, μοτοῦν "ὠμολίνῳ μοτῷ, λίνον ἐκδήσας.*" ("Vous inciserez entre les côtes, avec un bistouri convexe, la peau d'abord; puis, prenant un bistouri pointu, vous l'entourerez d'un linge jusqu'à la pointe, et vous en laisserez libre la longueur de l'ongle du pouce; alors vous enfoncerez l'instrument. Ayant laissé couler autant de pus que vous jugerez convenable, vous mettrez une tente de lin écru, que vous attacherez avec un fil" [1]) (fig. 33).

Nous voyons avec combien de soin, avec combien d'attention et de précaution méticuleuses *Hippocrate* pratiquait la pleurotomie. Ses précautions n'étaient pas moindres quand il s'agissait de la diagnose et de la détermination des différentes affections des poumons. Non seulement il recherchait l'historique de la maladie, non seulement il en étudiait les symptômes, mais aussi — et c'est ce qui cause une véritable admiration — c'est lui le premier, c'est lui seul le premier qui, pour la diagnose de ces affections, ressentit le besoin et se servit de l'auscultation du thorax. Et voici ce qu'il nous dit à ce propos: "*Περιπνευμονίη . . . τοῦτον . . . καθίσας ἐπὶ ἐφέδρου, ὅ, τι μὴ ὑποκινήσει, ἕτερος μὲν τὰς χεῖρας ἐχέτω, σὺ δὲ τῶν ὤμων σείων, ἀκροάζεσθαι ἐς ὁκότερον ἄν ψοφέῃ· βούλεσθαι δὲ ἐς τὸ ἀριστερὸν ταμέειν· ἧσσον γὰρ θανατῶδες. Ἢν δέ σοι ὑπὸ τοῦ πάχεος καὶ τοῦ πλήθεος μὴ ψοφέῃ, ποιέει γὰρ τοῦτο ἐνίοτε, ὁκότερον ἄν ἀποιδέῃ καὶ ὀδυνᾶται μᾶλλον, τοῦτο τάμνειν.*" ("Péripneumonie . . . on l'asseoit sur un siège qui ne bouge pas; un aide lui tient les bras, et vous, le secouant par les épaules, vous écoutez de quel côté le bruit se fait entendre; on doit désirer d'inciser du côté gauche, car le danger est moindre. Si, en raison de la densité et de la quantité, il n'y a pas de bruit (cela arrive quelquefois), vous ferez, du côté où il y a gonflement et le plus de douleur, l'incision" [2]). Et ailleurs: "*Ὁ δὲ ὕδερος ἀπὸ τῶνδε γίνεται . . . ἔστι δ'ὅτε ἀποιδέει πρὸς τὸ πλευρόν . . . ἢν δὲ μὴ ὑποδηλοῖ, λούσας πολλῷ καὶ θερμῷ, τῶν ὤμων λαβόμενος σεῖσον· εἶτ' ἀκροᾶσθαι ἐν ὁκοτέρῃ ἄν τῶν πλευρέων μᾶλλον κλυδάζηται*". — "L'hydropisie provient ainsi . . .

1) *Hippocrate:* Des Maladies. Livre deuxième. 47. Vol. VII p. 71.
2) *Hippocrate:* Des Maladies. Livre deuxième. 47. Vol. VII p. 71.

Parfois, un gonflement se manifeste au côté ... s'il n'y a point de signe de ce genre, lavez le patient avec beaucoup d'eau chaude, prenez-le par les épaules, et secouez-le; puis écoutez de quel côté il y a le plus de fluctuation" [1]). Ailleurs encore il écrit: "*Ἢν ὕδερος ἐν τῷ πνεύμονι γένηται ... τούτῳ ἂν γνοίης ὅτι οὐ πῦον, ἀλλὰ ὕδωρ ἐστί· καὶ ἢν πολλὸν χρόνον προσέχων τὸ οὖς ἀκονάζῃ πρὸς τὰ πλευρά, ζέει ἔσωθεν οἷον ὄξος.*" ("S'il se forme une hydropisie dans le poumon ... par cela vous reconnaîtrez que c'est non du pus, mais de l'eau; et si, appliquant l'oreille contre la poitrine, vous écoutez pendant longtemps, cela bout en dedans comme du vinaigre") [2]). Et encore: "La poitrine et le poumon rendent un gargouillement comme le ventre" [3]). ("*Καὶ ἐκ τῶν στηθέων καὶ πλευμόνων οἷον γαστὴρ τρυλλίζει.*") Et enfin: "*Ἢν ὁ πνεύμων πρὸς τὸ πλευρὸν προσπέσῃ, βὴξ ἴσχει καὶ ὀρθοπνοίη ... καὶ κεντέουσιν ὀδύναι ὀξεῖαι, καὶ τρίζει οἷον μάσθλης*". ("Quand le poumon tombe contre le côté, le malade a toux et orthopnée ... des douleurs aiguës le piquent; un bruit comme de cuir se fait entendre" [4]).

Ainsi, l'auscultation du thorax et l'examen par auscultation du poumon n'est pas l'enfant spirituel d'un médecin moderne, comme on croit et écrit généralement, à tort, dans la Médecine: c'est une invention géniale d'*Hippocrate*, c'est un enfant légitime de ce grand médecin de la Grèce antique (fig. 34.)

Amygdalotome. — Staphylotome. — Embryotome et Scalpel.

Hippocrate inventa encore d'autres bistouris spéciaux, dont il se servit pour les affections de la luette et des amygdales de l'homme, à cause de la position de ces organes, et aussi pour le foetus mort qui, pour une raison quelconque, ne peut pas sortir par des forces naturelles seules. Voici ce qu'il écrit au sujet des amygdalotomes: "*Ἢν ἀντιάδες γένωνται ... ἐπὴν δέ σοι δοκέωσι τὰ φύματα μαλακὰ εἶναι, ἔσωθεν ἀφασσώμενα, ὑποτύψαι μαχαιρίῳ· ἔνια δὲ καὶ αὐτόματα καθίσταται*". ("Quand les amygdales s'affectent ... quand les tumeurs vous paraîtront molles, touchées par dedans, percez-les avec un bistouri. Quelques-unes guérissent spontané-

1) *Hippocrate:* Des Affections internes. 23. Vol. VII p. 225. 227.
2) *Hippocrate:* Des Maladies. Livre deuxième. 61. Vol. VII p. 95.
3) *Hippocrate:* Des Affections internes. 6. Vol. VII p. 181.
4) *Hippocrate:* Des Maladies. Livre deuxième. 59. Vol. VII p. 93 et Prénotions Coaques. Deuxième section. 20. Vol. V p. 681 et pl. a.

Fig. 34. Une scie chirurgicale et six bistouris divers.

ment"[1]). Et ailleurs au sujet des staphylotomes: *"Ην ἡ σταφυλὴ καταχρεμασθῇ καὶ πνίγῃ . . . σχάσαντα μαχαιρίῳ τὸ ὕδωρ ἐξαγαγεῖν,*

1) *Hippocrate:* Des Maladies. Livre deuxième. 30. Vol. VII p. 49.

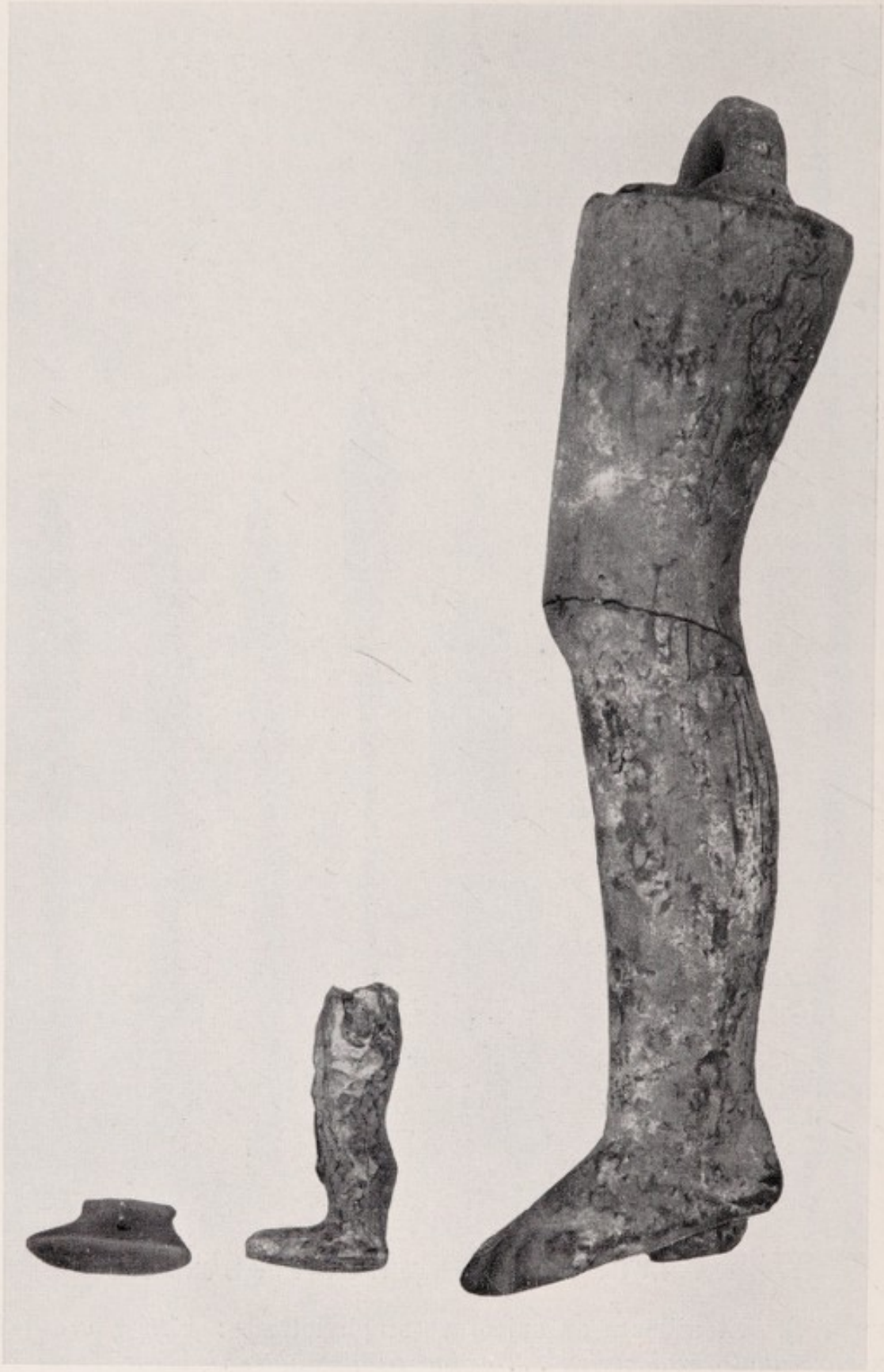


Fig. 35. Exvoto de personnes guéries des extrémités inférieures, des jambes et extrémités du pied avec trous dont ils étaient suspendus dans l'Asklepieion.

Fig. 36 Offrandes de malades guéris de maladies des yeux, du bras et de la main, de la jambe et du pied et de l'oreille droite.

Fig. 37. Diverses offrandes de malades, guéris d'affections des mamelles et des organes génitaux.

σχάζειν δέ, ὅταν το ἄκρον ὑπέρυθρον γένηται". ("Si la luette devient pendante et suffoque...on incise la luette avec un bistouri, et on en fait sortir l'eau; cette incision sera faite quand l'extrémité en est... devenue telle, que la luette est exposée à s'enflammer")[1]. Et encore: "*Σταφυλὴ ἐν τῇ φάρυγγι γένηται, ἐμπίπλαται ἄκρος ὀγαργαρεὼν ὕδατος... ὅταν οὕτως ἔχῃ, λαβὼν τῷ δακτύλῳ τὸν γαργαρεῶνα, ἄνω ἐς τὴν ὑπερώην ἀποπιέσας, διαταμέειν ἄκρον ἔπειτα ἀναγαργαρίζειν*". ("Si le grain de raisin se forme dans la gorge, le bout de la luette se remplit d'eau... Quand il en est ainsi, prenez la luette avec le doigt, pressez-la au haut contre le palais, et tranchez-en le bout; puis donnez le gargarisme[2]; et plusieurs autres.

1) *Hippocrate:* Des Affections. 4. Vol. VI p. 213.

2) *Hippocrate:* Des Maladies. Livre deuxième. 29. Vol. VII p. 47.

Il parle de la staphylagre comme d'un instrument simple et facile à manier disant: "*Ὀδοντάγρῃσι καὶ σταφυλάγρῃσι χρῆσθαι τὸν τυχόντα ἐστίν· ἁπλῆ γὰρ ἡ χρῆσις αὐτῶν εἶναι δοκεῖ*". ("Quant aux instruments pour arracher les dents et pour saisir la luette, le premier venu peut s'en servir; car manifestement l'emploi en est simple" [1]).

Parmi tous les autres bistouris spéciaux d'*Hippocrate*, nous parlons ici seulement du plus recourbé, de celui dont il se servait pour l'embryotomie. — "Pour les enfants morts . . . et que le gonflement survienne, opérer ainsi qu'il suit: fendre la tête avec un bistouri . . . quand vous devez faire la version ou la section de l'enfant, les ongles de l'opérateur seront coupés; le bistouri dont il se servira sera plutôt courbé que droit; on en cachera l'extrémité avec le doigt indicateur, palpant, guidant et craignant de blesser la matrice" [2]). "*Ὁκόσα δὲ τεθνεῶτα τῶν ἐμβρύων . . . ἀνοιδίσκειαι δέ, τάμνειν τῷδε τῷ τρόπῳ· σχίσαντα τὴν κεφαλὴν μαχαιρίῳ . . . ὅταν δὲ στρέφειν ἢ κατατάμνειν μέλλῃς τὸ παιδίον, τὰς ἰδίας χεῖρας χρὴ ἀπονυχίσασθαι, τὸ δὲ μαχαίριον, ὡς ἂν κατατάμνῃς, καμπυλότερον ἔστω ἢ ἰθύτερον, καὶ τοῦτο κατὰ κεφαλὴν ἀμφικαλύπτειν τῷ λιχανῷ δακτύλῳ, ἐσματευόμενον καὶ ὁδηγεῦντα καὶ ὀρρωδέοντα, ὅπως μὴ ψαύσῃς τῆς ὑστέρης*".

Quel esprit d'observation, quel soin dans les détails ne voyons-nous pas dans ce chapitre!

Nous finirons le chapitre des bistouris dont *Hippocrate* se servait dans des cas spéciaux, en parlant du scalpel, qu'il employait pour couper le cartilage du nez quand il était aussi dur que la pierre: — "Autre polype: en dedans, le long du cartilage, pour une cause quelconque, il naît une dureté, et ce parait être une chair; mais si l'on y touche, cela résonne comme une pierre. Les choses étant ainsi, fendez la narine avec un scalpel, nettoyez, puis cautérisez par dessus. Cela fait, recousez la narine, traitez la plaie" [3]). "*Ἕτερος πώλυπος· ἔσωθεν παρὰ τὸν χόνδρον ἀπό τευ σκληρὸν φύεται, καὶ δοκέει μὲν εἶναι κρέας· ἢν δὲ ψαύσῃς αὐτοῦ, ψοφέει οἷον λίθος. Ὅταν οὕτως ἔχῃ, σχίσαντα τὴν ῥῖνα σμίλῃ ἐκκαθῆραι, ἔπειτα ἐπικαῦσαι· τοῦτο δὲ ποιήσας, συρράψαι πάλιν τὴν ῥῖνα, καὶ ἰῆσθαι τὸ ἕλκος*").

Il est à noter qu'avant de procéder à une telle intervention chirurgicale, *Hippocrate* se servait, dans ce but, de nombreuses méthodes. A cet effet, il fabriqua le rhinoscope (canule). Voici ce qu'il écrit à ce sujet: "*Ἕτερος πώλυπος· ἐμπίπλαται ἡ ῥὶς κρέασι,*

1) *Hippocrate:* Du Médecin. 9. Vol. IX p. 217.
2) *Hippocrate:* Des maladies, des femmes. 70. Vol. VIII p. 147. 149.
3) *Hippocrate:* Des Maladies. Livre deuxième. 36. Vol. VII p. 53.

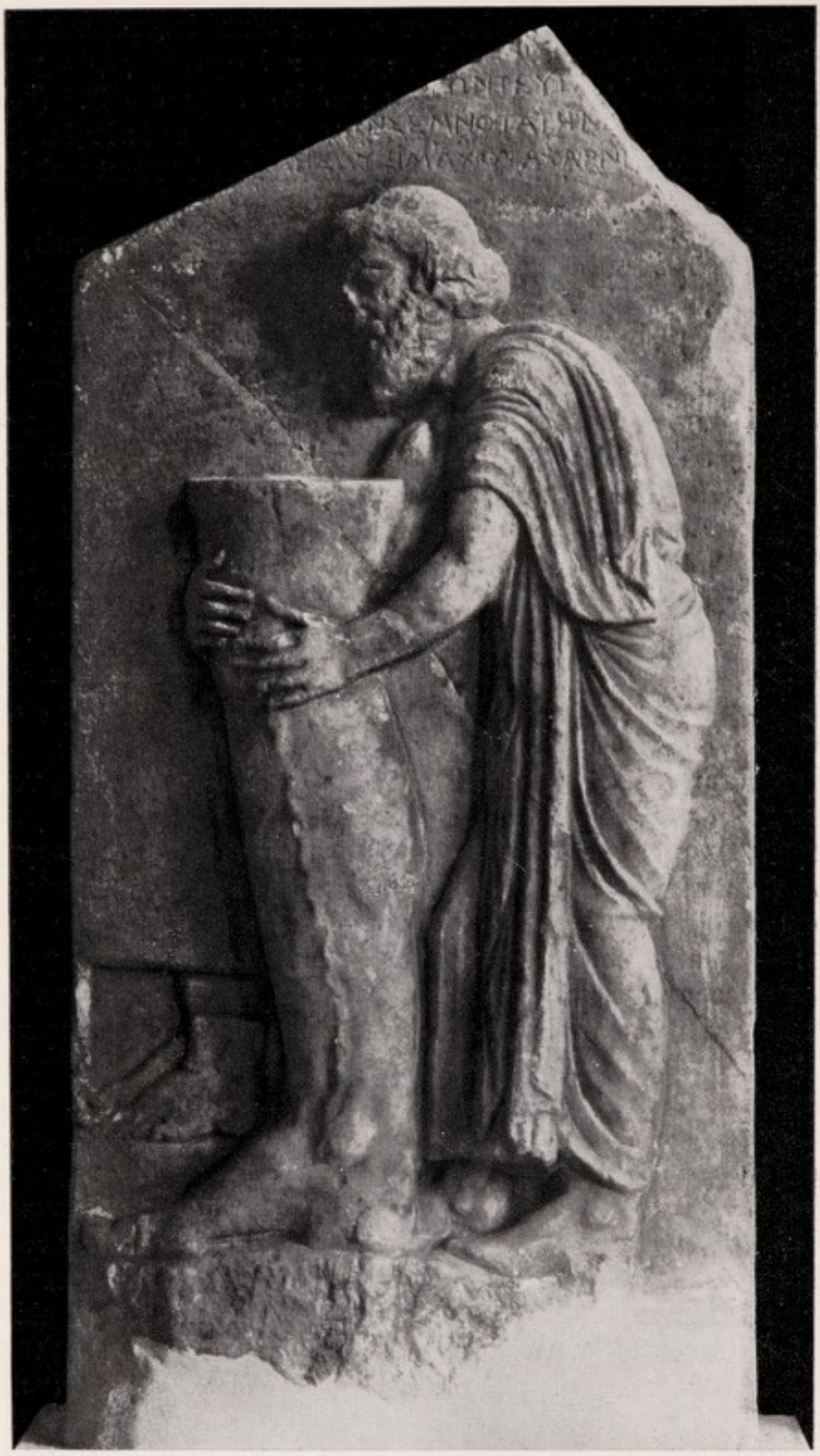


Fig. 38. Exvoto d'un malade guéri d'un cirse.

καὶ ψαυόμενον τὸ κρέας σκληρὸν φαίνεται, καὶ διαπνεῖν οὐ δύναται διὰ τῆς ῥινός. Ὅταν οὕτως ἔχῃ, ἐνθένια χρὴ σύριγγα καῦσαι σιδηρίοισιν ἢ τρισὶν ἢ τέσσαρσιν· ἐπὴν δὲ καύσῃς . . . ἐπὴν δὲ ἀλθαίνηται, τοὺς μολίβδους χρίων τῷ μέλιτι ἐστίθει, ἄχρις ἂν ὑγιὴς γένηται". ("Autre polype; le nez se remplit de chair: cette chair, au contact, paraît dure; le malade ne peut respirer par le nez. Les choses étant ainsi, mettez un rhinoscope [une canule] et cautérisez avec trois ou quatre ferrements. Après la cautérisation . . . quand la cicatrisation avance, enduisez de miel les tiges de plomb et introduisez-les jusqu'à la guérison") [1]).

Ainsi les bistouris d'*Hippocrate* étaient nombreux et de formes multiples. Quelques-uns étaient faits spécialement pour des buts chirurgicaux déterminés et cela à cause de la nature et de la position des parties ou des organes du corps pour lesquels, le cas échéant, il s'agissait de s'en servir (fig. 35—38).

III. Sondes.

L'exiguité de la place nous oblige de ne pas parler des autres bistouris dont *Hippocrate* se servait pour d'autres opérations chirurgicales. Nous passons également sous silence nombre d'autres passages vraiment savants et importants de ses œuvres concernant la première partie de chaque opération, l'incision de la peau, et nous présentons la sonde comme le deuxième, par ordre de fréquence, parmi les instruments de la chirurgie d'*Hippocrate*. Il en avait

1) *Hippocrate:* Des Maladies. Livre deuxième. 36. Vol. VII p. 53. Nous croyons devoir noter ici qu'*Hippocrate*, pour pouvoir observer le col de la matrice à l'œil nu et l'examiner sans difficulté, ainsi que pour rendre faciles les interventions dans cette région, a inventé le calamus (roseau) qui, avant chaque usage, enduit d'huile ou d'une autre substance glissante, était facilement introduit dans le col de la matrice de la patiente. Il en dilatait de suite les parois, permettant ainsi, pendant les opérations, l'examen objectif de l'orifice de la matrice. Ce métroscope primitif était, chaque fois, d'une grandeur différente, selon la patiente. (Des maladies des femmes. Livre premier. 11. Vol. VIII p. 47.) Dans de telles conditions et voulant aussi examiner le rectum, il a inventé le speculum dont il donne aussi les détails, disant: "*Ἢν δὲ ἀνωτέρω ᾖ ἡ κονδύλωσις, τῷ κατοπτῆρι σκέπτεσθαι καὶ μὴ ἐξαπατᾶσθαι ὑπὸ τοῦ κατοπτῆρος· διανοιγόμενος γὰρ ὁμαλύνει τὴν κονδύλωσιν, ξυναγόμενος δὲ πάλιν δείκνυσιν ὀρθῶς*". ("Si le condylome est situé plus haut, il faut examiner au speculum, et ne pas se laisser tromper par cet instrument. En effet, ouvert, il aplatit le condylome; fermé, il le montre très bien.") (*Hippocrate*. Des Hémorrhoïdes. 5. Vol. VI p. 441.) Et ailleurs: "*Ὕπτιον κατακλίνας τὸν ἄνθρωπον, κατοπτῆρι κατιδὼν τὸ διαβεβρωμένον τοῦ ἀρχοῦ*". ("Couchez le malade sur le dos; examinez avec un speculum la partie corrodée du rectum".) (*Hippocrate*. Des fistules. 3. Vol. VI p. 451) et pl. a.

inventé de différentes sortes et qualités, comme la sonde large, la sonde exotide, la sonde diastomotride, la sonde forte et autres. Il les fabriquait en bois, d'habitude en bois de pin, mais aussi en plomb, en cuivre et en étain, faisant la distinction entre le "noyau de la sonde", la "partie large de la sonde" etc.

L'épaisseur de cette sonde chirurgicale était telle que: "Mâchoires resserrées et dents appliquées les unes contre les autres, au point de ne pas laisser passer une sonde" [1]) (*"Ἰένυες δὲ ξυνηγμέναι καὶ ἐπὶ τοὺς ὀδόντας πλέον ἢ μήλην παρεῖναι"*). Il se servait de la sonde tout comme nous autres aujourd'hui en chirurgie. C'est ainsi qu'il dit: *"Ἢν μὲν καταφανὲς ᾖ τοῖσιν ὀφθαλμοῖσι τὸ ὀστέον ψιλόν· εἰ δὲ μή, τῇ μήλῃ σκέπτεσθαι"*. ("L'os est-il accessible à la vue (dénudé de la chair), cela est facile; sinon, on fera des recherches avec la sonde") [2]). Et ailleurs, relevant l'importance de la sonde pour l'examen des fractures des os du crâne, il écrit: *"Κατὰ δὲ χειρουργίην (οὐκ ὀρθῶς ἐστι) τάδε . . . καὶ τὰ κατήγματα καὶ τὰ ἐκπτώματα μὴ γινώσκειν, καὶ μηλῶντα κατὰ κεφαλὴν μὴ γινώσκειν εἰ τὸ ὀστέον κατέηγεν"*. ("En ceci, la main [agit de travers] . . . ne pas reconnaître les fractures et les luxations, ne pas discerner en ruginant le crâne, si l'os est fracturé" [3]).

Il se servait également de la sonde pour trouver et déterminer la position, où se trouve enfoncée la flèche du blessé: *"Ἔπειτα δὲ καὶ λόγῳ καὶ ἔργῳ ἐξελέγχειν πλὴν μηλώσεως. Μήλωσις γὰρ οὐκ ἐξελέγχει, εἰ πέπονθέ τι τουτέων τῶν κακῶν τὸ ὀστέον, καὶ εἴ τι ἔχει ἐν ἑωυτέῳ, ἢ οὐ πέπονθεν· ἀλλ' ἔδρην τε τοῦ βέλεος ἐξελέγχει μήλωσις"*. ("Puis on en viendra aux preuves de raisonnement et de fait, excepté l'emploi de la sonde; la sonde, en effet, n'apprend pas si l'os a subi quelqu'un de ces accidents, et s'il porte en lui quelque atteinte, ou s'il n'a pas souffert, mais elle enseigne si l'instrument vulnérant a produit une hédra" [4]). En outre *Hippocrate* faisait un autre emploi fréquent de la sonde dans la trépanation du crâne en recommandant également: *"Ὡσαύτως χρὴ πυκινά τε σκοπεῖσθαι τῇ μήλῃ τὴν περίοδον τοῦ πρίονος"*. ("Il faut également et examiner à diverses reprises avec la sonde la voie du trépan" [5]). Et ailleurs: *"Θαμινὰ δὲ ἐξαιρεῦντα τὸν πρίονα σκοπεῖσθαι καὶ ἄλλως καὶ τῇ μήλῃ πέριξ κατὰ τὴν ὁδὸν τοῦ πρίονος"*. ("Mais retirer fréquemment l'ins-

1) *Hippocrate:* Septième livre des Epidémies. 8. Vol. V p. 379.
2) *Hippocrate:* Traité des plaies de tête. 10. Vol. III p. 213.
3) *Hippocrate:* Des Maladies. Livre premier. 6. Vol. VI p. 151.
4) *Hippocrate:* Traité des plaies de tête. 10. Vol. III p. 215.
5) *Hippocrate:* Traité des plaies de tête. 21. Vol. III p. 260. 261.

trument pour examiner, tant autrement que par la sonde, tout le pourtour de la voie" [1]).

Mais aussi il se servait de la sonde comme d'un moyen de diagnose dans l'opération de l'empyème, en assurant que l'effet du pus sur la sonde et la coloration qu'elle en subit comme si c'était le feu qui l'a provoquée; donc cette réaction chimique signifie une forme non bénigne du pyothorax et une mauvaise prognose du patient: "*Οἷσιν ἀπὸ τοῦ πύου ἡ μήλη χρωματίζεται καθάπερ ἀπὸ*

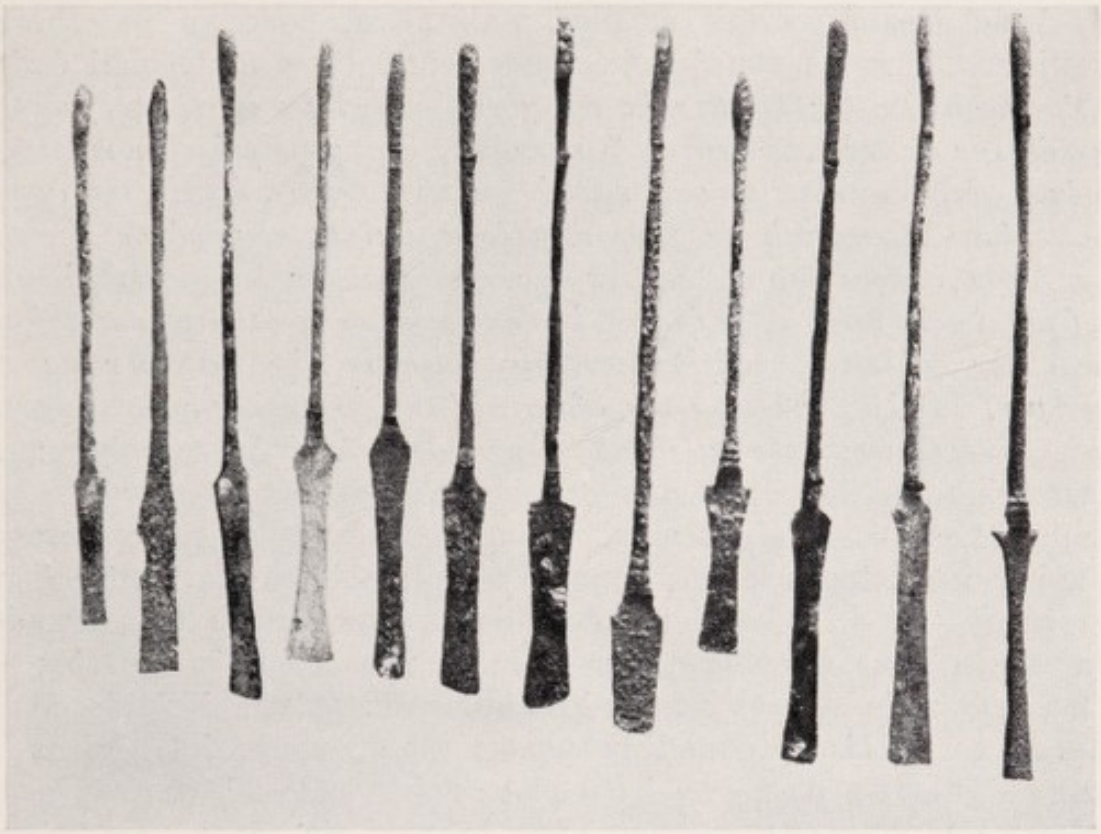


Fig. 39. Diverses sondes chirurgicales métalliques (en étain) et cuivre).

πυρός, ἀπόλλυνται ὡς τὰ πολλά." ("Ceux chez qui le pus colore la sonde comme si elle avait passé au feu, succombent généralement" [2]). Il se servait de la sonde également dans l'ouverture de la veine et dans la saignée: "*Ὅταν ἀφαιρέῃς τὸ αἷμα, τῇ μήλῃ μὴ κάρτα πιέζειν, ὡς μὴ φλάσις προσγίνηται*". ("Et quand vous faites sortir le sang, il ne faut pas presser fortement avec la sonde, de peur de produire de la contusion" [3]) (fig. 39).

1) *Hippocrate:* Traité des plaies de tête. 21. Vol. III p. 259.
2) *Hippocrate:* Prénotions Coaques. 404. Vol. V p. 677.
3) *Hippocrate:* Des plaies. 24. Vol. VI p. 429.

Autres sortes de sondes. Sonde du nez entaillée. — Verge d'étain.

Mais en dehors de la sonde chirurgicale, *Hippocrate*, ayant attentivement étudié l'homme et recherché profondément ses besoins dans ses diverses maladies graves, a, grâce à son génie, inventé et fabriqué la sonde du nez ou sonde entaillée et la verge d'étain. Il se servait de ces deux sondes pour des buts divers, mais notamment pour arracher les polypes du nez, le cathétérisme des cavités nasales jusqu'au pharynx et le passage des fils à coudre des bouclettes et cordes de nerf, mais aussi, pour un but thérapeutique, dans les fistules du fondement. C'est ainsi qu'il écrit: "*Ἕτερος πώλυπος· ἔσωθεν ἐκ τοῦ χόνδρου προέχει κρέας στρογγύλον· ψαυόμενον δὲ μαλθακόν ἐστιν. Ὅταν οὕτως ἔχῃ, χορδὴν λαβὼν νευρίνην, βρόχον αὐτῇ σμικρὸν ποιήσας, κατειλίξαι λίνῳ λεπτῷ, ἔπειτα τὴν ἀρχὴν τὴν ἑτέρην διεῖναι διὰ τοῦ βρόχου, μέζονα ποιήσας τὸν βρόχον· ἔπειτα τὴν ἀρχὴν διεῖραι διὰ τῆς ῥάβδου τῆς κασσιτερίνης· ἔπειτα ἐνθεὶς τὸν βρόχον εἰς τὴν ῥῖνα, τῇ μήλῃ τῇ ἐντετμημένῃ περιτείνας τὸν βρόχον περὶ τὸν πώλυπον, ἐπὴν περικέηται, διείρειν τὴν ῥάβδον ἐς τὸ στόμα, καὶ λαβὼν ἕλκειν τὸν αὐτὸν τρόπον, τῆς χηλῆς ὑπερειδούσης· ἐπὴν δὲ ἐξελκύσῃς, ἰῆσθαι ὥσπερ τὸν πρόσθεν*". ("Autre polype; en dedans du cartilage proémine une chair ronde; au toucher elle est molle. Les choses étant ainsi, prenez une corde de nerf, faites-y une bouclette, tournez autour un fil menu; puis passez l'autre bout de ce fil dans la bouclette en faisant une boucle plus grande. Passez le bout dans le chas de la verge d'étain; mettez la boucle dans le nez et passez-la autour du polype à l'aide de la sonde entaillée; quand la boucle est en place, introduisez la verge jusque dans la bouche; saisissez le fil, et tirez-le de la même façon, en soutenant avec le pied de biche. Le polype étant arraché, traitez comme dans le cas précédent" [1]). Et ailleurs il écrit au sujet des fistules paraproctiques (de l'anus): "*Ποιησάμενος μήλην καττιτερίνην ἐπ'ἄκρου τετρημένην, ἐνείρας ἐς τὴν μήλην τὴν ἀρχὴν τοῦ ὠμολίνου συμβεβλημένου, καθιέναι τὴν μήλην ἐς τὴν σύριγγα, καὶ ἅμα τῆς ἀριστερῆς χειρὸς τὸν δάκτυλον τὸν λιχανὸν καθιέναι ἐς τὴν ἕδρην· ἐπὴν δὲ ψαύσῃ ἡ μήλη τοῦ δακτύλου...*". (Puis ayez une sonde d'étain percée à une extrémité; introduisez dans ce trou de la sonde le bout du fil plié en cinq; faites entrer la sonde dans la fistule, et en même temps introduisez l'index de la main gauche dans le fondement; quand la sonde touchera le doigt ..." [2]).

1) *Hippocrate:* Des Maladies. Livre deuxième. 35. Vol. VII p. 53. Ibid. 33. Vol. VII p. 51. 2) *Hippocrate:* Des fistules. 4. Vol. VI p. 451.

Enfin alleurs: "*Ἢν δὲ μὴ διαβεβρώκῃ ἡ σύριγξ, προμηλώσας μήλῃ, τέμνε ἕως ἂν διέλθῃ*" ("Si la fistule n'a pas pénétré, introduisez la sonde et incisez jusqu'où elle est arrivée"[1]).

Sondes de la matrice.

Mais aussi il a fabriqué plusieurs espèces de sondes de la matrice, en bois, notamment en bois de pin, en cuivre, en plomb et en étain, et il s'en servait non seulement pour le sondage de la matrice dans un but diagnostique, mais aussi pour ouvrir l'orifice utérin, pour la dilater et pour introduire dans la cavité de la matrice diverses substances pharmaceutiques, pour la redresser, quand elle était en position inclinée ou courbée ainsi que pour d'autres traitements gynécologiques. C'est ainsi qu'il recommande: "*Ὅσῃσι . . . σφόδρα μεμυκὸς ᾖ (τὸ στόμα τῶν ὑστερέων), ἀναστομῶσαι τοῖσι δαιδίοισι καὶ τοῖσι μολιβδίοισιν*" ("Quant à celui où . . . l'orifice (utérin) est très fermé, on l'ouvrira avec les bâtonnets de pin et avec les plombs"[2]). Et encore: "Quand la matrice suppure après un accouchement ou un avortement ou de toute autre façon . . . il convient d'enfoncer dans l'orifice utérin une sonde introductrice: car les injections seront moins nécessaires, si le pus s'écoule à l'aide de la sonde"[3]). — ("*Ἥτινι ἂν ἡ μήτρη ἔμπυος γένηται ἢ μετὰ τόκον ἢ ἐκ διαφθορῆς ἢ ἄλλως πως, . . . ξυμφέρει ταύτῃ μήλην ὑπαλειπτρίδα καθιέναι ἐς τὸ στόμα τῆς μήτρης. ἧσσον γὰρ δεήσεται κλύσιος, εἰ χωρήσειε πρὸς τὴν μήλην*"). Ailleurs il écrit: "*Θυμιῆν δι' αὐλοῦ. Ἐπὴν δὲ θυμιήσῃς, τῇ ὑστεραίῃ τρῖψαι κάστορος ὄρχιν, οἴνου λευκοῦ παραχέων καὶ αὐτὸν μήλῃ ἀμφιπλάσας καὶ εἰρίῳ κατελίξας προσθεῖναι*" ("On administre la fumigation à l'aide d'un tuyau. Après la fumigation, le lendemain, triturer le testicule de castor en y versant du vin blanc, l'étendre avec une sonde, l'enrouler dans de la laine, et appliquer"[4]). De même ailleurs: "Si une hydropisie se forme dans la matrice . . . vous aurez une sonde d'étain que vous introduirez"[5]). ("*Ἢν ὕδρωψ γένηται ἐν τῇσι μήτρῃσι . . . μήλην ποιησάμενος κασσιτερίνην ἐγκαθιέναι*"). Et encore: "*Περιπλάσαι περὶ μήλην, τὸ πάχος ποιέοντα ὁκόσον παραδέξεται ὁ στόμαχος· προστιθέναι δὲ πρὸς τὸ στόμα τῆς μήτρης καὶ ὅσαι ὅκως ἂν περήσῃ ἐς τὸ εἴσω τῆς μήτρης, ὅταν δὲ ἀποτακῇ τὸ φάρμακον, ἐξελεῖν τὴν μήλην*". ("On

1) *Hippocrate:* Des fistules. 5. Vol. VI p. 453.
2) *Hippocrate:* Des maladies des femmes. 13. Vol. VIII p. 51.
3) *Hippocrate:* De la superfétation. 28. Vol. VIII p. 493.
4) *Hippocrate:* Des femmes stériles. 221. Vol. VIII p. 429.
5) *Hippocrate:* Des maladies des femmes. Livre premier. 60. Vol. VIII p. 119. 123. Voir aussi: De la nature de la femme. 35. Vol. VII p. 376.

arrange une part de ce mélange autour d'une sonde, ayant soin que la grosseur soit telle que l'orifice utérin l'admette; on la porte à l'orifice utérin, et on pousse, de manière qu'elle pénètre dans l'intérieur de la matrice. Quand le médicament s'est fondu, on retire la sonde"[1]) et pl. a. (fig. 40).

Il opérait le redressement de l'utérus avec la sonde, écrivant: "Chez quelques-unes l'orifice utérin est dévié et appliqué du côté de la hanche . . . l'ayant écarté, elle le redressera avec les bâtonnets de pin et de plomb"[2]). (*"Οσῃσι τὸ στόμα ἀπεστραμμένον ἐστί καὶ προσπεπτωκὸς πρὸς τὸ ἰσχίον . . . ὅταν δ'ἀποστήσῃ, ἐξορθοῦν τοῖς δαιδίοισι καὶ τῷ μολιβδίῳ*"). Ailleurs il écrit: "*Ὁκόσῃσι δὲ τὸ στόμα κλίνεται ἑτέρωσε καὶ προσπίπτει τῷ ἰσχίῳ . . . τῷ δακτύλῳ ἀποστῆσαι ἀπὸ τοῦ ἰσχίου κἄπειτα ἐξιθύνειν τοῖσι δαιδίοισί τε καὶ μολίβδῳ. οὐ γὰρ βιήσεται θοῶς.*" — ("L'orifice utérin s'incline d'un côté et se porte vers la hanche . . . éloigner de la hanche la matrice avec le doigt; puis la redresser avec les baguettes de pin et les sondes de plomb; car, comme il a été dit, elle ne cède pas à une force qui s'exerce rapidement"[3]) (fig. 41).

Quant à la dilatation du col de la matrice, *Hippocrate* la pratiquait avec la sonde ainsi: "*Ὅταν δὲ νεόλουτος ᾖ καὶ νεοπυρίητος, ἀνευρύνειν τὸ στόμα τῆς μήτρης τῇ μήλῃ τῇ κασσιτερίνῃ, καὶ ἀνορθοῦν ὅπῃ ἂν δέηται, ἢ μολιβδίνῃ, ἀρξάμενος ἐκ λεπτῆς, εἶτα παχυτέρῃ, ἣν παραδέχηται, ἕως ἂν δοκέῃ καλῶς ἔχειν· βάπτειν δὲ τὰς μήλας ἐν ἐνὶ ἑῶν μαλθακτηρίων διειμένῳ, τι ἂν δοκέῃ ξυμφέρειν, ὑγρὸν ποιήσας· τὰς δὲ μήλας ποιέειν ὄπισθεν κοίλας, εἶτα περὶ ξύλοισι μακροτέροισιν ἁρμόσαι, καὶ οὕτω χρῆσθαι*". ("Quand la malade vient de prendre un bain et une fumigation, ouvrir l'orifice utérin et le redresser de la façon que besoin est, avec une sonde d'étain ou de plomb, d'abord petite, puis plus grosse, si elle est reçue, jusqu'à ce que les choses paraissent en bon état; tremper les sondes dans quelque préparation émolliente qui sera jugée convenable et qu'on rendra liquide en la délayant. Les sondes seront creuses en arrière, on les emmanchera dans des bâtonnets longs et on s'en servira ainsi"[4]).

Ainsi, la sonde de la matrice et le cathétérisme de l'utérus dans un but diagnostique et thérapeutique n'a pas été indiqué d'abord par Levret, et ce ne sont pas, non plus, d'autres médecins, contemporains ou

1) *Hippocrate:* De la superfétation. 27. Vol. VIII p. 493.
2) *Hippocrate:* Des maladies des femmes. 13. Vol. VIII p. 51.
3) *Hippocrate:* Des maladies des femmes. 132. Vol. VIII p. 281.
4) *Hippocrate:* De la superfétation. 29. Vol. VIII p. 497.

postérieurs, qui en ont généralisé l'usage comme, bien à tort, on croit et on écrit toujours. La sonde de la matrice (métromèle) est un instrument qu'*Hippocrate*, pressé par la nécessité, a fabriqué et dont, maintes fois, il s'est servi pour le cathétérisme de l'utérus et non seulement dans un simple but diagnostique, mais aussi et surtout pour des buts thérapeutiques multiples, selon les méthodes que la gynécologie-chirurgie actuelle n'omet pas d'employer, quand elle se trouve dans les mêmes cas que lui.

Bougies en bois de pin, bougies métalliques pour la dilatation de la matrice.

Parmi les autres espèces de sondes, nous parlerons seulement de celles dont *Hippocrate* se servait pour élargir graduellement le col rétréci de la matrice pour des raisons thérapeutiques. C'est ce qu'on appelle communément, aujourd'hui, κηρία-bougies. Il les fabriquait en bois de pin, mais aussi en plomb. En voici les détails concernant la longueur, l'épaisseur et le mode d'emploi: (fig. 42). "*Μετὰ δὲ τὰς πυρίας πειρῆσθαι προστιθέναι τῶν προσθέτων τῆς σιάλου δαιδὸς τῆς πιοτάτης, χρίσμα δὲ λίπα ἔστω, ποιέειν δὲ μῆκος μὲν δακτύλων ἕξ, πλῆθος δὲ πέντε ἢ ἕξ, εἶδος δὲ ἔξουρα· εἶναι δὲ θάτερον θατέρου σμικρῷ παχύτερον· τὸ δὲ παχύτερον εἶναι ὁκόσον δάκτυλος ὁ λιχανός, καὶ τὸ εἶδος ὅμοιον τῷ δακτύλῳ ἐξ ἄκρου λεπτότατον, ἀγόμενον δὲ παχύτερον· ποιέειν δὲ ὡς λειότατόν τε καὶ στρογγυλώτατον, φυλασσόμενον ὅκως σχινδαλμὸς μηδεὶς ἔσται· προσιθέναι δὲ πρῶτον τὸ λεπτότατον· ὅταν δὲ προσθῆται, ἀναπανέσθω ὅκως μὴ ἐκπέσῃ φυλάσσουσα· προστιθέσθω δὲ πρῶτον τὸ ἄκρον, εἶτα αἰεὶ μᾶλλον, ὁμοῦ τε ἐπισιρέφειν καὶ ἀπωθέειν κυκλόσε τὸ δαίδιον· καὶ ὁκόταν σμικρὸν προσδέξηται, ἐπισχεῖν ἐπὶ τῷ σμικρῷ τουτέῳ, φυλάσσουσα ὡς μὴ ἐκπέσῃ· εἶτα αὖθις ἀπωθέειν τὸν αὐτὸν τρόπον, ἄχρις οὗ τεσσάρων δακτύλων ἔσω τοῦ στόματος τῶν ὑστερέων γένηται. ὅταν δὲ τοῦτο προσδέξηται, τὸ μετὰ τοῦτο προστιθέναι, ὁμοῦ τὸ προσκείμενον ἀφαιρέουσα, ὅκως, πρὶν ξυμπεσεῖν τὸ στόμα, προσκείσεται θάτερον δαίδιον ἔτι ὀρθοῦ ἐόντος καὶ ἀνεφγμένου· οὕτω δὲ τοῦτο ἔσται, ἢν τὸ μὲν ἐξαιρέηται, τὸ δὲ προσιθῆται. Χρὴ δὲ καὶ μόλυβδον ἵκελον ἐξελάσαντα ποιῆσαι τὸ εἶδος τῷ δαιδίῳ τῷ παχυτάτῳ, κοῖλον δὲ ὅκως ξυνέξει . . . ὁκόταν δὲ ποιηθῇ ὁ μοτὸς ὁ μολύβδινος, στέατος αὐτὸν ἐμπλῆσαι ὕιος τετριμμένου. ὁκόταν δὲ παρεσκευασμένος ᾖ, τὸ μὲν δαίδιον ὑφελεῖν, τὸ δὲ μολύβδιον ἐνθεῖναι. Ἢν δὲ τὸ μολύβδιον καῦμα παρέχῃ προσιεθέν, τὸμὲν μολύβδιον ἀφαιρέειν, τὴν δὲ δαῖδα ὀπίσω προστιθέναι, καὶ τὸ μολύβδιον ἀποβάψαι ἐς ὕδωρ ψυχρόν· ἔπειτα ὀπίσω*

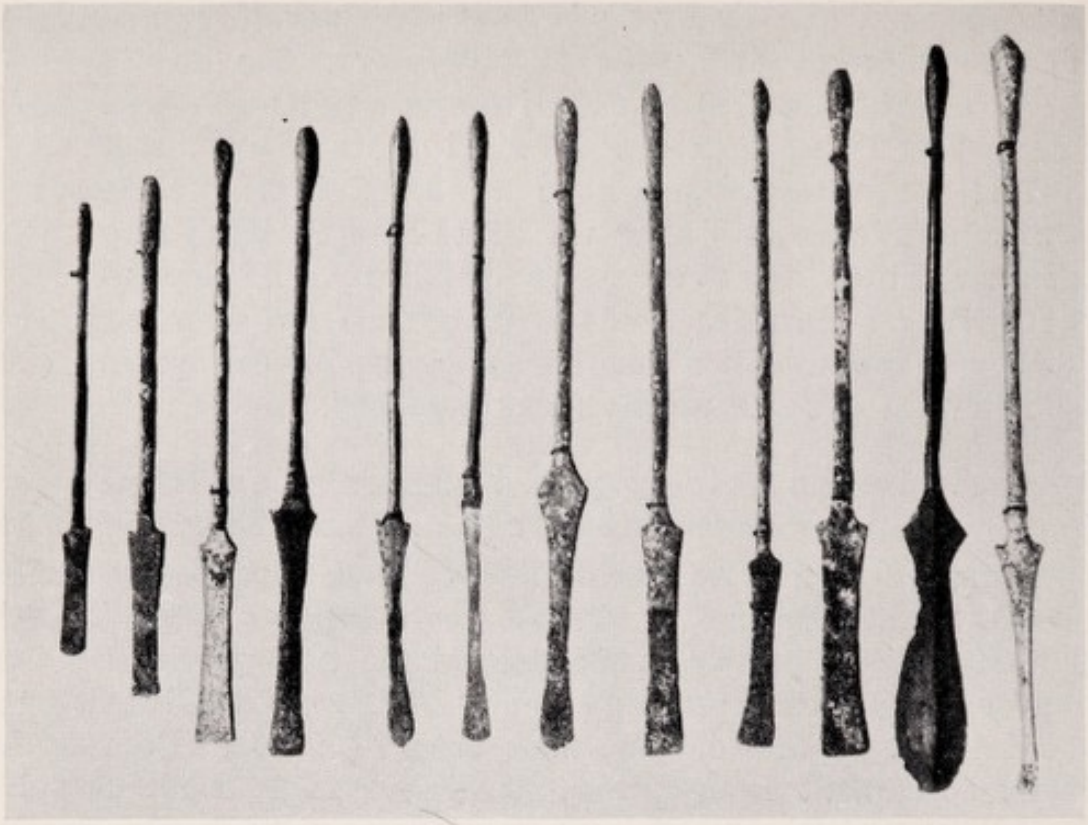


Fig. 40. Diverses sondes chirurgicales métalliques en cuivre et en étain.

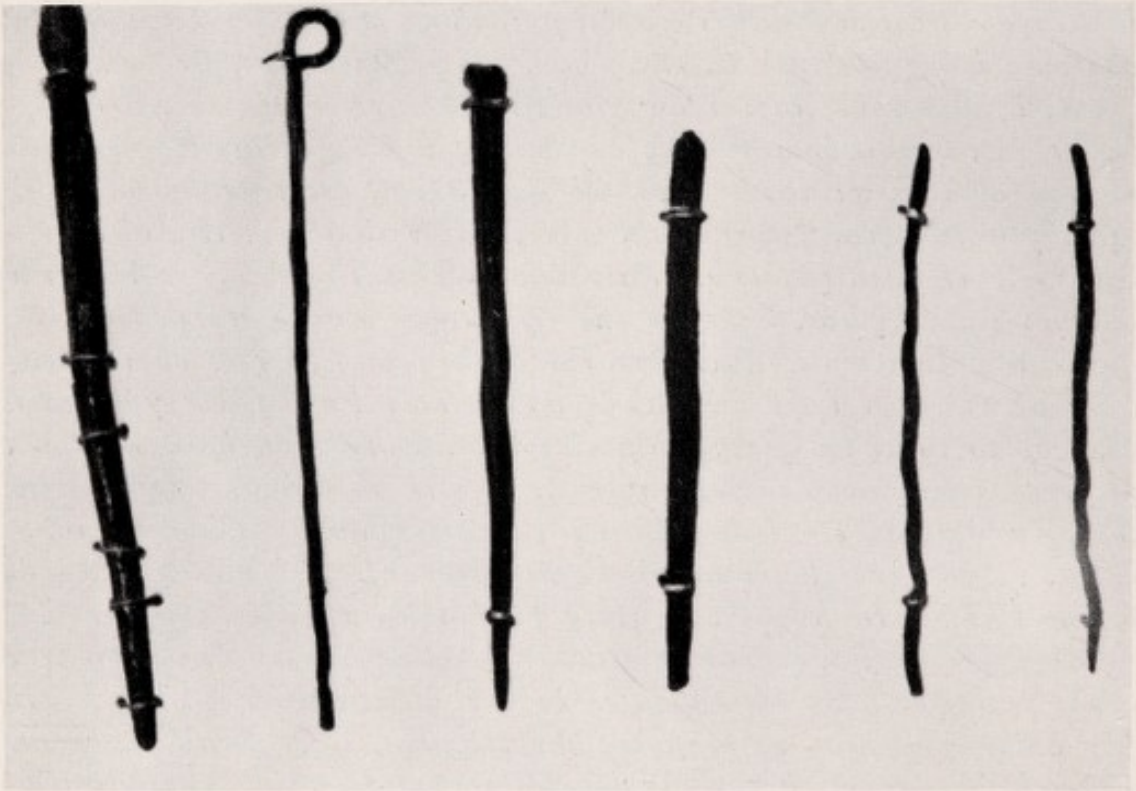


Fig. 41. Signature voir Fig. 42.

προσθεῖναι, τὴν δὲ δαῖδα ἀφελεῖν . . .Ὅταν δὲ ἀποφλεγμήνῃ (τὸ στόμα τῶν ὑστερέων), αἰεὶ προσχείσθω τὸ δαίδιον ἢ τὸ μολύβδιον". ("Après les fumigations, on essaye de mettre les pessaires faits avec des bâtonnets de pin les plus gras; on les enduit avec de

Fig. 41 et 42. Petites sondes chirurgicales en os, en bois de pin, en plomb et en étain, un petit marteau, une bougie, un batonnet d'étain et un crochet, découverts non loin de l'Asklepieion d'*Hippocrate*. Collection de l'auteur.

l'huile; ils sont longs de six doigts, au nombre de cinq ou six, de forme cônique, et un peu plus gros les uns que les autres; le plus gros est comme l'index de la main, de même forme que ce doigt, plus mince par le bout, grossissant en allant

vers l'autre extrémité. Ces bâtonnets seront aussi lisses et aussi ronds que possible, sans aucune écharde. On place d'abord le plus mince. Quand il est en place, la femme se tient tranquille, prenant garde qu'il ne tombe. On n'enfonce d'abord que le bout, puis on l'engage de plus en plus, le faisant tourner et le poussant en même temps. Quand le petit bout est reçu, on s'arrête à ce petit bout, et la femme prend garde que le bâtonnet ne tombe. Puis on enfonce davantage de la même façon, jusqu'à ce qu'il soit entré de quatre doigts à l'intérieur de l'orifice utérin. Quand ce premier bâtonnet est ainsi reçu, on l'ôte pour substituer celui qui suit en grosseur, de manière que celui-ci soit en place avant l'affaissement de l'orifice et quand cet orifice est encore droit et ouvert. Or, on réussira, si on enlève l'un et met l'autre. Il faut aussi avoir une tige en plomb semblable, pour la forme, au bâtonnet le plus gros, mais creusée à l'intérieur pour pouvoir contenir quelque chose . . . Quant la tente en plomb est prête, on l'emplit de graisse de mouton broyée. Cela fait, on ôte le bâtonnet et on met en place le plomb. Si, mis en place, il cause de la chaleur, on le retire et on remet le bâtonnet; on trempe le plomb dans de l'eau froide, et on le replace, après avoir ôté le bâtonnet ... et, quand l'inflammation est tombée (de l'orifice utérin), on entretient toujours en place le bâtonnet ou le plomb" [1]).

Et ailleurs il écrit au sujet du mode de dilatation de la matrice: "*Μετὰ δὲ ἀνασιομοῦν τὴν μήτρην μολιβδίοισιν ἐληλασμένοις ὀκτωδακτύλοισι πέντε· τὸ πρῶτον ἔσιω λεπτόν, τὸ δὲ δεύτερον παχύτερον, καὶ τἄλλα θάτερον θατέρου παχύτερον· ἀνασιομοῦν δὲ πέντε ἡμέρας· αἰεὶ δὲ λουσαμένῃ προστιθέσθω, καὶ ἀναδείσθω ἐκ τῆς ὀσφύος, ὡς μὴ πίπτῃ, καὶ ὡθείτω τὰ μολύβδια αἰεὶ ἀνωτέρω, τὸ δὲ τελευταῖον ὡς ἀνωτάτω.*" ("Puis ouvrir la matrice avec cinq plombs préparés, longs de huit doigts; le premier est mince, le second est plus gros, et ainsi de suite; ouvrir pendant cinq jours; toujours mettre en place les plombs après un bain, les maintenir par un bandage attaché aux lombes, afin qu'ils ne tombent pas, les enfoncer de plus en plus avant, et le dernier aussi avant que possible" [2]).

Ainsi donc, l'élargissement du col de la matrice avec du bois ou du métal n'est pas, comme on croit communément, une découverte de ces dernières

1) *Hippocrate:* Des maladies des femmes. Livre deuxième. 133. Vol. VIII p. 289. 293.

2) *Hippocrate:* Des femmes stériles. Livre troisième. 221. Vol. VIII p. 427.

années, mais bien un enfant spirituel du père immortel de la médecine.

IV. Curettes.

Quand l'homme, à l'âge de la pierre, quittant son état de bête, devenait petit à petit plus intellectuel, il ressentit le besoin de fabriquer, parmi ses premiers ustensiles, la cuiller, imitant le creux de sa propre main (fig. 43). Et il a fallu plusieurs milliers d'années avant qu'il ne découvrît les métaux et qu'il ne pût, à l'époque minoenne, fabriquer une petite réplique de la cuiller pour un autre besoin, le cure-oreille (fig. 44). Il s'est encore passé plusieurs millénaires avant qu' *Hippocrate*, par son esprit génial, eût pu fabriquer, avec succès la première cuiller chirurgicale pour le ruginage des os et un autre organe souffrant de l'homme, la matrice, dont nous parlons plus loin.

Hippocrate a pratiqué une infinité de fois le ruginage des os, surtout de la tête: "*Ἐπειδὰν δὲ ξύσῃς τὸ ὀστέον τῷ ξυστῆρι*" ("Après avoir ruginé l'os avec la rugine" [1]). Aussi: "*Ἐπιξύειν χρὴ τῷ ξυστῆρι κατὰ βάθος καὶ κατὰ μῆκος τοῦ ἀνθρώπου ὡς πέφυκεν*" ("Vous le ruginerez — l'os de la tête — avec la rugine dans une profondeur et une longueur proportionnées à la conformation de l'homme" [2]).

Il se servait de la curette de l'os non seulement dans un but thérapeutique, mais aussi dans un but diagnostique, accentuant que: "*Καὶ ἢν μὴ ὑγιές, ἀλλ'ἐρρώγῃ καὶ πεφλασμένον ᾖ, τὸ μὲν ἄλλο ἔσται ὀστέον λευκὸν ἐπιξυόμενον· ἡ δὲ ῥωγμὴ καὶ ἡ φλάσις, καταταχέντος τοῦ φαρμάκου, δεξαμένη τὸ φάρμακον ἐς ἑωυτὴν μέλαν ἐόν, ἔσται μέλαινα ἐν λευκῷ τῷ ὀστέῳ τῷ ἄλλῳ*" ("Si, au lieu d'être intact, l'os est fracturé et contus, toute la partie saine restera blanche sous la rugine; mais la fracture et la contusion, ayant été pénétrées par le médicament qui s'est fondu et qui est noir, présenteront une couleur noire au milieu du reste de l'os, qui sera blanc") [3]). Et ailleurs: "*Ἀλλὰ χρὴ αὖθις τὴν ῥωγμὴν ταύτην φανεῖσαν μέλαιναν ἐπιξέειν κατὰ βάθος· καὶ ἢν μὲν ἐπιξύων τὴν ῥωγμὴν ἐξέλῃς καὶ ἀφανέα ποιήσῃς . . . ὑπὸ τοῦ ξυστῆρος . . . Ἢν δὲ κατὰ βάθος ᾖ καὶ μὴ ἐθέλῃ ἐξιέναι ἐπιξυομένη, ἀφίκει ἐς πρίσιν ἡ τοιαύτη ξυμφορή*". ("Derechef on ruginera en profondeur cette fracture qui se montre noire; et, si la rugine l'enlève et la fait disparaître . . . que la rugine a effacé . . . si, au contraire, elle s'étend en profondeur et ne veut pas s'effacer sous la rugine,

1) *Hippocrate:* Des plaies de tête. 14. Vol. III p. 239.
2) *Hippocrate:* Des plaies de tête. 14. Vol. III p. 237. 239.
3) *Hippocrate:* Des plaies de tête. 14. Vol. III p. 243.

Fig. 43. Cuiller primitive de l'époque lithique (âge de la pierre) que l'homme a fabriquée imitant le creux de sa main. La mère primitive de toutes les cuillers.

un tel accident réclame le trépan"[1]). Il écrit aussi: "*Τερηδών . . . καὶ γίνεται ἐν αὐτῷ κάτηγμα, καὶ ἢν οὕτω ἀνατάμῃς, εὑρήσεις ἄναιμον ὀστέον καὶ τρηχὺ καὶ πυρρόν, ἐνίοισι δὲ καὶ διαβεβρωμένον πρὸς τὸν ἐγκέφαλον . . . αἱρεῖν ἄριστον . . . ἢν . . . τρηχὺ δέ, ξύσας*".

Fig. 44. Cure-oreille des temps mycéniens, la première fille de la cuiller et l'aïeule de la curette chirurgicale.

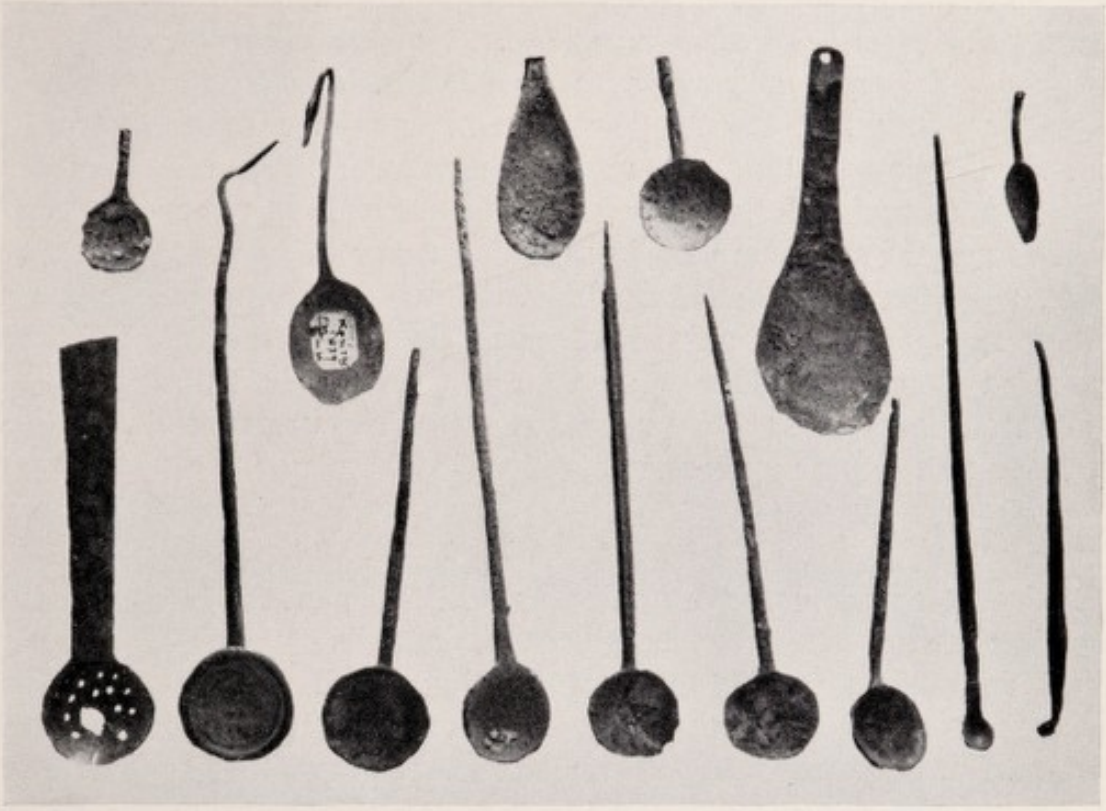


Fig. 45. Curettes chirurgicales diverses.

("Carie du crâne. Carie . . . l'os . . . se fracture. Si vous incisez en cet état, vous trouvez l'os exsangue, raboteux et d'un jaune rouge; parfois il est corrodé jusqu'au cerveau . . . le mieux est de l'ôter . . . si . . . il est raboteux, on rugine"[2]).

1) *Hippocrate:* Des plaies de tête. 14. Vol. III p. 243.
2) *Hippocrate:* Des Maladies. Livre deuxième. 24. Vol. VII p. 39.

Ailleurs il dit: "*Καταξύσαντα τῷ ξυστῆρι (εὔπριστον δὲ γίνεται καὶ εὔξυστον), ἔπειτα τὰ λοιπὰ οὕτως ἰητρεύειν*" ("Ruginer [l'os de la tête] avec la curette [il est alors facile à trépaner et à ruginer], puis du reste traiter le malade"[1]) (fig. 45).

Il ruginait les os du crâne non seulement sans la moindre crainte, mais avec une connaissance parfaite des choses, allant jusqu'au diploë de l'os, et en traitant comme une fracture simple ou fracture compliquée. Voici ce qu'il dit à ce sujet: "*Σφάκελος ἐγκεφάλου . . . ταμόντα χρή, ἵν'ἐξοιδέει, καὶ διακαθήραντα τὸ ὀστέον, ξύσαι, ἕως ἄν ἀφίκηται πρὸς τὴν διπλοϊδα· εἶτα ἰῆσθαι ὡς κάτηγμα*". ("Affection des os du crâne. — Sphacèle du cerveau . . . il faut inciser là où il y a gonflement, nettoyer l'os et le ruginer jusqu'au diploë; puis on traite comme une fracture"[2]).

Enfin, voici ce qu'il écrit au sujet de la carie des os de la tête: "*Καὶ γίνεται ἐν αὐτῷ κάτηγμα . . . αἱρεῖν ἄριστον . . . ἦν . . . τρηχύ δέ, ξύσας μέχρι τῆς διπλόης, ἰῆσθαι*" ("Dans la carie du crâne . . . l'os se fracture . . . le mieux est de l'ôter . . . si . . . il soit raboteux, on rugine jusqu'au diploë, et on traite"[3]).

Il nous aurait fallu avoir à notre disposition la place nécessaire pour expliquer suffisamment l'usage des autres curettes d'*Hippocrate*, notamment de celles de la chair des différents organes, afin que le lecteur, voyant aussi les figures de ces instruments précieux, pût s'en faire une idée claire. Ne pouvant le faire ici, nous présentons seulement deux autres rugines, la curette de la matrice et la rugine des paupières.

La curette de la matrice.

Ayant opiné que les maladies qui ne peuvent être traitées par des médicaments ont besoin d'une opération[4]), et voyant qu'en dépit de son esprit étincelant d'intelligence, il ne pouvait guérir avec les seuls médicaments les diverses affections endométriques (intrautérines), après s'être servi de diverses potions, de suppositoires et de pessaires de différentes formes, de bains chauds ou froids, des pyries et des emphysèses, de lavements et de douches, ainsi que des autres moyens pharmaceutiques, il imagina de recourir au fer, savoir au bistouri. Il inventa et fabriqua un instrument chirurgical spécial, la curette, par laquelle, lui le premier, il

1) *Hippocrate:* Des plaies de tête. 19. Vol. III p. 255.
2) *Hippocrate:* Des Maladies. Livre deuxième. 23. Vol. VII p. 39. Voir aussi Vol. V p. 581, VII p. 35 et autres.
3) *Hippocrate:* Des Maladies. Livre deuxième. 24. Vol. VII p. 39.
4) *Hippocrate:* Aphorismes. Septième section. 87. Vol. IV p. 609.

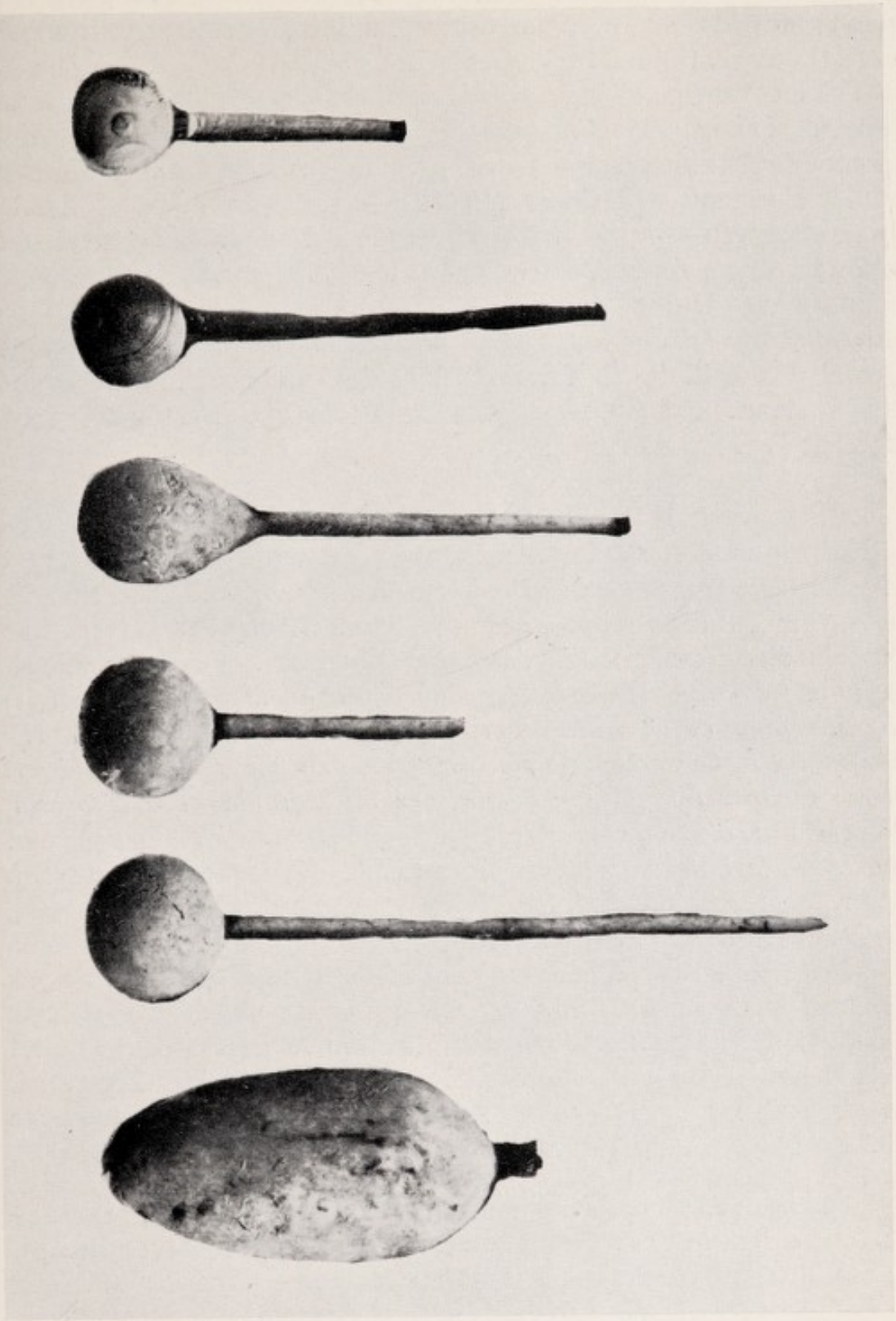


Fig. 46. Cuillers chirurgicales de diverses dimensions en os pour le nettoyage spécialement des parties tendres du corps.

opéra avec succès le curettage de la matrice (*ἀπόξεσις τῆς μήτρας*), tout comme par une autre rugine de son invention, il opérait la rugination de l'os carié (fig. 46).

Voici comment *Hippocrate* décrit le mode original d'une telle opération, qui constitue le point de départ de l'intervention chirurgicale de l'homme sur un des plus importants organes de son organisme et qui, plusieurs siècles — près de deux et demie milliers d'années — après, est revenue sur l'arène de la chirurgie en compagnie d'une foule d'autres opérations très graves sur le même organe, la matrice: "*Ἢν θρομβωθέωσιν αἱ μῆτραι . . . περὶ ξύστραν περιειλίξας γυπὸς δέρμα ἢ ὑμένα, διαξύειν τὸ στόμα τῶν μητρέων*". ("Quand des caillots se forment dans les matrices . . . et, ayant entouré d'une peau ou membrane de vautour une curette, vous ratisserez l'orifice utérin" [1]).

Grattage des paupières.

Enfin quand il s'agissait de gratter les paupières, il se servait de la méthode que la médecine contemporaine garde tout entière, sans savoir ou sans se souvenir que ce traitement aussi est une invention et un mode thérapeutique d'*Hippocrate*. Voici ce qu'il dit à ce sujet: "*Ὅταν δὲ ξύσῃς βλέφαρα ὀφθαλμοῦ, ξύειν* (*εἶτα καίειν*) *εἰρίῳ Μιλησίῳ, οὔλῳ, καθαρῷ, περὶ ἄτρακτον περιειλῶν, αὐτὴν τὴν στεφάνην τοῦ ὀφθαλμοῦ φυλασσόμενος, μὴ διακαύσῃς πρὸς τὸν χόνδρον. Σημεῖον δὲ ὅταν ἀπόχρῃ τῆς ξύσιος, οὐκ ἔτι λαμπρὸν αἷμα ἐξέρχεται, ἀλλὰ ἰχὼρ αἱματώδης ἢ ὑδατώδης. Τότε δὲ χρή τινι τῶν ὑγρῶν φαρμάκων, ὅκου ἄνθος ἐστὶ χαλκοῦ, τουτέῳ ἀνατρῖψαι*". (Lorsque vous aurez à gratter les paupières de l'œil, faites-le d'abord, (puis cautérisez), avec un cautère fusiforme en bois, autour duquel vous aurez roulé de la laine de Milet crépue, pure, et faites bien attention à ne pas toucher la prunelle de l'œil, et à ne pas brûler jusqu'au cartilage. Le signe qu'il ne faut pas pousser plus loin le grattage, c'est qu'il ne s'écoule plus du sang rutilant, mais un liquide ténu, sanguinolent ou aqueux. Alors il faut faire une onction avec l'un des médicaments liquides contenant de la fleur de cuivre" [2]).

Tels sont, en traits généraux et aussi succinctement que possible, les **bistouris,** les **sondes chirurgicales,** les **cuillers chirurgicales,** et **les rugines** les plus habituels d'*Hippocrate*. Mais l'étui des instruments d'*Hippocrate* contenait plusieurs autres dizaines d'importants ins-

1) *Hippocrate:* De la nature de la femme. 43. Vol. VII p. 387.
2) *Hippocrate:* De la vision. 4. Vol. IX p. 157.

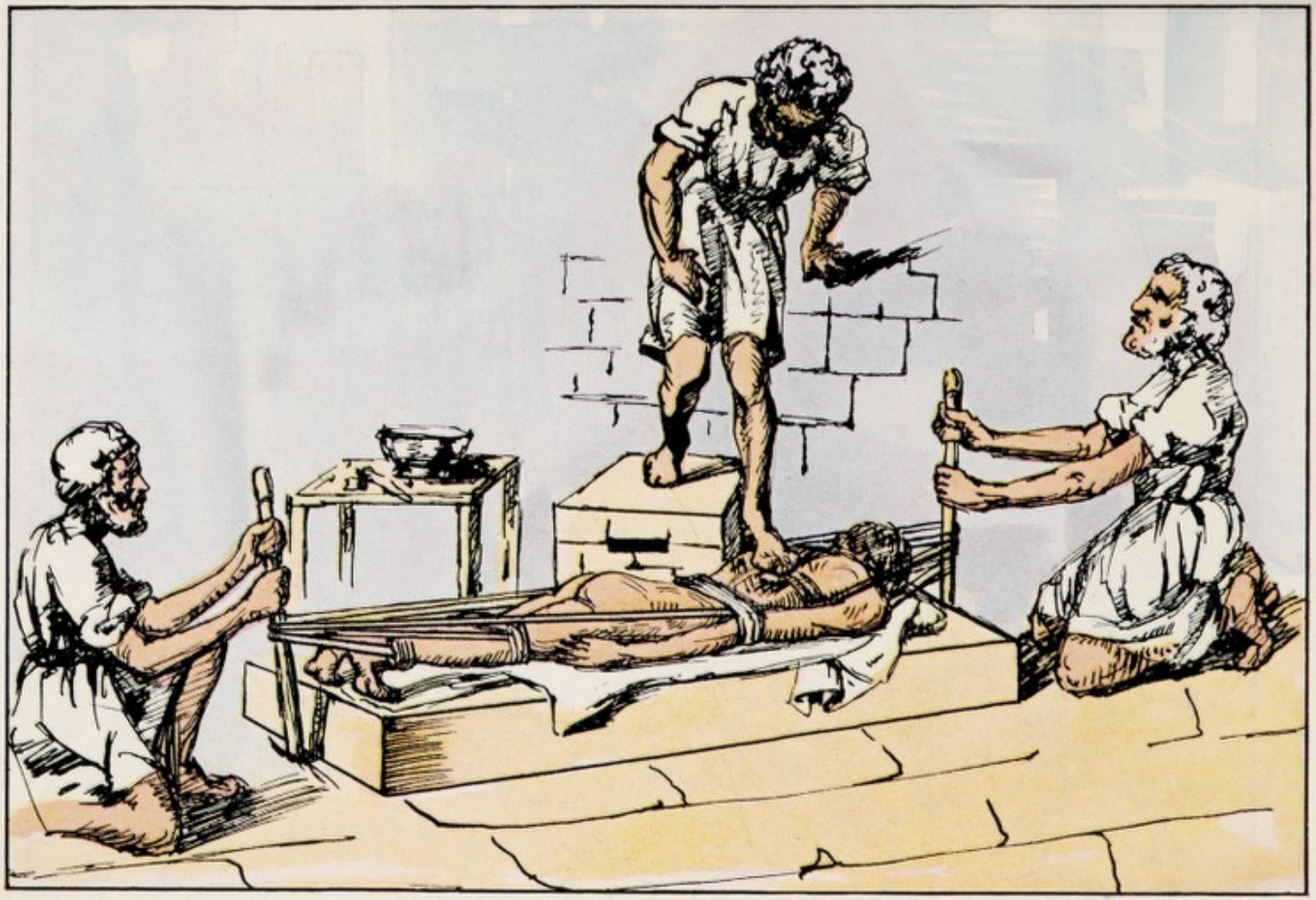


Fig. 47. Redressement de l'épine dorsale courbée, d'après l'une des nombreuses méthodes d'*Hippocrate*. *Hippocrate*. Des cuticulations. Chap. 47. Incurvations du rachis par cause externe et méthode pour les traiter. Vol. IV p. 209.

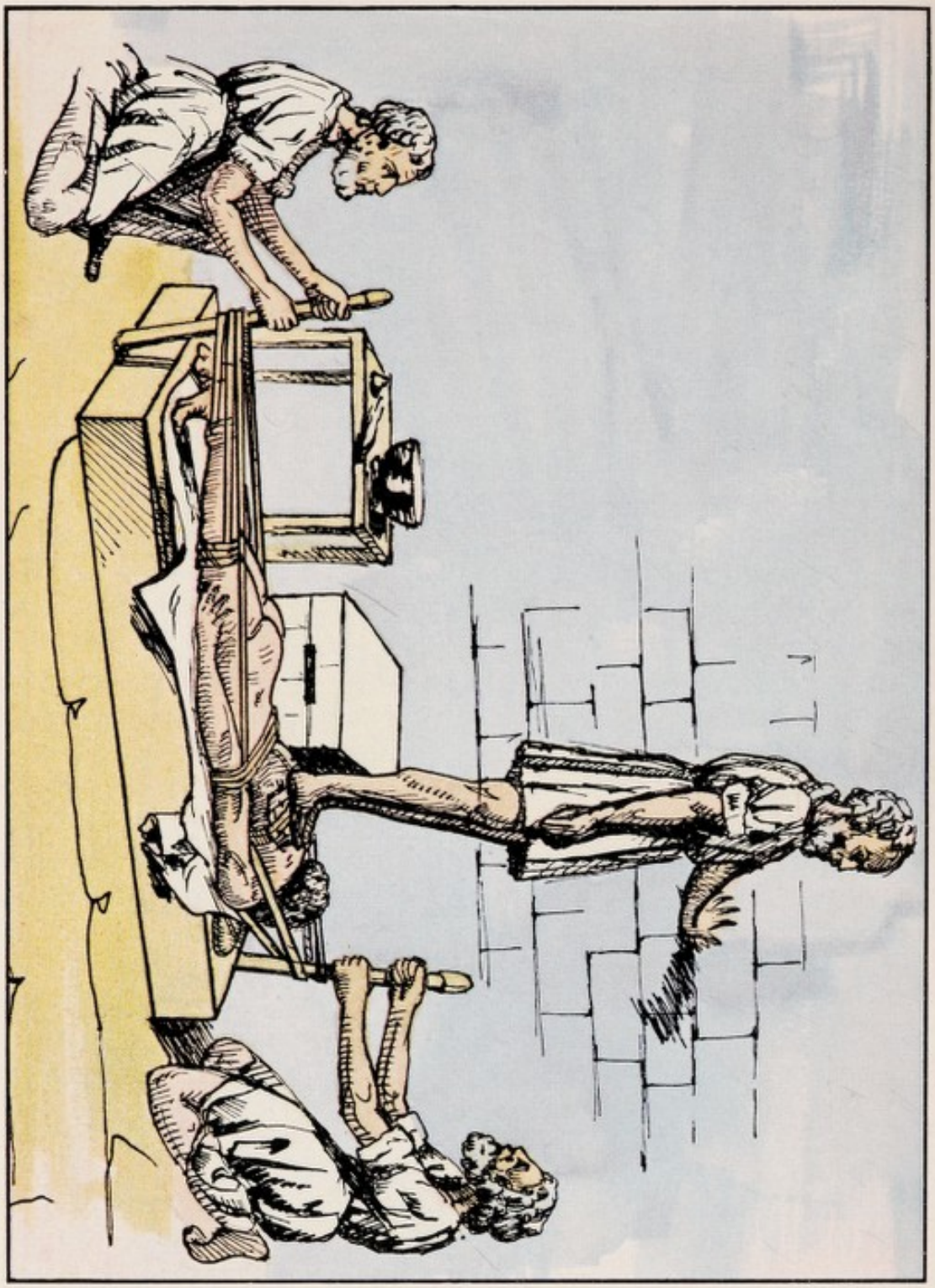


Fig. 48. Redressement de la colonne vertébrale bossue, d'après l'une des nombreuses méthodes d'*Hippocrate*.

truments de chirurgie que le père divin de la médecine a imaginés, fabriqués et décrits et dont il s'est servi. Parmi ceux-ci il y avait plusieurs espèces de **thermocautères,** des **scies chirurgicales,** de différentes sortes pour les sections et les amputations; plusieurs sortes de **trépans** pour la trépanation du crâne et pour la ponction du thorax, des **pincettes chirurgicales** et des **aiguilles** de différentes sortes, mais aussi divers **métroscopes, rhinoscopes** et **speculum** pour l'examen précis de l'intérieur des narines, du col de la matrice, du vagin intérieur et de l'intérieur du rectum, en outre les **litholaves** etc. etc.

L'étui des instruments chirurgicaux d'*Hippocrate* contenait beaucoup d'autres instruments de chirurgie et d'obstétrique, tels que **la cuiller, le crochet,** l'**ostéologue (crochet), le compresseur** etc. pour l'embryotomie et pour tirer le foetus. Pour le redressement des dislocations et des fractures il possédait nombre d'instruments spéciaux, tels que le **treuil,** le **levier,** le **coin,** la **pression,** le **pilon,** et d'autres. En dehors des divers **bandages** dont il avait plusieurs sortes, en dehors des diverses **vessies avec une canule, vessies avec une sonde solide d'étain, vessies avec tuyau d'une plume,** les **outres avec un tuyau de forge,** etc. pour les **lavements des oreilles, des narines, de la cavité du thorax** dans la pleurotomie, **de la cavité de la vessie, de la matrice** etc. etc. (fig. 47—48).

L'explication exacte de tous ces instruments et leur description à l'aide de photogravures ne serait pas dépourvue d'une valeur scientifique et d'un intérêt médical tout spécial.

Mais, pour ce faire, il faudrait de l'espace qui, ici, est excessivement précieux et exigu.

Athènes, Février 1932.

Dr. *Skevos G. Zervos.*

THE EARLY HISTORY OF ALOPECIA SYPHILITICA

BY

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The assembling of a semeiology for syphilis, so eminently chronic and polysymptomatic, sparing no organ in its ravages, has been the labor of four centuries. In the infancy of any disease, the more disfiguring and distressing symptoms will first impress the eye and the mind. Thus for Nicolaus Leonicenus, first Italian to attempt a treatise on syphilis (1497), the disease consisted of the simple syndrome of *pustulae* commencing on the genitalia and subsequently cropping out on other parts of the body, and of *dolores*. Commencing with such a primitive foundation, the early syphilographers in the course of a few decades built up a more and more pretentious symptom complex, which by the time of Falloppius had risen to a considerable degree of complexity. There is, however, one syptom, so disfiguring, that one is astounded to find it unmentioned until four decades after the physicians of the Renaissance had recognized *Morbus Gallicus* as a disease entity.

Jean Astruc [1]) (1684—1766) has made use of this strange silence of early syphilographers in regard to alopecia in his scheme of dividing the early progress of the disease into a series of periods, each characterized by the appearance of new symptoms.

1. 1494—1514. *Pustulae, dolores, gummata.* Described by Nicolaus Leonicenus (1497), Gaspar Torrella (1500), Jacobus Cataneus (1505 [2]), and the Spaniard Almenar (1510), and subsequently

1) De morbis venereis libri novem etc., Paris, 1740.

2) Streeter (Tr. Internat. Congr. Med., 1913, London, 1914, sect XXIII, 373—376) has shown that the date 1505, as given by Astruc, is incorrect. Cataneus, also called Lacumarcino, first published his work about 1524. Astruc knew of his *De Morbo Gallico* only from the *Aphrodisiacus* of Aloysius Luisinus.

summarized by Fracastor in the second book of his *De Contagione, Contagiosis Morbis et eorum Curatione* (1546).

2. 1514—1526. This period is characterized by the appearance of two new symptoms. Nodes of the bones, at times ending in necrosis (exostoses cum ossis carie plerumque junctae). First described by Jean de Vigo (1514). Condylomata in the region of the genitalia (verrucae et porri circa genitalia progerminantes). Mentioned by Petrus Maynardus.

3. 1526—1540. During this period there occurred a marked amelioration of the disease, but two further symptoms appeared: buboes (Nicolaus Massa, 1532); *Alopecia,* which according to Fracastor became prevalent in 1538—1539.

4. 1540—1550. Gonorrhoea virulenta, mentioned by Béthencourt and Paracelsus, but first emphasized by Brassavolus.

5. 1550—1610. Tinnitus aurium. Falloppius.

6. 1610..... Vesiculae crystallinae (our herpes progenitalis).

It is evident that this scheme of the erudite Astruc is highly artificial. In great part it is based on the gradual confusion with syphilis of non-syphilitic diseases, such as gonorrhea, condyloma acuminatum, herpes progenitalis. We are here concerned only with alopecia. As proof that alopecia did not make its appearance in *Morbus Gallicus* until a year or so before 1540, Astruc has three most respectable authorities to offer, Fracastor, Brassavolus and Falloppius.

Fracastor, in his *de Morbis Contagiosis,* the second book of his prose work already mentioned (published in 1546), describes the disease as it appeared during the first few decades following its recognition: „These, then, were the symptoms in those who were at that time afflicted by the malady. I use the past tense in describing these symptoms, because, though the contagion is still flourishing today, it seems to have changed its character since those earliest periods of its appearance. I mean that, within the last twenty years or so, fewer pustules began to apear, but more gummata, whereas the contrary had been the case in earlier years. Moreover, whenever the pustules did appear, they were dryer, and the accompanying pains (if any) were, in every case, more acute. Moreover, in the course of time, within about the last six years of the present generation, another great change in the disease has taken place.

I mean that pustules are now observed in very few cases, and hardly any pains, or much less severe, but many gummata. Also, to the general amazement, the hair falls from the head and the other parts to such an extent that it makes men look ridiculous; for some go about in public without a beard, some without eyebrows, others with heads totally bald. This mishap was at first supposed to be due to medicines, especially to quicksilver. But later, with greater knowledge, all are now aware that it is the result of a change in the form of the disease." [1]).

Brassavolus, in his treatise written about 1551, has it that about twenty years previously new symptoms commenced to appear, among others one vulgarly called *pellarola,* which renders men ridiculous in appearance, since they lose the hair of their heads, beards, eyebrows and eyelids. No one can help but laugh at seeing such hairless creatures.

And Falloppius, pupil of Brassavolus, in 1560 or 1561, repeats the statement of his teacher. In the first years of the disease, for a period of about forty years, there was no such lesion as *defluvium pilorum.* Loss of hair from *morbus gallicus* has sprung up during the thirty past years. And a little later, he makes the significant statement that it is now forty years that men no longer shave, all on account of this shameful disease. Before the appearance of alopecia, it was the custom to shave. But the Spaniards introduced into Italy a tyrant, *Morbus Gallicus,* and the wearing of long beards. *Hispani induxere Tyrannidem in Italiam, gallicum et barbae longae usum.* A luxurious beard became an envied badge signifying freedom from syphilis.

It is a striking fact that Fracastor should have discussed alopecia in detail in his prose work of 1546, both in book II *(De Contagiosis Morbis)* and in book III *(De Contagiosorum Morborum Curatione)*, yet in his poetical work, *Syphilis Sive Morbus Gallicus,* published in 1530, but commenced some years earlier, there is no mention of it. What an addition alopecia would have made to the galaxy of symptoms, which afflicted the rich, athletic, handsome youth of Cenomania, who perishes of the scourge in its most hideous form.

3) I have used Wilmer Cave Wright's excellent translation: Hieronymi Fracastorii de Contagione, Contagiosis Morbis et eorum Curatione, Libri III, Translation and Notes, New York and London, G. P. Putnam's Sons, 1930.

„This finish'd Piece, this celebrated Frame,
The Mansion of a loath'd Disease became:
But of all such baneful, and malignant Kind,
As Ages past ne'er knew, and future ne'er shall.
Now might you see his Spring of Youth decay,
The Verdure dye, the Blossoms fall away;
The foul Infection o'er his Body spread,
Prophanes his Bosome, and deforms his Head;
His wretched Limbs with filth and stench o'erflow,
While Flesh divides, and shews the Bones below.
Dire Ulcers (can the Gods permit them) prey
On his fair Eye-balls, and devour their Day,
Whilst the neat Pyramid below, falls Mouldring quite away." [1])

Similarly Erasmus, in an equally dramatic description of the loathsome disease, in the *Coniugium Impar* or *Unequal Marriage* of his *Colloquies* [1]), omits alopecia from the train of foul lesions with which he decks the bridegroom. He mercilessly satirizes his bitter enemy, dead a brief year, Ulrich von Hutten, a pauper and fugitive, who had succumbed to the ravages of syphilis on the isle of Ufenau

1) Tate, Nahum: Syphilis: or, a Poetical History of the French Disease. Written in Latin by Fracastorius. And now Attempted by N. Tate, London, 1686. The thought might occur that it is by alopecia that the „foul infection... deforms his Head." However, this phrase is an additional flourish which the Poet Laureate, only too free with poetic licence, has seen fit to insert. I give here the Honourable William Renwick Riddell's prose translation as a comparison: „Little by little, that blooming spring, that flower of youth, that strength of mind perished — then (terrible to relate) a foul tabes enveloped his wretched limbs and his bones loomed large through filthy abscesses, hideous ulcers (oh! pity of the gods!) ate away his beautiful eyes, the delight of divine day, ate away his nostrils eroded by fierce wound. At length, after no long time, the unhappy victim of fate left the unseen breezes of the air and light." (Hieronymus Fracastorius and his Poetical and Prose Works on Syphilis etc. Toronto, 1928.)

1.) The Colloquies, or Familiar Discourses of Desiderius of Roderman, Rendered into English by H. M. Gent, London, 1671. The translator has has rendered the Latin „capite obvincto" by the phrase „having his night cap on." The fact is that Hutten, as he himself tells, suffered from a tertiary lesion involving the region of the occiput. In the woodcut accompanying Jehan Cheradame's French translation of Hutten's treatise on guaiac (c. 1525), the knight's head is wrapped in a covering extending far down on the neck. As to rings on his thighs, it would seem more reasonable to think of them as loops of bandages, rather than as annular syphilides as some have done.

in the Lake of Zurich. Hutten, whose syptoms had abated, presumably as the result of a course of guaiac taken at Augsburg in 1518, had hopes of finding solace from his many troubles in wedlock. So Erasmus pictures one Pompilius Blenus (*Blennus*- a coxcomb, a snotty-nose), who, in spite of his pox, weds a maid of sixteen, as a „Knight, who can scarce sit in his saddle for scabs." He has him appear for his wedding „with a maimed nose, trayling one leg after him, but less happily than the Swissers use to do, with scabbed hands, a stinking breath, and dull eyes, having a night-cap on, filthy matter running out of both his nostrils and ears. Others have Rings on their fingers, he weareth Rings even on his thighs."

A century later, Shakespeare does not forget to include alopecia in the curse which the misanthrope, Timon, would bring down on the heads of the courtesans:

„Consumptions sow
In hollow bones of man; strike their sharp shins,
And mar men's spurring. Crack the lawyer's voice,
That he may never more false title plead,
Nor sound his quillets shrilly: hoarse the flamen,
That scolds against the quality of the flesh,
And not believes himself: down with the nose,
Down with it flat; take the bridge quite away
Of him, that his particular to foresee,
Smells from the general weal: make *curled pate* ruffians *bald*:
And let the unscarred braggarts of the war
Derive some pain from you. Plague all;
That your activity may defeat and quell
The scource of all erection. — There's more gold: —
Do you damn others, and let this damn you,
And ditches grave you all!" [1])

1) Timon of Altens, IV, 3. There are numerous references in Shakespeare to alopecia, usually in the form of a play on the expression *French Crown*. Among others: Pericles, IV, 3; All's Well That Ends Well, II, 3; Measure for Measure, I, 2. Packard (Annals of Med. Hist., VI: 194, 1924) interprets *French Crown* as *Corona Veneris*. However, Schelenz (Shakespeare und sein Wissen auf den Gebieten der Arznei- und Volkskunde, Leipzig und Hamburg, Leopold Voss, 1914) correctly considers it to signify alopecia. Iwan Bloch (Neuberger u. Pagel Handbuch der Geschichte der Medizin, III, 411) makes the statement: „Rondelet beschrieb zuerst die *Corona Veneris*." I have found

AD EXCELLENTISSIMVM D. IOANnem Babtiſtam Pantinum. Epiſtola. XXX. De depilationibus coroſionibus gingiuarũ, & caſu dentiũ, & aliis quibuſdã diſpoſitionibus quę cũ morbo Gallico, eueniũt ac de eorum medicaminibus.

PRAVCIS Poſt diebus quibus ad te literas dedi una cum deſcriptione ſyrupi de pomis, qui uentrẽ ſoluit, redditæ ſunt mihi iterum literæ tuæ, ex eis uero a' me non minus ardua, quam mihi deſiderata poſtulas, quæ quoniam tibi in primis cui plurimum debeo, deinde aliis quibus mederis languentibus ſalutaria futura exiſtimo, ea ad te ſcribere non recuſo, eo ferme ordine quo a' te ſcripta ſunt. Primum quidem quæris depilationes quæ paſſim hiſce noſtris tẽporibus hominibus accidũt, (morbi quem Gallicum uocant) accidens aliquod exiſtat an potius affectus quem Præſtantiſſimi Antiqui Medici Græci Alopeciam, & Ophiaſim, & Arabes Tiriam uocant. ſit cui quæſito facile' reſpondere poſſum, ſi prius morbi Gallici poſtremam differentiam a' me in libello de morbo Gallico ſcriptã rememorabo. Etenim in eo libello dixi morbum Gallicum, malam temperiem ex iocinoris quadam refrigeratione eſſe, non tamen ſine aliquali effectus ſiccitatis, & immoderata cõplicatione aliarum qualitatum, ita ut præter manifeſtam, ex operationibus, refrigerationem, ſit etiam occulta mala quædam quahtas uelũti forma, ſeu ultima differẽtia quæ toti corpori comunicatur, ut ex meis de febribus ſcriptis ſatis clare' uidebis. Neq; obſtant ea quæ ab aliquibus male, & ſine experientia, huius deſcriptionis contrarium dixerunt. Credunt quidem iecur male affectũ eſſe, ſed temperiem malam non illam frigidam (ut dixi) ſed calidam, & ſiccam eſſe pertinaciter aſſeuerant, friuolis quibuſdã rationibus, ita ut pudeat me (teſtor Deum) tam innanibus rationibus contradicere. Dicunt enim (ne te in iſtis morer) ea ratione, tẽperaturam hanc præternaturam eſſe calidam, quoniam aliquando a' principio in iſtis febricula ſuboritur, & quo

niam

Striking it is, also, that Nicolaus Massa (1499—1569) has not a word to say of alopecia in the first two editions of his work on *Morbus Gallicus* (1532 and 1534) [1]). But in the edition of 1563 (which is reprinted in the first volume of the *Aphrodisiacus* of Aloysius Luisinus, 1566), the greater part of a chapter is devoted to it. (Tractatus VI, Capit. 3. *De his* [*remediis*] quae opitulantur pilorum casui, gingivarum [cor]rosionibus, et quoque dentium casui, on remedies which are beneficial in alopecia, ulceration of the gums and falling of the teeth). In this third edition Massa feels called upon to describe effective remedies for the prevention and cure of alopecia, which he would have us believe has become very frequent

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in Rondelet the term „in fronte papulae carnosae," but nothing further to substantiate this statement. Possibly *Crown of Venus* was a *happy thought* of some wit long forgotten. In Pericles, Boult has cried Marina, the virgin, through the market and a „Spaniard's mouth so watered that he went to bed at her very description." Bawd gleefully exclaims:

Bawd. We shall have him here to-morrow with his best ruff on.
Boult. To-night, to-night. But, mistress, do you know the French knight that cowers i'the hams?
Bawd. Who? Monsieur Veroles?
Boult. Ay; he offered to cut a caper at the proclamation; but he made a groan at it, and swore he would see her to-morrow.
Bawd. Well, well; as for him, he brought his disease hither: here he does but repair it. I know he will come in our shadow, to scatter his *Crowns* in the sun.

A reference to the belief (first put in print by Hercules Saxonia of Padua, 1597) that venereal diseases can be cured by intercourse with a virgin.

In measure for measure, Lucio and two gentlemen are conversing:

I Gent. ...thou art good velvet; thou art a three-piled piece, I warrant thee: I had as lief be a list of an English kersey, as be piled, as thou art piled, for a French velvet...
Lucio. Behold, behold, where madam Mitigation comes! I have purchased as many diseases under her roof, as comes to-
2 Gent. To what, I pray?
I Gent. Judge.
2 Gent. To three thousand dollars-a-year.
I Gent. Ay, and more.
Lucio. A French crown more.
I Gent. Thou art always figuring diseases in me: but thou art full of error; I am sound.

Velvet was esteemed according to the richness of the pile; three-piled was the richest. But piled also means bald.

1) I have used the Liber de morbo Neapolitano/Noviter editus: in quo omnes etc., 1534, of the Surgeon General's Library.

in the course of years. He barely touches upon the cause of alopecia. It is due to the presence of a cold humid matter, mixed with a corrosive substance, i.e., a corrupt phlegm, which in its dispersion throughout the body reaches the roots of the hair and causes it to fall. For fuller information, Massa refers the reader to his letter written to Joannes Baptista Pantinus, which is to be found in the first volume of his *Medicinales Epistolae* [1]). Massa has worked miracles with guaiac, but he recognizes in mercury a splendid remedy. It furnishes an „infallibilis et securissima via sanandi hanc aegritudinem," especially where infection is recent and there exist alopecia and pustules. Syphilis, in itself a violent disease, requires powerful remedies. So he urges that one resort to mercury rubs in the treatment of such lesions, relating that in numerous instances where the hair of the scalp and beard were about to fall out, he has thwarted such embarassing disfiguration by mercurial inunctions, applied each second, even each fourth day. As a local remedy, he recommends bathing the hair in a decoction of guaiac, or washing with a lotion made from the ashes of juniper, pine, mastic, larch, myrtle and the like. Then the affected parts are anointed two or three times a day with a stimulating remedy, such as one made of yellow honey with its bees, bear fat, ladanum (the gum-resin of a cistus) and southernwood.

From 1540 on, almost every treatise on *Morbus Gallicus* mentions alopecia, indeed frequently an entire chapter is devoted to its consideration. (Brassavolus, *De Capillorum, Pilorumve Defluvio et Alopecia;* Falloppius, *Capillorum, Superciliorum et Barbae Defluvium;* Antonius Chalmeteus, *Alopeciae Sanatio;* Leonardus Botallus, *Pilorum Casum Curandi Ratio;* Augerius Ferrerius, *De Alopecia Capitis, et Barbae;* Bernardinus Tomitanus, *Pilorum et Capillorum Defluvium;* Alexander Trajanus Petronius, *De Pilorum Defluvio, et Unguium Dentiumque Casu;* Alphonsus Ferrus, *De Casu Pilorum).* It has now become one of the major symptoms of *Morbus*

1) Nicolai Massae Veneti Artium et Medicinae Doctoris Epistolae Medicinales etc., Venetiis, 1558. The letter bears the date 1538 and has the following caption: Ad Excellentissimum D. Ioannem Baptistam Pantinum. Epistola XXX. De depilationibus corosionibus gingiuarum, et casu dentium, et aliis quibusdam dispositionibus quae cum morbo Gallico, eueniunt ac eorum medicaminibus. I have given a facsimile of the first page of this letter.

Gallicus. Franciscus Frizimelica (1491—1559), a more or less forgotten professor at Padua, appends to his work on *Morbus Gallicus* a little treatise on the subject, *Adversus Defluvium Pilorum Lucubratiuncula.*

It is Antonius Musa Brassavolus, pupil of Leonicenus at Ferrara, who investigates the new kind of alopecia most thoroughly. Taking down his Galen and his Avicenna, he reviews what these old masters have to say on diseases of the hair so that he may better interpret and classify the new species of alopecia. According to Galen (Book I, Chapter I of his *De Compositione Medicamentorum Secundum Locos),* the hair dies from two causes. On the one hand, just as plants wither from lack of nourishment, so the hair may fall for a similar reason. From such a cause recults the condition called Calvities, the baldness of advancing age. On the other hand plants die because they receive vitiated matter for nourishment. So may the hair fall because it is fed corrupt humors. Thus result the conditions known as Ophiasis and Alopecia, which are essentially the same, differing only in the configuration of the deformity resulting from the loss of hair. The former takes its name from the serpent, because the defect produced by the falling of the hair is serpiginous; the latter, from the fox, because it resembles a disease found in the pelts of this animal. And turning to the *Canon* of Avicenna, Brassavolus again finds loss of hair attributed to two causes, one dependent upon the material from which hair is generated [1]), the other upon the soil in which it is embedded. In the first instance, the matter generating the hair may be actually deficient; or it may be present in sufficient quantity, but may be unable to penetrate the skin because of obstruction of the pores; or again passage through the pores may be so free that it is merely extruded without forming hair; finally the formative material may be so changed by the excessive humidiy and coldness of the individual's constitution that it cannot form hair. For this type of loss of

1) The hair, according to Aristotle, was an excrement, formed where the vessels end in the skin: „For the vessels come to an end where the skin itself terminates; and in all places where these endings occur, the exudation of moisture of a corporeal character necessitates the growth of hairs, unless there be some operation of nature which interferes, by diverting the moisture to another purpose." De Partibus Animalium. Book II, 16. Translated by William Ogle, Oxford 1912.

hair, arising independent of any corruption of the humors, Brassavolus adopts the term *Profluvium Pilorum*. To cite some examples of this type of disease. In chronic diseases, in hectic fevers, in phthisis, in those taking poison or bitten by the viper, the hair falls because there is an actual deficiency in the generative matter. In boys, eunuchs and women, hair is not lacking [i.e. the usual adult male distribution, especially beard and chest] because of any deficiency of suitable material, but because the humidity natural to such individuals does not allow the matter to attain a degree of dryness necessary for it to form hair. In the case of a body, the defect is corrected with advancing age, inasmuch as in the male the constitution naturally becomes dryer with passing years. In women and eunuchs, however, it persists. Brassavolus remarks that a species of *Defluvium Pilorum* has been described following the *fasting* of the devout, but hardly expects to find it among the clergy of his day. In distinction to *Defluvium Pilorum*, Brassavolus applies the term *Alopecia* to any loss of hair aristing from contamination of the soil which nourishes it, i.e., from corruption of the four humors. As the new disease, *Morbus Gallicus*, is caused by such a corruption, the loss of hair occurring in this disease is, properly speaking, a kind of *Alopecia*.

This *Alopecia*, popularly called *Pellarola* in Italy, which makes its victim appear so ludicrous, frequently follows upon an ulcer of the penis, a bubo, an ulcer of the mouth, and may persist after these lesions have healed. As for treatment, Brassavolus offers a mass of polypharmacy, varying his remedy according to which of the four humors is involved. An individual of an atrabilious (melancholic) constitution receives not only a different purgative from one who is bilious (choleric), phlegmatic or sanguineous, but also a different hair tonic. He is adverse to shaving the head. True, this allows local remedies to be more easily applied, but he insists that the regrowth of hair is retarded by it. But he tells how he has cured paupers by having them shave their heads, and after washing the shaven scalp with their own urine, by having them apply a mixture of quicklime and oleum rosaceum omphacinum [1]), keeping this remedy on the scalp for four hours and then rewashing with urine.

1) Composed of red roses and oil of unripe olives.

He promises much from this remedy. You are not to fear lest the quicklime cause ulceration, for it is tempered by the oil with which it is mixed. On another occasion, he cured a woman who had not a single hair, whose scalp was white and glistening. Numerous remedies having been tried without avail, he concluded the pores of the skin must be obstructed. Cantharides caused the skin to ulcerate, but within five or six days the hair could be seen to sprout.

This humoral explanation for the genesis of syphilitic alopecia is representative of that of early syphilographers in general. The simile, culled from Galen, reappears frequently. The hair is affected in the manner of a plant which grows in a saline earth (terra salsuginosa) or which is fed by brackish water (salsuginosa aqua). Its roots destroyed, the plant withers and dies (Falloppius, Borgarutius).

Alopecia was but one of a train of cephalic lesions arising from the dispersion to the head of the more subtile humors or poisonous vapors rising from the liver (universally considered as the organ primarily involved in syphilis, the so-called *Minera* or *Sedes*). To quote Falloppius: „Since the liver disperses poisonous vapors upward to the head and these are continually being fed to this region, the expulsive force in the head strives to expel them through all available channels. It forces them to the skin, thus they are exhaled through the pores, whence the hair falls because of their corrosive action. It expels them downward [from the brain through the cribiform plate] to the mouth, thus the palate and teeth become corrupted. It expels them through the nose, causing ulceration. As a last resort, it strives to expel them through the ears, and when the flatus or vapors are foul and dense, a sound is produced during their forcible expulsion [tinnitus aurium]."

The rationale for the treatment of syphilitic alopecia was in accord with the prevailing humoral doctrines. All remedies were to be avoided which might repel into the cranium the vapors and humors which *Nature* was striving to expel. Such dangerous procedures might produce catarrh, cephalalgia, vertigo, epilepsy, etc. Moreover, by various methods of evacuation, as bleeding and catharsis, efforts were bent toward keeping these vapors and humors from reaching the head. An old Galenic stratagem is recommended by Benedictus Victorius (born about 1481). He would have the right

leg cauterized at a distance of four fingers below the knee, finding authority for this in Galen's *Commentaries,* where it is stated that hair may be restored by drawing the peccant humors downward to the legs. Should such heroic treatment be refused, Victorius advises massage of the legs, rubbing downward from the knees.

Rondelet of Montpellier (1507—1566) treats of alopecia at considerable length. It may occur without pain in the head or joints. Should it be associated with such pains, it is surely syphilitic. In this disease, not only are the eyebrows lost as in leprosy, but also the hair of the scalp and beard. Should the alopecia occur in the region of the occiput or on the sides of the head, it is certainly syphilitic. These regions, because of their unusual natural humidity, resist baldness from all other causes. As for treatment: after purging with remedies taken inwardly, further evacuation is produced by rubbing the legs, arms and spine with an ointment prepared from bear grease, southernwood, unguentum martiatum [1]), quicksilver, myrrh, frankincense, oliban, ashes of southernwood and of the skin of moles, resin and terpentine washed in a decoction of southernwood, and wax. To what remains of the ointment after inuncting, is added ladanum, ashes of bear skin and of the hair of a man and woman, and honey. With this, the parts affected by alopecia are rubbed morning and night. Finally, a wash is applied composed of ashes of southernwood, wormwood, ashes of mole and of bear skin in water, to which are added maiden hair, southernwood, betony, sage and pennyroyal. If a live mole can be obtained, it is to be boiled alive and the parts affected with alopecia are to be gently rubbed with it. The mole was highly prized as a remedy for alopecia. Alfonsus Ferrus of Naples lauds the fat of the mole as very effective in either preventng or curing syphilitic alopecia. Ambroise Paré scoffs at this supposedly miraculous effect of the mole. If alopecia is due to syphilis, he would have the patient rubbed until he enters the kingdom of Bavaria (jusqu'a qu'il entre au royaume de Baviére), a play on the French word *Baver,* to salivate.

For the most part, physicians considered alopecia as a sign that syphilis would run a mild course. Thus, Brassavolus, in commenting

1) Composed of mastich, wax, storax, oesypum (the sordes collected from wool), opsobalsam, oil of nard, gleucinum, oil of unripe olives, stag's marrow, terpentine.

upon the gradual attenuation which the disease was undergoing, states that alopecia was becoming a very common symptom of *Morbus Gallicus,* and that those who are not ashamed of being bald, are restored to health without the aid of medicines. For Fernel, the mildest species of *Lues Venerea* is that which manifests itself by the gradual loss of hair of the scalp and beard. In such individuals, the virus, in the form of a thin vapor, diffuses upward in the body to the roots of the hair. It is not corrosive enough to cause the skin to ulcerate. Benedictus Victorius welcomes alopecia. It indicates a strong constitution (virtus fortis), capable of dispersing the corrosive humors to the skin. Such fortunate syphilitics are usually spared pains and ulcers.

But this optimism of the physicians brought but little consolation to the unfortunate syphilitic with a moth-eaten scalp and beard. Especially to those prominent in affairs of State or of Church would the fear of alopecia become a nightmare. As Brassavolus relates: „There is one symptom called *Pellarola* or *Defluvium Pilorum,* by some *Alopecia,* but of a different sort from that mentioned by older writers. It gives men a ridiculous appearance, when the hair of the scalp, beard, eyebrows and eyelids fall. No one can help but laugh at seeing such hairless fellows." But there is a limit to such jokes. „Those who develop alopecia, have indeed a ludicrous disease. They are the laughing stock of their fellow men. Those who lose teeth and nails, become indeed the butt of jokes, but joined with a feeling of pity. Those who go blind, deserve not only to be pitied, but also to be held in reverence (pietate)."

What dread a syphilitic had of alopecia is reflected in an admonition from Falloppius. The ancients, and so the physicians of the Renaissance, made much over a calm, cheerful frame of mind in their treatment. So Falloppius exhorts his syphilitics: „Qui laeti sunt, qui derident morbum, licet cadat his barba, et capilli, quibus nunquam animus affligatur, hi duplo citius sanantur." To those syphilitics who keep cheerful and make light of their plight, even though they lose the hair of their beards and scalps, Falloppius promises a cure in double-quick time.

Eustachius Rudius [1]), in his day an esteemed professor at Padua,

1) Eustachii Rudii... De Affectibus externarum corporis humani partium Libri septem. Venetiis, 1606.

relates in his work of 1606 of two Venetian physicians who lost their beards as a result of the pox. They were jeered out of the city.

A passage from Bernard Tomitanus throws an interesting light on the influence of syphilis upon social conditions at the middle of the sixteenth century. He repeats the opinion of Fracastor that the disease is diminishing in virulence: „The disease seems to be taking such a course that pustules have for the most part disappeared. Its destructive ulcers have vanished, tumors and excruciating pains attack individuals less frequently and with less violence. By our time (about 1560), which completes about one hundred years of the disease or there about(!), pustules are seldom seen, pains are few, and these, if present, are fleeting and vague. But there are now many gummas and an unbelievable amount of falling of the hair of the scalp and other regions of the body. We now find that it is very common for the eyebrows, the hair of the scalp and the beard to fall. However that may be, there is every indication that the disease is abating in its severity, is, so to speak, growing tame and the disgrace of being infected is lessening. In years gone by, those who were afflicted with the disease or had at one time been treated for it, were known to all their fellow citizens. Such was their disgrace, that everyone shunned having dealings with them, just as if they had been infected with a most foul plague. Not only did prostitutes shun intercourse with them, not only did their friends avoid their kisses and embraces, but their very breath was avoided. At banquets, if they must be invited, they were assigned special seats and separate dishes for food and wine, lest others using them might be infected. Our time has shaken off this fear. At present there is no discrimination at banquets, no fear of infection. Indeed, now when nuptials are being arranged, there are few held back by syphilis. The chief issue between the relatives of the prospective bride and groom is concerning the dowry, about money, nothing or little is said about syphilis. The reason for this is the milder course of the disease and the readier cure by appropriate remedies."

Physicians naturally bent their efforts toward preventing the calamity of alopecia from overtaking their influential patients. Falloppius, otherwise frowning upon mercurial fumigations, which he styles a punishment of the devil (diabolūs crux—diabolūs here 4th

declension genitive), admits of their use under two emergencies: in stubborn ocular inflammations (lippitudines rebelles) and in alopecia. Bitter experience has taught him their value in the former. He tells of a certain notary, (possibly of wealth and influence, thus making the pill doubly hard to swallow), whom he had been unsuccessful in curing of an ocular inflammation, though he had him drink guaiac on several occasions. The patient was fortunate enough to fall into the hands of a female quack (muliercula), who cured him with fumigations. The second indication for their use is when infection with syphilis occurs in men holding influential positions. In such individuals, the dread of alopecia must be taken into account. Fumigations will hold fast hair about to fall and save such men from disgrace. But he wisely warns that such a dangerous method of treatment is only for robust individuals.

So common was syphilitic alopecia in France that the disease itself became commonly known as pélade. The plight of Henry III (1551—1589) is described in a passage of Sauval's *Histoire et Recherches des Antiquités de la Ville de Paris*: „Henri III eut cette maladie de même que son aïeul (i.e. syphilis), ce qui fit perdre les cheveux. La perruque n'était pas (ou n'était plus) connue en France. Le roi se vit réduit à prendre une calotte ou ses cheveux étaient cousus, mais si mal faite qu'il la couvrait toujours de sa tocque, sans l'oter devant qui ce fut, non pas même devant sa mère, sa femme, ni les ambassadeurs."

Of great interest in connection with alopecia are Consilia, written for the poxed Count Galeotti Pico Mirandola of distinguished family. They are from the pen of two of the most prominent practitioners of the day, Joannes Baptista Montanus, physician and contemporary of Fracastor at Verona, and Bartholomaeus Maggius, surgeon, remembered along with Paré for his sound treatment of gunshot wounds.

Montanus sums up Pico's constitution as follows: Possessing as he does by nature an immoderately hot heart and liver, his infection with *Morbus Gallicus* will of necessity lead to corruption of his blood. Likewise the spirits, generated in the heart, will become overheated, as is evidenced by the transient fevers to which he is subject, by the striking redness of his face. That his blood has

become adust [1]), is shown by his jaundice, by his fevers, and by the eruptions to which he is prone. In addition, his stomach, deficient in natural heat, generates an abundance of phlegm, even though he select his food with the utmost care. Finally, to top it all, his head is too hot and dry, and so fails to temper the excessive heat in the other organs. This is shown by the fact that his left eye, its vision impaired as a result of an old injury and its lids abscessed, is now almost blind.

And Montanus passes on to general advice as to hygiene, *Regimen* of the so-called *Sex Res Nonnaturales*. That his Lordship must have been irrascible is gathered from the admonition of Montanus that he must by all means suppress outbursts of anger, for by them his body will be so profoundly affected that treatment will be ineffective. As Pico is engaged in military service and so must travel much, he should try to moderate these activities as much as possible. His journeys should be made in the morning on an empty stomach. And if perchance he must ride all day, let him eat at most two eggs with a bit of bread dipped in broth. Let him select a good mount and a comfortable saddle (a most important consideration in view of the lesion presently to be described). And to mention only a few further admonitions, Montanus advises Pico to use thin white or red wine, properly aged, and this only at meal time and in moderation. He takes a slap at the pernicious custom of the nobles of drinking their wine with cracked ice, and tactfully assures his distinguished patient that he is well aware that such advice is superfluous for his Lordship, who in all maters exercises the greatest prudence and moderation. And as to food he has wise counsel to offer. His food is to be simple and to consist of a single dish. Indeed a single dish of indigestible food is less harmful than a conglomeration of excellent foods, and to drive home his point, he cites the oft told tale of people who are compelled to subsist on dried fish alone, yet, if the story can be believed, live a span of two or three ordinary lives, sound in health and vigorous. Inasmuch as a diet list is everywhere available, Montanus is loth to resing the old saw, and mentions only the foods especially to be avoided. As his Lordship frequently

1) Adustus, an old humoral term, adopted into 17the century English. Denotes „parched to dryness by heat which evaporates the thinner elements."

travels in France, where it is said to be the custom to parch victuals in the frying pan, and as the French eat more bacon and lard than any four nations combined, he warns Pico against such food. „Instruct your cooks to set your table without such foods. A cook is more prone to try to tickle one's palate and fancies than to help keep one's health. It must be apparent to your Lordship that there are no two things more opposed to each other than an excellent cook and a skilled physician. Their aims are in totally different directions. The latter strives to be of service, the former to please. The latter's goal is health, the former's is praise and flattery." In the evening he is to stroll about his home for two hours following supper, chatting with friends on pleasant topics. But he does not approve of shooting dice or any other strenuous mental exertion. Thus he will be assured of a good night's sleep.

And passing by many other wise counsels, we come to an affliction which has caused his Lordship no end of misery over a period of four long years, fissures and ulcers of the anus. These ulcers had arisen as the result of the accumulation of a foul melancholic blood in this region, which is only too prone to serve as a cloaca for such corrupt humors, as is evidenced by the frequency of hemorrhoids in these parts. And Montanus is much concerned whether he shall strive to heal all three of his anal ulcers. For in so doing, the corrupt humors, which had so long been discharging through this channel, might be shunted to some noble organ and cause irreparable damage. So he concludes that two may be safely healed, but a third should be left open, and should it eventually degenerate into a fistula, such an outcome would be highly gratifying. Is he not concerned with the same problem which confronted the divine Hippocrates in the case of hemorrhoids? Did not the Father of Medicine advise that one hemorrhoid be left open so that this channel of evacuation, provided by Nature, might not be completely obliterated? Should by chance all three of Pico's ulcers heal, Montanus advises that two ulcers be artificially produced at a comfortable distance below the knees so that the retained humors will find a ready outlet.

And now Montanus proceeds with measures aimed at preventing the recurrence of the disease once it is treated. But he prudently prepares his patient for such a contingency, thus protecting his own

reputation, should such a misfortune occur. As a result of some error in his regimen, some germ of the infection might resume its disastrous work. And indeed, it is not improbable that Pico's disease will recur in the course of time, for his Lordship is much occupied with weighty business, travels through many countries. Montanus admits that this scourge cannot be entirely eradicated from a body in which it has once taken deep root. But he adds consolingly: „But I do not deny that it can be so controlled and held in check that it will cause no injury for a long period." And in case of recurrence, Montanus, bitter antimercurialist, urges him to resort to the only safe remedy, the Lord's greatest blessing, a decoction of guaiac.

And near the end of his Consilium, he gives special attention to the cure of two disfiguring lesions, which, should they occur, would be especially embarassing because of his Lordship's high station in life, namely, macules and pustules affecting the whole body and loss of hair. For the latter he recommends remedies which long experience has shown to be most effective. Among others is the following prescription: Take five green lizards, six ounces of bees, four ounces of bee glue or virgin wax, a handful each of maidenhair and myrtle, eight ounces of southernwood. Dry the animals in an earthen vessel within a furnace, powder, and mix all the ingredients. Then add a pound of bear fat and ferment in a well covered vessel buried in dung or exposed to the hot sun for thirteen days. Distill, separate the water from the oil and set both aside for use. Another remedy, especially effective in the alopecia originating from syphilis, the value of which will be evident to anyone who ponders over the properties of each ingredient, and then considers why the hair falls out in syphilis, is compounded of saffron, aloes, myrrh, ladanum, oil of bitter almonds, bear fat, and an ounce of powdered fly heads.

But as is gathered from the *Consilium* of Maggius written in 1550, Pico had not escaped the embarassment of alopecia, once in 1541, when the disease caused a generalized loss of hair associated with his early secondary lesions, and again some seven or eight years later, when he had the misfortune to lose his beard. His plight is well described in the preface of Maggius' *Consilium*.

The most illustrious Count Pico Mirandula suffers at the age of 42 from various diseases, one of which is syphilis, with which he was infected in 1541 following intercourse with a certain harlot. The

disease manifested itself at that time by a variety of symptoms, ulcers of a malignant character appeared on the penis, dry pustules cropped out on the head along with other pathognomonic symptoms, which were of such a malignancy and severity that he was cured only after losing his hair and both his finger and toe nails. Of these symptoms he was freed only after much effort by evacuations and a decoction of guaiac. While these symptoms were being treated by his physicians, his most loving and noble wife, because of her love for her husband, fearlessly lay beside him and tended him (but in an honorable fashion), and thus was infected with the same scourge [1]). Since the illustrious lord did not know his wife had been infected, for no symptoms manifested themselves in her, [after his cure] he lay with her as becomes a dutiful husband. And so the disease sprang up in him afresh, which occurred all the more readily inasmuch as he had already been infected. And so a thing, grievous enough, happened to both. When one was cured, the other without knowing it, infected his mate [1]). However there continued to be present in his lordship certain symptoms involving the hands and feet (palmar and plantar syphilides). In 1547, while sojourning in Venice, he developed a very severe pain in the anus, without any swelling of the external parts, which pain none of his physicians were able to relieve, no matter how they tried, with either anodynes or dispersive remedies. One day however, contrary to the predictions of all his physicians, the place broke down spontaneously and the pain immediately subsided. Upon breaking open, much mucus together with some blood was discharged. Wherefore it was the opinion of some of the most eminent physicians that an abscess had ruptured, while others believed some blind hemorrhoids had burst. Subsequently an ichor continued to be discharged from the region, and there developed fissures with considerable ulceration of the outer parts of the anus, spreading day by day. There was also considerable induration of the canal of the anus, from which there descended at times ichors so hot that they could scarcely be endured. At the end of ten months he fell into a putrid fever accom-

1) i.e., by the breath and other bodily emanations, a mode of infection held common by the physicians of the 16th century.

1) The early syphilographers had a peculiar idea as to reinfection and superinfection.

panied by jaundice. His condition became miserable. In the following year, without being infected afresh (at least so they say), his beard fell out, there developed extreme emaciation, also a brownish discoloration of his face along with roughening of the skin, in places in the form of reddish macules, like the *essarae* of the Arabians, the *exanthemata* of the Greeks, but in places with considerable depression. When he passed his stools, a greater or lesser amount of phlegm was passed spontaneously, resembling fat or eggwhite, which substance more recent writers term mucus. It descended with such a virulence that it caused excruciating pains. At times the feces, along with lumps of blood, became so hard in their passage that he was forced to break them with his fingers. There also appeared a hard mass in his right hypochondrium, likewise hard tumors in his groins. Of these symptons his Lordship desired to know the cause and cure."

Pico has assigned no easy task for his physician. Maggius admits that this disease, which has persisted for nine years and has resisted three courses of guaiac, cannot be easily eradicated. Possibly failure of remedies is to be ascribed to the severity of Pico's infection. It may be that he has been repeatedly infected, which mishap could have easily occured during one of his sojourns in Venice and Paris. He urges his Lordship not to depend upon remedies which act simply by their manifest qualities (i.e., by their heat, coldness, dryness and humidity counteracting opposite qualities in the body), but he must resort to *Medicamenta Bezoardica, Alexipharmica, Antidota,* our specifics. For *Morbus Gallicus* such remedies are guaiac and mercury. And he recommends preferably a new course of guaiac, using both bark and wood in preparing the decoction. Maggius omits any special remedy for alopecia. The bedridden count was more concerned with other symptoms, especially his anal fissures, to worry about his beard.

Such is the early history of syphilitic alopecia as gleaned from the records of the sixteenth century.

In general, bearded races have been held in high honor. To be beardless is to be an immature lad, a eunuch, a woman. True, the North American aborigines, racially sparce of hair, plucked their chins. Alexander the Great had his well trained Macedonian phalanxes shave off the handle by which an enemy could sieze them.

Shaving his own beard, Peter the Great taxed those who insisted on growing one. For the most part, the Roman Catholic clergy shave clean, as have done their popes for two centuries or more.

But Adam, the primal man, Zeus, the All-father, are bearded. The Bible holds the beard in high esteem. Delilah (Judges 16) lures from Samson the secret of his strength: „If I be shaven, then my strength will go from me, and I shall become weak, and be like any other man." Hanun (Samuel II, 9), heaps insult upon David's ambassadors of good-will by shaving off one half of their beards, cutting their garments in the middle, even to the buttochs, and then sending them away. To lighten their shame, the king graciously speaks: „Tarry at Jericho until your beards be grown, and then return." And Elisha (Kings II, 2) „went up from thence unto Beth-el: and as he was going up by the way, there came forth little children out of the city, and mocked him and said unto him, go up, thou bald head; go up, thou bald head. And he turned back and looked on them, and cursed them in the name of the Lord." And the Lord punished the little children: „And there came forth two she bears out of the wood, and tare forty and two children of them."

In Rome, the bald head, the hairless chin, were objects of ridicule. The emperor Verus, indulging in the grossest debauch while in Syria, was the butt of much ridicule because he had his beard shaved to please one of his courtesans. Suetonius tells how Julius Caesar, because of his bald head, was dubbed by his soldiers, „moechus calvus," the bald whoremonger. And of Domitian, Suetonius relates that he was so sensitive of his baldness that he considered it an affront to himself if in his presence some one else were chided with being bald, whether in jest or during an altercation.

The loyal have on occasion discarded the beard out of deference to their rulers. Spanish courtiers shaved clean their chins on the accession of Philip V who was unable to grow one. So under Louis XIII, young and beardless, his most loyal supporters sacrificed their beards.

Of interest is the history of the beard among English kings. Beards dressed in the most varying fashion, moustaches, shaven faces follow one another. There is the close shaven face of Henry II, the chin with the two curled locks, long beards with three great ringlets, long forked beards floating down to the breast in patriarchal

style. In fourteenth century England the beard with a long drooping moustache is held in favor. Thereafter beards are very rare save among some of the older folk until they are gradually restored to good standing in the sixteenth century. Henry VIII, *himself syphilitic, restored* the *beard* to favor. Stow's *Annales* give 1535 as the year in which he caused his beard to be knotted and no more shaven, his hair being polled at the same time. The age of Elizabeth saw lawyers, soldiers, courtiers and merchants all bearded. Beards now take a hundred fashions. Satirists and Puritan pamphleteers are busy with them and the men who waste hours perfuming or starching them, in dusting them with orris powder, in curling them with iron or quills. With the reign of Queen Anne, England again enters a beardless age. The beard and moustache are no longer seen. It was left for the Jew, the Turk.

Unquestionably syphilis had much to do with bringing back the beard in the sixteenth century. As Falloppius says for his Italy, the Spaniards brought the pox and beards. Now it was not so much a boast of manliness as it was a silent denial of syphilis.

Were Fracastor, Brassavolus and Falloppius deceived? Had alopecia been hidden up to their time among a mass of more evident and harassing lesions? Ulcers, arthralgias and the torturing nocturnal algias so vividly described by all the syphilographers of that day? Possibly it was included under the general term *Scabies* or *Pustulae Gallicae,* equivalent to our syphilides. This forty years of silence on the part of the early syphilographers is certainly suggestive. We can only speculate on the correct answer.

KÖRPERLICHE UND KULTURELLE VOLKSENTARTUNG IN GEBIETEN ENDEMISCHER MALARIA. MITTEL-SUMATRA

VON

PROF. DR. A. W. NIEUWENHUIS

VI

„Der Reisende, der von der Westküste in das Innere Zentral-Sumatras eindringt, findet bald Gelegenheit, in den Padanger Hochländern mit malaiischer Kunst in Berührung zu kommen. Dieser Kunst, die mich schon auf meinen früheren Reisen in Sumatra interessierte, brachte ich diesmal ein besonderes Interesse entgegen; sie war mir der Inbegriff eines verhätschelten Lieblings geworden, den man hegt und pflegt, wo man ihm begegnet. Demzufolge sammelte sich für mich auch ein Material an, dessen Veröffentlichung den Rahmen dieses Buches weit überschreiten würde. Ich habe mir deshalb auch vorgenommen, in diesem Bericht dem Leser an der Hand der zahlreichen farbigen Wiedergaben nur einen allgemeinen Eindruck vor Augen zu führen: später gedenke ich dieses Thema an der Hand des überdies noch in meinen Händen befindlichen Materials weiter auszudehnen und die Ergebnisse in einer besonderen Arbeit zu veröffentlichen. Ganz allgemein darf man sagen, dass die Kunst auf der Westseite höher als an der Ostküste von Zentral-Sumatra steht. Die Kunst der Malaien ist wie ihre Rasse keine reine, selbständige; sie setzt sich aus einer starken Mischung indischer Einflüsse zusammen, welche die Malaien aus ihrer Urheimat, dem indischen Berglande mitgebracht haben..... Der eigentliche Mittelpunkt Zentralsumatranischer Kunst, wenn ich so sagen darf, liegt in den Padanger Hochländern, also im alten Reich Minangkabau. Jeder, der auch nur ein Bischen Kunstgefühl nach Sumatra mitbringt, wird erfreut sein über die hübschen, farbiggetönten Schnitzarbeiten an den Häusern,

den Reisscheunen, den Mosscheen, den balai's. Dazu gesellt sich der reich ornamental behandelte Gold- und Silberschmuck und die prächtigen Goldbrokate der Hochländer. Wir sehen also, dass es hier drei Gebiete sind, in denen sich die Kunst wesentlich repräsentiert. Dankbar dürfen wir den konservativen Sinn des Malaien begrüssen, der noch heute nach alten Mustern und Vorlagen arbeitet, obwohl es sich nicht ableugnen lässt ,dass hier und dort schon Neuerungen einzudringen versuchen, die den Zauber des Alten bedrohen.

.....Betreten wir beispielsweise einen Ort der Padanger Hochländer, oder haben wir das Glück, dort einen grossen Markttag zu sehen, so darf der Kunstkenner sicher sein, dass er auf seine Kosten komen wird." Es folgen dann einige Betrachtungen über die drei Kunstgewerbe an der Hand mehrerer sehr hübscher, farbiger Abbildungen von Holzschnitzereien, Goldbrokattüchern und Goldschmiedearbeiten.

Nach seinem Aufenthalt unter den Gebirgsmalaien zog Prof. Maass mit seinem Reisegefährten zur Ostküste und verweilte während vier Monaten im niedrigen Hügelland und Flachland der Osthälfte von Sumatra unter der von Malaria und ihren schädlichen Folgen heimgesuchten Bevölkerung. Neben der Reise selbst (80 Seiten) wird dem Aufenthalt in den Gegenden von Taluk und Gunung Sahilan eine ausführliche ethnographische Beschreibung von fast 350 Seiten gewidmet. Es ist bezeichnend für die Abwesenheit von Kunstäusserungen bei dieser Bevölkerung, dass dieser Verfasser sie in seiner ethnologischen Schilderung gar nicht erwähnt. Dennoch hatte er auch dort ein offenes Auge für die Leistungen des Volkes, was folgende Auszüge genügend beweisen;

S. 367: „Die Topfformen, die ich für meine Sammlung erwerben konnte, waren mit den Mustern der hier abgebildeten Stempel verziert; de Töpfe selbst bestanden aus schwachgebranntem Ton und hatten die Form alter prähistorischer Urnen. Die in Tjaranti angefertigten Tonwaren sollen auf der Drehscheibe hergestellt werden. Die Ausübung der Töpferei liegt grösstenteils in den Händen von Frauen: natürlich schliesst dies nicht aus, dass auch Männer die Frauen dabei behülflich unterstützen. Die Töpferwaren aus Tjaranti, die mir gebracht wurden, stellten zwei verschiedene Arten dar, die sie pariua und balanga nennen. Die ersteren sind Kochtöpfe mit weitem Bauch und eng am Hals, während die anderen grosse, rohgearbeitete, un-

glasierte, napfartige, irdene Töpfe mit weiter Öffnung ohne Henkel waren."

S. 369: „Die Korbmacherei wird nur zum eigenen Bedarf betrieben und kein besonderes Gewerbe daraus gemacht. Hat einer einmal in seinem Hause einen Korb, den er braucht, nicht vorrätig, so geht er einfach zum Nachbarn oder ins Dorf und sucht ihn dort zu kaufen. Das Flechten von Körben ist Arbeit der Frauen."

S. 370: „Holzschnitzereien werden mit Spitzmessern und Meisseln ausgeführt."

S. 374: „Die Webekunst wird leider nicht mehr ausgeübt, da der Import auswärtiger Textilwaren sie völlig verdrängt hat. Ich fand noch einige alte Webstühle vor, die seit Jahren nicht mehr benutzt werden."

S. 375: „Färberei: Wenn der Reis geschnitten war, wurden die Körner des Baumwollstrauchs auf das trockene Reisfeld gesät und nach sechs Monaten konnte man schon Früchte ernten. Aus ihnen wurden die Kerne entfernt, die Baumwolle an der Sonne getrocknet, mit einer Raspel bearbeitet und die feinen Wollfäden dann auf ein Rad gezogen, um darauf auf den Garnwickler gebracht zu werden. Hierauf färbte man den Faden rot, blau oder gelb. Die rote Farbe lieferte der Saft der mangkudu-Wurzel (Morinda citrifolia und M. tinctoria); sie wurde durch Hacken zu Stückchen zerkleinert, die in Wasser gelegt wurden, das den Farbstoff auslaugte. Nun wurden die zu färbenden Wollfäden hineingelegt, drei Tage in dem Wasser gelassen, darauf ausgerungen und an der Sonne getrocknet. Stellte es sich heraus, dass die Einfärbung der Fäden nicht gut gelungen war, so wurden die Fäden so lange nachgefärbt, bis sie die gewünschte Farbe hatten. Den blauen Farbstoff gewann man aus Damar-Russ. Man liess einen Topf über verbrennendem Damarharze stark anblaken, kratzte den gewonnenen Russ herunter, tat ihn in einen Topf und rührte ihn mit Wasser, bis dies Gemisch eine ziemlich konzentrierte Lösung gab. Hierzu wurde ½ gantang Öl von der Frucht des Pangium edule hinzugesetzt, damit der Russ sich besser mit dem flüssigen Element verbinden konnte. Die zu färbenden Wollfäden bleiben in dieser Verbinndung ebenfalls drei Tage liegen und wurden genau so wie die roten Fäden weiterbehandelt.

Um den Fäden die gelbe Farbe zu geben, verfuhr man wie bei der Rotfärbung, nur dass man der Farbmasse das Öl der si-mauang-

Früchte beifügte. Weiss blieb eben ohne Färbung, da dies ja die Naturfarbe des Fadens ist. Heutzutage hat man das Anpflanzen des Baumwollstrauches aufgegeben, weil die Weberei eingegangen ist."

Aus dem Angeführten ergibt sich, dass nur Baumwollzeug mit äusserst einfacher Färbung hergestellt wurde; von Schafwolle oder Seide war bei der Weberei keine Rede. Kunstweberei oder Färberei wurden nicht betrieben. Auf dem Gebiet der Industrie begegnet man also demselben scharfen Gegensatz zwischen den Gebirgsbewohnern und denen der niedrigen Gegenden wie bei Ackerbau, Viehzucht, Handel und Verkehr.

Wir beschäftigten uns bis jetzt mit den Besonderheiten des Volkslebens in Mittel-Sumatra, wie es sich ohne Einfluss von Aussen im Tieflande und im Hochgebirge entwickelt hat. Die materielle Seite dieses Volks trat dabei in den Vordergrund; im Folgenden soll nun auch die eigentümliche soziale Seite zur Sprache kommen.

Um den vielseitigen, tief durchdringenden Einfluss der Endemie hervortreten zu lassen, kann die geringere oder grössere Änderung des Volkswesens durch ganz fremden Einfluss dienen. Es handelt sich hier um die Art der Annahme höherer Entwicklung durch den Einfuhr des Unterrichts nach europäischem Muster, das bis dahin in Mittel-Sumatra unbekannt war. Wir geben hierfür einer Autorität auf diesem Gebiet des Unterrichts, Herrn C. LEKKERKERKER, das Wort, der in seinem Buche „Land en Volk van Sumatra" auf S. 192 über Mittel-Sumatra bezüglich „Würdigung des Unterrichts in der inländischen Gesellschaft" schreibt: „Djambi (Flachland N.): noch kein Interesse ausgenommen in Korintji (östliches Gebirgsland N.); Riou-Indragiri (Flachland N.) Interesse sehr mässig, in Ober-Indragiri (östliches Gebirgsland, auch Kwantan genannt, ein Minangkabausches Grenzland, N.) eine beginnende Entwicklung; Westküste von Sumatra (Gebirgsland N.) sehr starker Drang nach intellektueller und ökonomischer Entwicklung, ausser in einigen dünn bevölkerten Randgebieten; das Oberland aktiver als das Unterland; im letzteren macht Pariaman eine günstige Ausnahme. In geistiger Beziehung steht die Westküste in jeder Beziehung an der Spitze von Sumatra; dieses Gebiet ist auch Java voraus, wenn man die Bevölkerungsdichte berücksichtigt. So waren z.B. von den 183 Schülern, mit denen der Kursus an der Schule für die Ausbildung von inländischen Ärzten 1913/14 in Batavia begann, 105 Javaner, 50 Sumatraner (beinahe

nur von der Westküste und Mandailing), 8 Amboinesen, 2 Timoresen und 18 Menadonesen von Celebes. Menado spielt im Osten des Archipels eine ähnliche Rolle wie die Westküste im Westen. Als im Anfang dieses Jahrhunderts der Unterricht unter dem Volke bekannt wurde, war ein starker Drang zu diesem merkbar. In dieser Zeit war die Anzahl der Regierungsschulen noch viel zu klein, auch lagen diese oft in viel zu grossem Abstand für diejenigen, die sie besuchen sollten. Es wurden dann aber durch Initiative der Minangkabauer selbst viele Volksschulen in ihren Dörfern gegründet, wobei die europäischen Verwaltungsbeamten selbst oft die helfende Hand reichten. Dabei wurden Schulgebäude neu gebaut, gut und sogar hübsch, wie man von Alters her zu bauen gewöhnt war. Anfangs war man auf zu junges und ungenügend ausgebildetes Lehrpersonal angewiesen, weil sich dieser Unterricht zu schnell entwickelte. Doch versprachen diese Schulen viel Gutes für die Zukunft, was sie auch tatsächlich hielten.

Was diese Bevölkerung in ihrem Drang nach geistiger Entwicklung zu Stand brachte erweist sich daraus, dass 1912 die Zahl der Schulen an der „Westkust van Sumatra" 193 subsidierte und 33 nicht subsidierte betrug. In Palembang nicht die Hälfte und in den übrigen Gebieten von Sumatra gab es nur hie und da solche Volksschulen. An der „Westkust" betrug die Schülerzahl 15000. Kennzeichnend ist auch, dass zu den nicht subsidierten Schulen auch die holländisch-malaiische Schule von Kota Gĕdang gehörte, eine sehr fortschrittliche Gemeinde bei Fort de Kock. Diese Schule hatte ihre Entstehung dem „Studiefonds Kota Gĕdang" zu danken, zusammengebracht von Inländern des Ortes und der Umgegend. Von diesem Fonds wurden zwei junge inländische Lehrer nach Niederland geschickt, um dort das holländische Lehrerdiplom zu holen. Der eine starb, der andere erreichte sein Ziel und wirkte weiter an der Schule. Ein Hauptstreben war, den Unterricht auf gleiche Höhe zu bringen, wie die holländisch-indischen Gouvernementsschulen und sie auf dieser zu halten".

„Es ist bekannt, dass der Wert sowohl des Unterrichts wie des Schulbesuchs für das inländische Zusammenleben viel mehr bedeutet als das Erlangen der Kenntnisse einer Volksschule. Auch für diesen Teil Sumatras gilt als Ausfluss des Unterrichts, dass dieser einen neuen Geist unter die Bevölkerung bringt.

Schädliche und schlechte Gewohnheiten verschwinden. Apathie,

Indolenz, Unsauberkeit und mit dieser zusammenhängend Krankheiten, Kinderheiraten und andere sexuelle Misstände, Geisterfurcht, an der so viele leiden, grausame Gewohnheiten, sie vermindern alle. Dagegen stellt sich Empfänglichkeit für Verbesserungen auf dem Gebiet von Ackerbau, Handel und Industrie ein; Fähigkeit für Verbesserung der ökonomischen Lebensbedingungen, Abnahme von Glaubensfanatismus. Gegen Betrug macht sich Abwehr bemerkbar. Die Lebensschwierigkeiten dieser Menschen vermindern auf diese Weise und der Eifer der Verwaltungsbeamten beginnt bessere Früchte zu tragen".

Bezüglich des Dranges nach Entwicklung macht sich somit derselbe Gegensatz zwischen Hoch- und Tiefland geltend als im bereits behandleten Gebiet der Volkskultur und des Volksbestehens.

Dieser merkwürdige Einfluss des Wohngebiets auf die geistigen Verhältnisse einer Bevölkerung findet ein nicht weniger deutliches Gegenbild in dem, was wir in Mittel-Sumatra bezüglich der für Indien so wichtigen Hinduzeit beobachten können. An die höheren Kulturen der Hindus, die während einer tausendjährigen Periode bis ungefähr 1500 auf den Indischen Archipel einwirkte, haben ihre Völker vornehmlich den materiellen, geistigen und kulturellen Fortschritt zu danken. Hiervon findet man auch bei den Minangkabauern vielseitige Beweise. Die tastbaren sind die zahlreichen und verschiedenartigen Überbleibsel aus der Hinduzeit, die über das ganze Land verbreitet angetroffen wurden.

In letzter Zeit ist von dieser frühreren Geschichte etwas mehr bekannt geworden. Wir wissen nun, dass seit dem siebenten Jahrhundert unserer Zeitrechnung mächtige Hindureiche mit hoher Kultur in den östlichen Flussgebieten des Musi und des Djambi bestanden haben. Palembang, das Stromgebiet des ersten Flusses, war in diesen frühen Zeiten der Sitz des Hindureichs Çriwidjaja, das im Lauf des siebenten Jahrhunderts seine Macht über das nördlicher im Djambigebiet gelegenen Reich von Malaju ausdehnte; später sogar über Malakka und weiter.

An Macht und Grösse wechselnd bestand Çriwidjaja als unabhängiges Reich bis zum Ende des dreizehnten Jahrhunderts, wo es von Java abhängig wurde. Hundert Jahre später, ungefähr 1377, versuchte es seine Unabhängigkeit wieder zu gewinnen, wurde aber durch die Überherrschung des ostjavanischen Reichs von Modjopahit gänzlich vernichtet.

Nördlicher am Djambifluss bestand in dieser Zeitperiode das Hindureich Malaju, in der Regel mehr oder weniger von Çriwidjaja abhängig. Wie es in späteren Jahrhunderten den Sitz seiner Regierung in das Barisan-Hochgebirge verlegt hatte, konnte es seine Unabhängigkeit handhaben. Bis zum Anfang des neunzehnten Jahrhunderts hat es dort als Reich von Minangkabau bestanden.

Diese jahrhundertelange Hindukultur äussert sich noch stets im materiellen und geistigen Bestehen der Völker des Barisan-Gebirges. Ihr teilweiser Übergang zum Islam in späteren Jahrhunderten hat hieran wenig verändert.

Nun lagen die Hauptorte, von denen die Verbreitung dieser Volksentwicklung ausging, weit im Osten an den Flussmündungen des Musi- und des Djambiflusses. In Verband hiermit muss daran erinnert werden, dass in den dortigen Sümpfen wie noch heutzutage in jenen Hauptstädten Djambi und Palembang endemische Malaria nicht vorkommt. Unterhalb dieser Städte an der Meeresküste und oberhalb am Fluss in der Hügelgegend herrscht sie allgemein. Dadurch konnten diese alten Hauptstädte Jahrhunderte lang bestehen, während die Bevölkerung oberhalb oder unterhalb am Fluss entweder sich nicht behaupten konnte oder sehr niedrig an Zahl blieb. In dem riesigen niedrigen Gebiet zwischen den Hauptstädten und dem Barisan-Hochgebirge, das eine mittlere Breite von 150 K.M. des flächeren Geländes aufweist, fehlt gegenwärtig jede Spur einer früheren, höheren Kultur. Es herrschen dort Zustände, die oben für die dünngesäte, ärmliche Bevölkerung beschrieben wurden. Nur an den Ufern dieser Riesenströme, die sich durch das mit Urwald bedeckte Gebiet schlängeln, sind die Malaien hier in einzelnen Dörfern angesiedelt, wo sie einfachsten Ackerbau auf trockenen Reisfeldern treiben, obgleich sie doch ihren Ursprung den zivilisierten Malaien des Hochgebirges entlehnen. Nur der ungünstigen Volksgesundheit kann es zugeschrieben werden, dass die primitiven Zustände hier herrschen geblieben sind und die Malaria-Krankheiten lassen sich dabei als wichtigste Ursache gelten. Bereits zu Anfang wurde erwähnt mit welchem Ernst der englische Malariakenner Ronald Ross sich über Volksentartung infolge von Malaria geäussert hat. Da die Hinduzeit für die malaiischenVölker des Archipels, die sich einer höheren Kultur zugänglich erwiesen, tatsächlich zu einem besseren ökonomischen, sozialen und geistigen Bestehen führte, scheint es angemessen, noch kurz die Änderungen zu er-

wähnen, die die vorderindischen Fremden eingeführt haben. Für ackerbauende Völker wie die in Ost-Indien erhebt sich zuerst die Frage, was für den Reisbau geschah. Wir wissen jetzt hierüber, dass der Sawahbau bereits vor jener Zeit bestand, aber in den grossen Hindureichen günstigere Bedingungen für seine Entwicklung erlangt hat als bei den ständig mit einander in Unfrieden lebenden Stämmen von früher. Besonderheiten hierüber sind aber nicht bekannt.

Bezüglich der eng mit dem Ackerbau verbundenen Viehzucht können wir uns über das, was in diesen vielen Jahrhunderten vor sich ging, besser Rechenschaft geben. Praktisch muss damals das Halten von nützlichen Hausstieren wie Rinderarten, Pferderassen, vielleicht auch bereits Schafen und Ziegen eingeführt worden sein. Da von allen diesen Tieren die wilden Stammeltern nicht im Archipel vorkommen und sie auch bei der malaiischen Bevölkerung von Gebieten wie Mittel-Borneo bis vor kurzem fehlten, können wir schwerlich annehmen, dass die Malaien sie vor der Hinduzeit besessen haben. Der wilde Bantèng hat nur auf Bali stark zu der Entstehung des zahmen Rindes beigetragen, dessen Arten viel Blut der vorindischen Rinder besitzen. Was die Verbreitung eines solchen neuen Existenzmittels auch für den Ackerbau bedeutete, bedarf keiner Begründung. Die Methoden der Fischerei und Jagd im Archipel tragen mehr das Kennzeichen früher bereits bei den Malaien bekannt gewesen zu sein. Vor allem spricht hierfür stark ihre Verbreitung bis weit nach Neu-Guinea.

Für das Volksbestehen wichtig muss dagegen die Verbreitung zahlreicher neuer Formen von Industrie und deren starkes Aufblühen gewesen sein. Der Gottesdienst der damals herrschenden Hindu-Religionen erforderte den Gebrauch von Tempeln in prächtiger Ausführung, deren Überbleibsel uns jetzt noch durch Schönheit entzücken. Die häufig noch angetroffenen Bronze-Gegenstände, bei den Priestern in Gebrauch, weisen eine gleich hohe Entwicklung der Schönheit im Entwurf und in der Technik auf. Leider besteht dies alles nicht mehr, ausser bei den Baliern, aber es muss seinen Einfluss doch Jahrhunderte lang haben fühlen lassen. Wohl sind noch in Gebrauch die Gegenstände von Kupfer, Messing und Edelmetallen, deren Verzierung alle das Kennzeichen tragen, den Archipelvölkern von den Hindus überbracht worden zu sein. *Fortsetzung folgt.*

X^ÈME CONGRÈS INTERNATIONAL D'HISTOIRE DE LA MÉDECINE [1])

RÈGLEMENT
DU X CONGRÈS INTERNATIONAL D'HISTOIRE DE LA MÉDECINE

ARTICLE I

La tâche du Congrès devra se limiter, en principe, au désarroi et à la discussion des thèmes officiaux préalablement signalés.

Outre ce labeur fondamental, le Congrès consacrera tout le temps compatible avec ses travaux à l'examen des communications présentées sur des thèmes divers, toujours dans l'aspect spécifique de l'histoire de la Médecine.

Comme annexe à ces objectifs le Congrès organisera une Exposition de livres, documents et matériel afférant le progrès historique des arts médicaux.

ARTICLE II

Pourront prendre part aux travaux de ce Congrès, en premier lieu, les membres de la Société Internationale d'Histoire de la Médecine et pourront y figurer comme congressistes adhérés toutes les corporations, entités et personnes s'intéressant à l'investigation, l'étude et l'enseignement de l'Histoire de la Médecine.

ARTICLE III

L'intervention dans les séances consacrées à l'examen et à la discussion des thèmes officiaux du Congrès, ainsi qu'à celles ayant trait à l'examen et la discussion des communications sur thèmes divers, sera permise exclusivement aux personnes qui aient accrédité leur condition de congressistes et qui se soumettent aux déterminations du Comité Organisateur et de la Présidence de chaque réunion.

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1) Extrait du programme officiel: Décimo Congreso internacional de Historia de la Medicina 1935. 23—Septiembre—29. Madrid. (Réd.).

ARTICLE IV

Néanmoins, les personnes, entités et corporations invitées par le Comité Exécutif pourront prendre part aux actes du Congrès, exception faite des signalés à l'article antérieur. La préférence sera toujours donnée aux délégués officiaux de Pays étrangers, corporations et entités adhérées au Congrès, corporations officielles et congressistes.

ARTICLE V

La Commission d'Ordre et Protocole, désignée par le Comité Exécutif procurera une stricte application des articles de ce Règlement, ainsi que la ponctualité dans la célébration des séances et actes du Congrès, conformément aux jours et heures marqués aux programmes.

ARTICLE VI

Pour le meilleur déroulement des tâches du Congrès, les thèmes officiaux suivront leur tour d'énumération, et les communications présentées l'ordre alphabétique des noms de leurs auteurs.

ARTICLE VII

En cas d'absence de l'auteur d'une communication, il sera entendu qu'il renonce à sa lecture, et celle-ci ne pourra se faire par une autre personne dûment autorisée et réunissant la condition de congressiste que par concession spéciale du Comité Exécutif.

ARTICLE VIII

Les communications non annoncées aux programmes seront lues après épuisement des ordres du jour des séances correspondantes.

ARTICLE IX

Les langues officielles du Congrès: allemand, anglais, espagnol, français, italien et latin, pourront s'employer pour les rapports, communications et discussions.

ARTICLE X

Pour la lecture des rapports et des thèmes officiaux, trente minutes de temps sont accordées, et dix minutes pour la lecture des communications.

L'intervention dans les discussions de thèmes officiaux et communications ne pourra dépasser les cinq minutes.

ARTICLE XI

MM. les congressistes sont tenus de présenter à la Présidence des séances leur carte personnelle au moment de demander la parole pour intervenir dans une discussion.

De même, les congressistes devront remettre au Secrétariat du Congrès, immédiatement après la séance, un résumé par écrit de leur intervention.

ARTICLE XII

Les propositions et les conclusions présentées en relation avec chacun des thèmes discutés devront être nécessairement rédigées en langue officielle du Congrès et remises par écrit à la Présidence de la séance correspondante.

ARTICLE XIII

Toutes les réclamations soulevées pendant la célébration du Congrès seront présentées par écrit au Secrétariat géneral, avec mention spéciale de leur destination, soit le Secrétariat scientifique, lorsqu'il s'agisse de cet aspect du Congrès, soit le Secrétariat administratif si l'affaire y a trait.

ARTICLE XIV

Disposition générale. — Le Comité Exécutif du Xème. Congrès International d'Histoire de la Médecine, d'accord avec le Comité Directif de la Société Internationale d'Histoire de la Médecine, dictera toutes les dispositions nécessaires pour la meilleure application de ce Règlement et décidera, en dernier lieu, sur les cas non prévus au même.

Madrid, 1 juin 1935.

MEMORANDUM

Le Secrétariat général du Congrès sera installé jusqu'au samedi 21 septembre au Palais de l'Académie Nationale de Médecine, rue Arrieta, 12. A partir de cette date, le Secrétariat général du Congrès

aura son siège au Palais du Sénat, où auront lieu tous les actes officiels du Congrès, à l'exception de la séance inaugurale qui se célébrera à Toledo, selon il est annoncé aux programmes.

Il convient à MM. les congressistes de se présenter à leur arrivée à Madrid, au Secrétariat général du Congrès, où la Commission d'Ordre et Protocole leur remettra tout ce qui soit à leur adresse et leur donnera toute sorte d'information et d'aide pour leur meilleure orientation et installation.

THÈMES OFFICIAUX DU CONGRÈS

I

LA MÉDECINE ARABE EN ESPAGNE

Rapporteurs:

Professeur Capparoni (Rome).
Docteur J. Goyanes y Capdevila (Madrid).
Doctoresse A. Panayotatou (Alexandrie).
Professeur Fidel Fernández Martínez (Granada).

Communications:

Docteur A. Bloom (Le Caire): „L'Anatomie d'Abul Kasin, son origine et sa source talmudiques".

Docteur F. Canaan (Jerusalem): „Coupes magiques arabiques".

Professeur J. Guiart (Lyon): „L'origine persane de la médecine arabe".

Professeur Max Meyerhof (Le Caire): „Pharmacologie arabique espagnole".

Professeur Süheyl (Ishtambul) et *Docteur Huseyin Osman:* „Traité de Chirurgie du célèbre médecin arabe Bul Kasin, aux Bibliothèques d'Ishtambul".

Docteur Fernández de Alcalde (Madrid): „Honaino comme germe de la médecine hispano-arabique".

Docteur Henri Renaud (Rabat): „Un chirurgien maure du royaume de Grénade: Mohamed-al-Xafra".

II

LA MÉDECINE EN AMÉRIQUE PENDANT SA DÉCOUVERTE ET COLONISATION

Rapporteurs:

Docteur G. Bazzochi (Italie).
Professeur A. Da Silva Carvalho (Lisbonne).
Professeur Ricardo Jorge (Lisbonne).
Docteur R. A. Borzone (Santa Fé).
Docteur Tomás G. Perrin (Mexique).

Communications:

Révérend Père Barreiro (Madrid): „La collaboration des médecins dans les expéditions aux Indes".

Docteur Salvador Clavijo (La Carraca, Cádiz): „Origines et vicissitudes primaires des hôpitaux et postes de secours navaux en Espagne et à ses anciens domaines coloniaux".

Docteurs Escalón y *Varón Castro (Madrid):* „José Flores, contribution à l'étude de la médecine centro-américaine à l'époque de la domination espagnole".

Professeur Menetrier (Paris): „Sur la syphilis pré-colombienne".

Professeur R. Sciaffino (Montevideo): „La médecine uruguaye".

Docteur M. A. Van Andel (Hollande): „Le Docteur Willem Piso, médecin de la Dutch West Indian Company au Brésil, 1636—1644".

Docteur Fernández de Alcalde (Madrid): „Le Docteur Flores comme initiateur au Guatemala des études anatomiques sur figures plastiques".

III

LE FOLKLORE MÉDICAL DANS LES DIFFÉRENTS PAYS CIVILISÉS

Professeur Docteur Laignel-Lavastine (Paris): „Introduction au folklore médical".

Rapporteurs:

Docteur V. Torkomian (Arménie).
Docteur R. A. Borzone (Argentine).
Docteur Recht (Belgique).
Docteur P. Stoianoff (Bulgarie).

Docteur Sixto de los Angeles (Iles Philippines).
Professeur Pertierra (Iles Philippines).
Professeur Docteur Guiart (France).
Docteur Louis Karl (Hongrie).
Professeur A. Castiglioni (Italie).
Docteur Giuseppe Micheli Nardi (Italie).
Docteur Bilikiewicz (Pologne).
Docteur Vasilescu (Roumanie).
Docteresse Viorica Gomoiu (Roumanie).
Professeur Victor Gomoiu (Roumanie).
Professeur V. Bologa (Roumanie).
Docteur A. Guisan (Suisse).
Docteur Fuat Kámil (Turquie).
Professeur Süheyl (Turquie).
Docteur L. Thaller (Yugoslavie).

Communications:

Docteur V. Torkomian (Paris): „Le Folklore médical arménien".
Docteur Silvestre Bello (Las Palmas): „Le Folklore médical aux Iles Canaries".
Professeur Bugiel (Paris): „Le Folklore polonnais".
Professeur Bubrich (Buenos Aires): „Folklore argentin".
Docteur Scomel (Lima): „Folklore médical au Pérou".
Professeur Avelino Gutiérrez (Buenos Aires): „Folklore médical argentin".
Docteur C. Merax (Melilla): „Folklore médical au Maroc".
Professeur Tricot-Royer (Bruxelles): „Folklore médical belge".

IV

SECTION DE COMMUNICATIONS A THÈME LIBRE

Docteur J. P. Bantug (Philippines):

I.—„Bibliographie Médicale Philippine avant 1898."
II.—„Bibliographie sur l'histoire de la Médecine aux Philippines."
III.—„Essai Bio-bibliographique Médico-Pharmaceutique d'Auteurs philippins."
IV.—„Synopsis historique de la Médecine primitive aux Philippines."

V.—„Numismatique Médicale Philippine."
VI.—„Superstitions médicales aux Philippines."
VII.—„Projet d'une Exposition du Progrès Médical aux Philippines."
VIII.—„Législation Sanitaire aux Philippines."

Professeur Hulusi Behcet (Ishtambul): „L'histoire de la Dermatologie moderne en Turquie".

Professeur Diepgen (Berlin): „Arnaldo de Villanova".

Docteur Salvador Clavijo (Cádiz): „Les premières vaccinations faites par des espagnols".

Docteur Decref (Madrid): „Le premier hôpital d'accidents du travail fondé à l'Escurial par Phillipe II".

Docteur M. Louis Karl (Autriche): „La balnéothérapie de Pouzzoles au Moyen Age".

Docteur G. Marañón (Madrid): „La médecine aux galères d'Espagne".

Inspecteur Médical José González Granda (Madrid): „Esquisse historique de la Santé Militaire en France et en Espagne, puisque celle-ci a beaucoup copié de la première".

Docteur F. J. Cortezo (Madrid): „Une pharmacie illustre madrilène au siècle XVIII".

Docteur H. Dittrick (Cleveland): „Alimentateurs".

Professeur E. H. Guitard (Paris): „Pour l'histoire des eaux minérales aux Pyrénées".

R. P. Pinedo (Madrid): „Les idées médicales de St. Isidore".

Docteur S. Lembo (Naples): „La chirurgie du disendocrin" (avec projection cinématographique).

Professeur Docteur R. Oliver (Zaragoza): „Les épidémies de peste en Aragon", „L'hygiène à Saragosse pendant le XVIème siècle", „Livres rares et curiex et iconographie aragonaise sur la peste".

Docteur Víctor Escribano (Granada): „La chirurgie et les chirurgiens espagnols du XVIème siècle".

Professeur E. Forgue (Montpellier): „Evolution de la Médecine en Espagne".

Docteur J. Gimeno Riera (Zaragoza): „Histoire de la Psychiatrie espagnole".

Docteur Fernández de Alcalde (Madrid): „Enseignements puisés par la médecine espagnole à la lecture de *El Quijote*". Hôpitaux et

autres centres de bienfaisance existants à Madrid au XVIème siècle".

Professeur E. Kagarov (Leningrade): „Ethnographie des pays étrangers dans la science soviétique".

Docteur Félix Martí Ibáñez (Barcelone): „Histoire de la psychologie et de la philosophie mystiques de l'Inde".

Professeur Clivio Nario (Montevideo): „Ambroise Paré".

Professeur J. Orient (Cluj): „Æsculape et Hygée en Dacie".

Docteur Emilian Ostochowski (Pologne): „Michael Sendivoguis, alchimiste polonnais du XVIème siècle".

Professeur D. Paulian (Bucharest): „Projection d'un film original", „Parkinson et parkinsonnisme".

Professeur D. Paulian (Bucharest): „L'évolution de la névro-psychiatrie en Roumanie".

Docteur Alfonso de la Peña (Madrid): „Chirurgie transurétrale de la prostate".

Professeur P. Piccinini (Milan): „Andrés Bacci Elpidiano et son hydrologie *Totius orbis*", „Histoire des tableaux médicaux aux pays latins".

Professeur C. Stabler (Montevideo): „L'oeuvre des neurologues au XIXème siècle".

Professeur H. Roselló (Montevideo): „Les temples de la Médecine grecque".

Docteur S. Sanz Egaña (Madrid): „Vétérinairie espagnole au Moyen Age", „Nouvelles sur la médecine des animaux à l'Espagne chrétienne du Moyen Age".

Professeur Antonio Simonena (Madrid): „Le Collège de Saint Cosme et St. Damien à Pampelune".

Professeur Sudhoff (Leipzig): „Ambrosius Hispanicus".

Professeur Süheyl (Ishtambul:) „Document afférant la croyance psychique en Turquie dans les temps passés", „Histoire de la peste en Turquie", „Sur la syphilis parmi les Uygurs".

Professeur Szumowski (Crakovie): „L'Histoire de la Médecine et la réforme des études médicales", „Sur la nécessité de faire obligatoire l'étude de l'Histoire de la Médecine aux Universités".

Professeur A. Turenne (Montevideo): „H. Daventort: Un grand pays, un grand livre,un grand obstétricien".

Professeur H. Zeiss (Berlin): „Développement historique de la Géographie médicale".

PROGRAMME DES ACTES DU CONGRÈS

(Sauf cas de force majeure)

Dimanche 22 septembre 1935:

10 h.: Ouverture officielle des Bureaux et Services auxiliaires du Congrès au Palais du Sénat.

18 h.: Séance privée de la Société Internationale d'Histoire de la Médecine (Salle de Séances du Sénat).

18 h. 30: Réception de leurs Excellences les Délégués des Nations officiellement représentées à ce Congrès.

19 h.: Réception de MM. les Représentants d'Entités et Corporations officiellement adhérées au Congrès.

19 h. 30: Réception générale de MM. les Congressistes au Salon de Conférences du Sénat et Séance préparatoire.

Lundi 23 septembre 1935:

9 h. 30: Départ de Madrid en autocar pour Tolèdo.

11 h. 30: Séance inaugurale du Congrès, présidée par Son Excellence M. le Président de la République, à la cour de l'Hôpital Tavera, à Tolèdo.

13 h. 30: Déjeuner dans la Grande Cour de l'Alcazar de Tólèdo.

15 h.: Visite aux monuments artistiques, sous la direction de personnalités relevantes par leur connaissance de l'histoire et de l'art de Tolèdo.

18 h. 30: Goûter au *cigarral* „La Dolores", propriété du professeur Marañón, Président du Congrès.

Retour à Madrid.

Mardi 24 septembre 1935:

9 h. 30: Première réunion scientifique du Congrès, présidée par le Professeur Capparoni.

11 h. 30: Visites à l'Institut du Comte de Valencia de Don Juan et au Musée Sorolla.

16 h.: Ouverture de la Grande Exposition de manuscrits, documents, instrumental, livres et matériaux d'intérêt historico-médical.

22 h.: Réception et bal de gala.

Mercredi 25 septembre 1935:

10 h. 30: Deuxième réunion scientifique du Congrès, rapports et communications. Présidée par le Professeur A. Da Silva Carvalho.

16 h.: Troisième réunion scientifique, conférences.

18 h.: Réception au Musée Naval.

22 h.: Grande représentation de gala. Concert et reproduction en tableaux plastiques des oeuvres de thèmes historico-médicaux fameux, dues à des peintres nationaux et étrangers.

Jeudi 26 septembre 1935:

10 h. 30: Quatrième réunion scientifique. Présidée par le Professeur Victor Gomoiu.

16 h.: Visites à l'Institut Cajal, Institut National d'Hygiène, Ecole de Santé, Maison de Valezquez, Cité Universitaire, et goûter au pavillion de l'Ecole de Médecine de la Cité Universitaire.

21 h.: Banquet aux membres de la Societé Internationale d'Histoire de la Médecine.

23 h.: Réception et bal en honneur de MM. les Congressistes.

Vendredi 27 septembre 1935:

10 h. 30: Cinquième réunion scientifique. Présidée par le Professeur Laignel-Lavastine.

16 h.: Sixième réunion scientifique. Présidée par le Professeur Sir H. Rolleston.

19 h.: Réception au Palais National.

Samedi 28 septembre 1935:

Excursions à St. Lorenzo de l'Escurial, Monastère de Silos et Monastère de Guadalupe.

Dimanche 29 septembre 1935:

10 h.: Séance privée de la Société Internationale d'Histoire de la Médecine.

11 h.: Séance de clôture du Congrès. Présidée par le Professeur G. Marañón.

15 h.: Excursion et goûter à Aranjuez.

22 h.: Banquet de gala.

Lundi 30 septembre 1935:

VOYAGE A GRENADE (en organisation).

ORGANISATION DE VOYAGES, LOGEMENTS, HOTELS ET EXCURSIONS

Le Comité Exécutif du Congrès ayant décidé de nommer la Compagnie Internationale des Wagons Lits-Cook, Agence Officielle exclusive du X Congrès International d'Histoire de la Médecine, cette Compagnie se chargera de tout ce qui concerne voyages, logements, excursions, etc.

En conséquence, MM. les Congressistes désirant information sur ces sujets, pourront s'adresser aux Succursales de cette Compagnie en demande de détails pour tout ce ayant trait au Congrès: billets et organisation des voyages, réservation de chambres aux Hôtels et autres points pouvant conduire à leur plus grand confort. Il est à recommander à MM. les Congressistes de faire mention sur leur passeport de leur condition de „Délégué ou Membre du X Congrès International d'Histoire de la Médecine", à fin d'alléger les opérations de visa aux frontières, attendu que le Comité Exécutif du Congrès a obtenu du Gouvernement Espagnol, pour les assistants au Congrès tout genre de facilités compatibles avec les lois en vigueur.

Tout étranger doit être munie, à son entrée en Espagne, d'un passeport. Les nationaux des pays ci-dessous n'ont pas besoin de faire viser ce passeport par les Consulats espagnols de leur pays respectif:

Belgique, Cuba, Danemark, Islande, France, Grande Bretagne, Italie, Japon, Luxembourg, Norvège, Portugal, Pays Bas, Suède et Suisse.

Les nationaux des pays non cités ci-dessus devront faire viser leur passeport au Consulat espagnol le plus proche à leur résidence, ou, en son défaut, à un Consulat espagnol quelconque, avant leur arrivée en Espagne (Paris, Bruxelles, etc.).

Nous devons attirer l'attention de M. M. les Congressistes sur le fait qu'en Espagne l'exportation de capitaux est actuellement interdite, la somme pouvant s'exporter librement ne devant excéder pesetas 5.000 par personne. Par conséquent, et à fin de s'éviter des ennuis, tout étranger devra, à son arrivée à la frontière, déclarer

à la Douane et au Bureau de Police la somme totale qu'il porte sur lui, si elle est supérieure à 5.000 pesetas. De cette façon il ne sera pas inquiété si à sa sortie de l'Espagne il a sur lui une somme supérieure à celle de libre exportation.

COMMUNICATIONS

Pour MM. les Congressistes venant de l'Amérique, les bateaux faisant escale à Lisbonne, Vigo ou Gibraltar seront les plus convenables, ces villes étant directement reliées avec Madrid par des chemins de fer faisant le parcours en 20 heures environ. Pour ceux qui procèdent du Nord de l'Europe, le meilleur itinéraire est celui de Paris-Madrid, avec plusieurs bons trains faisant le trajet en 24 heures. Aux voyageurs venant de l'Italie, l'Autriche, la Yugo-Slavie et autres pays de l'Europe Centrale et Orientale, nous recommendons le parcours Nice-Marseille-Barcelone, cette dernière ville se trouvant à 14 heures de Madrid par voie ferrée, avec train de jour et de nuit. On peut aussi emprunter à Barcelone la voie aérienne qui est journalière (dimanches exceptés), avec trois heures de vol pour Madrid. Pour de plus amples détails, s'adresser aux Agences Wagons Lits-Cook.

MONNAIE

Les monnaies et billets en circulation en Espagne sont les suivantes:
Cinq centimes (pièce de cuivre).
Dix centimes (pièce de cuivre).
Vingt-cinq centimes (pièce de nickel).
Cinquante centimes (pièce d'argent).
PESETA (pièce d'argent).
Deux pesetas (pièce d'argent).
Cinq pesetas (pièce d'argent).
Vingt-cinq pesetas (billet).
Cinquante pesetas (billet).
Cent pesetas (billet).
Cinq-cent pesetas (billet).
Mille pesetas (billet).

RÉDUCTIONS SUR LES BILLETS DE CHEMIN DE FER

En Espagne.—Les Compagnies de Chemins de Fer espagnoles ont accordé à MM. les Congressistes et membres de leurs familles

une réduction du 34% sur le prix des billets ordinaires. Ces billets à prix réduit seront valables du 13 au 28 septembre (billet d'aller), et du 24 septembre au 19 octobre (billet de retour). Dates inclusives.

Si MM. les Congressistes désirent faire des arrêts en route, aux gares intermédiaires, ils devront en faire mention au moment de prendre leur billet au guichet.

Les billets kilométriques et les billets circulaires existants en Espagne offrent des réductions aussi importantes que celles des billets de Congressiste. Ce pourquoi nous recommendons de s'adresser aux Agents de la Compagnie Internationale des Wagons Lits-Cook en demande de renseignements supplémentaires.

Etant à prévoir que la plupart des Congressistes fassent leur entrée par la frontière Hendaye-Irun, nous attirons leur attention sur le fait que *dans les trains réguliers circulant entre Irun et Madrid le nombre de places est limité,* et que, par conséquent, il leur convient d'indiquer le train désiré, la classe et le jour, au moment de remplir les bulletins de voyage ci-joints. Les billets à prix réduit sont valables seulement pour des trajets doubles, c'est à dire, d'aller et retour, et peuvent s'obtenir par MM. les Congressistes à la frontière par l'entremise des bureaux et des interprètes de Wagons Lits-Cook. Un supplément de pesetas 5 sera perçu en sus du prix du billet, pour la réservation de places et frais d'obtention.

AVIS IMPORTANT. — *MM. les Congressistes sont priés de bien vouloir s'adresser à la Compagnie de Wagons Lits-Cook pour toute demande de réductions et de billets de Chemin de Fer* avant le premier septembre.

Après cette date, la Compagnie Internationale de Wagons Lit-Cook s'occupera de toutes les demandes qui lui parviendront, mais sans aucune garantie ni responsabilité de sa part en cas d'insuccès. Ci-joint, bulletin de commande (bulletin de voyage) des bons de réduction, que nous prions de bien vouloir remplir avec tous détails possibles et faire parvenir à l'Agence Wagons Lits-Cook la plus proche au lieu de résidence. L'Agence recevant ce bulletin se chargera de l'obtention des bons et son envoi à M. le Congressiste.

ORGANISATION D'EXCURSIONS EN ANDALOUSIE, NORD DE L'AFRIQUE ET LÉVANT ESPAGNOL

Le Comité Exécutif du Congrès a organisé une série d'excursions à des prix aventageux pour MM. les Congressistes, qui pourront les réaliser soit avant, soit après le 23 au 29 septembre, en envoyant préalablement le bulletin d'inscription ci-inclus.

Voici quelques unes des excursions organisées.

I *Andalousie en autocar.* Septembre 1935. — 6 jours. Prix par personne : 500 pesetas. Compris : Autocar Pullman. Chambres et repas dans des Hôtels de premier ordre. Taxes, impôts et pourboires aux Hôtels. Visite des villes et monuments, entrées et pourboires inclus. Les services d'un guide compétent, qui accompagnera le groupe pendant le voyage.

II *Madrid - Séville - Algeciras - Ceuta - Tétouan - Xauen - Tanger - Malaga - Grenade - Cordoue - Madrid - Saragosse - Barcelone - Cerbère.* En chemin de fer. — 18 jours. Prix par personne : Type A, 1.600 pesetas. Type B, 1.370 pesetas.

III *Madrid - Grenade - Séville - Valence - Barcelone - Cerbère.* En chemin de fer. — 10 jours. Prix par personne : Type A, 1.070 pesetas ; Type B, 792 pesetas.

IV *Madrid - Séville - Barcelone - Cerbère.* En chemin de fer. — 8 jours. Prix par personne : Type A, 825 pesetas ; Type B, 640 pesetas.

Avis. — Dans le type A sont compris :

Billets de Chemin de Fer en première classe.

Wagon-Lits de première classe.

Hôtels de premier ordre.

Transferts des Hôtels aux gares et viceversa.

Pourboires, taxes et impôts aux Hôtels et Wagon-Restaurants.

Repas au Wagon-Restaurant.

Les excursions indiquées aux itinéraires avec ses entrées et guides.

Le type B comprend, comme l'antérieur, sans Wagon-Lits et logements dans des Hôtels de second ordre.

AVIS AUX AUTEURS

Au lieu d'autres honoraires les Auteurs d'articles insérés au Janus recevront gratis 50 tirés à part *de leurs articles originaux.* Ils sont invités à faire connaître sans délai s'ils désirent en recevoir à leurs frais un nombre plus grand.

M. M. les Auteurs sont priés:

1°. **D'écrire les articles en gros caractères latins et d'une manière très lisible, si possible à la machine à écrire.**

2°. D'indiquer le nombre des tirés à part qu'ils désirent.

3°. De toujours joindre leur manuscrit aux épreuves quand ils les retournent à la rédaction.

4°. De retourner les épreuves au plus tard dans les huit jours à la Maison E. J. Brill, à Leyde.

JANUS

Archives internationales pour l'Histoire de la Médecine et la Géographie Médicale.

(Organe de la Société historique néerlandaise des Sciences médicales, exactes et naturelles.)

38me Année -:- -:- -:- EXTRAIT. -:- -:- -:- 1934

LIBRAIRIE ET IMPRIMERIE
CI-DEVANT E. J. BRILL S. A. -
LEYDE 1934

THE EARLY PATHOLOGY OF SYPHILIS, ESPECIALLY AS REVEALED BY ACCOUNTS OF AUTOPSIES ON SYPHILITIC CORPSES

(1497—1563)

BY

DR. ERNEST L. ZIMMERMANN

Baltimore, Maryland. (516 Cathedral Street).

The Renaissance brought to medicine as one of its greatest contributions a burning zeal to discover by actual dissection the structure of the human body, both in health and in disease. In the knowledge of normal anatomy great progress was made. There were the artists, interested as would be expected chiefly in osteology and myology, branches of anatomy which must be mastered if they hoped to portray the human body in its perfect form. On the other hand, there were the physiciananatomists, whose efforts culminated in the masterful dissections of Vesalius. With no less zeal were bodies dissected with a view to unravelling the „hidden causes" (abditae causae) of disease. But in pathologic anatomy the advances in knowledge accruing from such dissections were relatively disappointing. Handicapped by a centuries old humoral pathology with its fluxes, by a physiology ignorant of the basic fact of a circulation, these pioneer pathologists could not progress far.

It was during this period of intense interest in anatomic investigation that an apparently new disease struck terror into the hearts of man as the Black Death had done a century and a half before. Little wonder that physicians turned their hands toward dissecting corpses of victims of *morbis Gallicus* in order to fathom its mysteries.

In the work at hand, accounts, for the most part extremely

fragmentary, of these autopsies on syphilitic corpses have been assembled. They were performed approximately between 1497 and 1563, between the year in which was published Alexander Benedictus' *Anatomices humani corporis Libri V* with its first mention of an autopsy on a syphilitic and the year of the appearance of Botallus' *Luis venereae curandae ratio* with its remarkable account of the findings in a fatal case of gummatous necrosis of the cranial bones. In addition prevalent conceptions as to etiology are briefly presented, but only in so far as they are necessary for a full appreciation of the logic and ingenuity displayed by these early syphilologists in their attempts to correlate their findings in such autopsies with their traditional theories of disease.

SEMEIOLOGY

In the case of a disease like syphilis, so polysymptomatic and so eminently chronic, the evolution of a comprehensive symptom-complex will of necessity be gradual. The extent to which a symptomatology had been developed by 1563, may, for the sake of brevity, be indicated by summarizing the syndrome described by Gabriel Falloppius (1523—1562).

As would be expected, the more disfiguring and agonizing symptoms, those which most impress the eye and the mind, composed the first simple syndrome to be assembled. Thus in the *Libellus* of Nicolaus Leonicenus of Ferrara (1428—1524), coming from the press of Aldus Manutius in 1497, there were described

pustulae [1]), first appearing on the genitalia

dolores.

By the time of Falloppius this primitive symptom complex had been greatly elaborated and attempts had been made to classify the symptoms of *morbus Gallicus*. Falloppius divides

1) The term *pustulae* is not used in the limited sense of the present day. It designated the various papular and pustular lesions of early secondary syphilis. The macular syphilide, our roseola, is mentioned as early as 1497 by Gaspar Torrella in a passage which indicates that he included only elevated lesions under the term *pustulae*. In his second *consilium*, the recently infected syphilitic is described as having, among other symptoms, his „totum corpus infectum maculis latis, rubeis, sine pustulis".

into two categories the symptoms of this "hydra, which has not a single head, but seven, when one of which is severed, a new batch crops out".

I. Affectus consequentes ad gallicum principiatum (incipient lesions of syphilis).

Lassitudo
Dolor vagus
Caries pudendi
Bubones
Gonorrhoea gallica.

II. Signa confirmati morbi, quae velut umbra corpus, gallicum consequuntur (symptoms of constitutional disease, which follow syphilitic infection as a shadow follows its body).

Pustulae in universo corpore
Ulcuscula in pudendis callosa
Molificatio uveae
Tumores glandularum in faucibus
Corruptio palati et dentium
Dolores
Corruptio ossium capitis et bracchiorum
Tumores ateromatici (gummata)
Ulcera maligna universum corpus obsidentia
Defluvium pilorum
Rhagades, rimae, ulcera serpentia in vola manuum et planta pedum
Tinnitus aurium
Astma.

In his description of the initial lesion of syphilis, Falloppius makes two statements that are especially noteworthy. By referring to his two groups of symptoms, it will be found that he places in the first, listing incipient lesions, *caries pudendi,* and in the second, among lesions of confirmed syphilis, *ulcuscula in pudendis callosa.* Falloppius well recognizes the baneful significance of induration in a genital lesion:

"Whenever you find induration persisting about the scars of a healed genital lesion, you may be certain that the disease is now confirmed, for these indurations (calli) are the most manifest and positive signs of confirmed syphilis. [And in a subsequent

passage]: There are two obstinate symptoms, which, should they persist, destroy all hope of cure. They consist of certain indurated scars, which I believe are commonly called 'bottones', cicatrices similar to buttons. Unless the patient continue to drink wood until cure is complete, there is always danger of recurrence. The second is gonorrhoea gallica. Should its flow not be checked by decoctions or some other remedy, the disease will likewise persist." These *bottones* or button chancres were well known to the sophisticated layman of Falloppius' day.

The lymphangitis occasionally associated with chancre, which Torrella (1497) had so aptly pictured as extending in the manner of a spoke from the genital lesion to the groin, is well described by Falloppius:

"... at times there persists in the wake of an ulcer, a hard nervelike cord, traversing the genitalia, a symptom indicating that syphilis has not as yet been cured, and of the same significance [as induration in a chancre]. At times this chord suppurates and gives rise to fistulae [1])."

Falloppius was by no means the first to attempt to classify the lesions of syphilis. As early as 1514, Jean de Vigo had differentiated two groups of lesions, with designations identical with those subsequently proposed by Falloppius, *morbus Gallicus non confirmatus* and *morbus Gallicus confirmatus*, but with a fundamentally different basis for his classification.

Morbus Gallicus non confirmatus:

Pustulae parvae cum callositate circumdante (chancre)
Pustulae crustosae et interdum cum carnositate elevate (secondary syphilides)
Dolor clamosus etc.

Morbus Gallicus confirmatus:

Scirrhositates ad instar ossium (exostoses)
Tuberositates exiturales materia grossa et phlegmatica (gummata)
Ulcera etc.

1) These small ulcers occurring along the course of the lymphangitis were subsequently designated as lymphatic chancres by William Nisbet (1787), occasionally they are referred to as Nisbet's chancres, more frequently as bubonoli. Ehrmann has in recent years made a thorough pathologic study of these rather unusual lesions. (Handbuch der Geschlechtskrankheiten).

Whereas Falloppius' classification depends upon a distinction between symptoms occurring as manifestations of a disease to all appearances as yet localized and symptoms indicating generalization (so-called confirmed syphilis), that of de Vigo depends essentially upon response of lesions to treatment. In *morbus non confirmatus*, our primary and secondary syphilides, he follows traditional methods of treatment (diet, digestives, evacuants), and mentions mercury only under topical procedures (chirurgia), where it is recommended in a liniment for drying up pustules. Today we would explain the apparent success of such treatment by the fact that in general the early lesions of syphilis tend to undergo spontaneous involution. For his *morbus confirmatus* he extols his famous emplastrum, which, in spite of its earthworms, frogs and vipers, contained sufficient mercury to effect a decided therapeutic response. Moreover de Vigo makes a very important discovery as to the relative infectiousness of the two groups of lesions: "The disease is contagious only at a period near its beginning, at a time when it manifests itself *in forma scabiei*. In its later stages, when it manifests itself by pain, indurated tubercles, deep and destructive ulcerations, it is no longer contagious. I have made this observation a hundred times." (Practicae chirurgicae secunda pars, lib. V).

The essential differences between the classifications of de Vigo and Falloppius in terms of present day nomenclature are readily grasped by referring to the following table:

	Gallicus non confirmatus	Gallicus confirmatus
De Vigo	Primary and secondary syphilis	Tertiary syphilis
Falloppius	Non indurated genital lesions Chancroidal manifestations, suppurating adenitis, etc.	Indurated chancres Secondary and tertiary syphilis.

A third attempt at classification of syphilitic lesions during the period under consideration is noteworthy inasmuch as it has a striking resemblance to the one proposed by Ricord three centuries later and accepted in its main points even today. On turning to the work of the French surgeon, Thierry de Héri (1553), we find three types of lesions differentiated: "les accidens qui precèdent", chancre, buboes and gonorrhea; "les autres qui suivent", pustules and ulcers scattered over the body, alopecia

and arthralgia; "les autres qui surviennent", tophi, gummata, phagedenic ulcers, fissures of the palms and soles, etc.

Owing to the absurdity of many of their theoretical conceptions, there is apt to be a tendency to underestimate the clinical acumen of these early syphilographers. Jean Fernel recognizes only too well that the diagnosis of syphilides cannot be learned from books: "Sed omnium harum pustularum et ulcerum ab aliis simplicibus distinctio vix plane et ad unguen literis explicari potest; oculorum intuitu et frequenti aspectione cognoscenda." Brassavolus speaks of syphilides as having an "extraneus color". Massa assigns to them a "malus color", Lobera, a "tristis color". Falloppius, in speaking of syphilides without crusts, by a happy chance assigns to them a descriptive term, which, like Swendiaur's "copper color", seems destined to be tacked indiscriminately upon every syphilide.

"The central portion is whitish, the periphery of the color of salted pork [porcinae carnis salitae]. I cannot describe it, it is neither red, nor white, nor pale; cut through a ham [perna] and you have the color of these papules [pustulae] without crusts, such as occur on the palate, anus, face and scalp."

It is evident that by 1563 there had been developed for syphilis a rather extensive symptom complex as far as visible manifestations were concerned. Moreover there was considerable insight into the more or less orderly evolution of the various lesions of this Proteus. What was known of involvement of the inner structures may be gathered from autopsies subsequently to be described.

ETIOLOGY

Etiologic factors in the production of syphilis were divided into extrinsic and intrinsic. The former included atmospheric and celestial influences, errors in *dieta*, or as it was usually termed, *regimen sex rerum nonnaturalium*. In the course of time these factors were to recede in importance as the real extrinsic cause, a contagious virus, gained recognition. As a result of these various extrinsic factors, there developed certain intrinsic changes resulting in vitiation of the humors and the viscera.

Extrinsic Causes.

I. Atmospheric contamination or miasma.

The ancient Greeks placed but minor emphasis on the transmission of disease from individual to individual. Such transmission was to an extent recognized, but far more stress was placed on physical conditions under which disease originated. What more natural than that Leonicenus, Humanist, devoted to Greek tradition, should see in miasma the cause of *morbus Gallicus*. In his *Libellus* of 1497 he attributes syphilis to atmospheric corruption arising from the havoc wrought by the great floods of 1494. In his opinion, the disease is epidemic in character and has been described by Hippocrates in the aphorism enumerating the ailments prone to occur in summer:

"Of summer diseases, certain of these [spring diseases], and continued ardent, and tertian fevers, most especially vomiting, diarrhoea, ophthalmy, pains in the ears, ulcerations of the mouth, mortifications of the privy parts, and sudamina." [1])

Strange it is that in this aphorism which gives not the least inkling of a disease initiated by a genital lesion and followed by a train of consecutive lesions, Leonicenus should discover the new disease. Half a century later, Fracastor still accepts this miasmatic origin, otherwise he would be at a loss to explain the fact that the disease occurred in epidemic form during the first few years of its existence.

II. Astrologic and theologic factors.

By physicians possessed of enough originality of thought to attempt dissections, short work was made of such hocus pocus, which had already received its death blow from the hand of Giovanni Pico della Mirandola. Falloppius, while not denying that the heavens may exert some influence on health, exclaims: "I do not believe it to be the business of the physician to gaze at the heavens, rather let him contemplate over pots and urinals."

And so with the question of divine origin. Brassavolus bluntly expresses himself: "Why should the Lord pour His wrath upon the debauched, and not on usurers, robbers, cut-throats, blasphemers and murderers, who commit much more serious offenses

1) Adams, Francis. The Genuine Works of Hippocrates. N.Y., Wood, p. 216 (s.a.).

than do those who have intercourse . . . an act natural for everyone."

III. Errors in *dieta*.

In *dieta* we are dealing with a much more important factor in etiology. The term was not used in the present restricted sense. It included regulation of the so-called *sex res nonnaturales*, namely: *aer; cibus et potus; motus et quietes; somnus et vigilia; repletio et depletio (inanitio); passiones (accidentes) animae*. Each of these divisions was discussed in the most meticulous detail. Much of the discussion may strike us as ludicrous today. Yet there is included much surprisingly sound advice, as an example of which I offer a passage from Montanus' *consilium* for the syphilitic Galeotto Pico Mirandola. "Inasmuch as my illustrious lord often travels in France, where it is said to be the custom to parch victuals in the frying pan, and inasmuch as the French eat more bacon and lard than any other four nations . . ." And Montanus goes on to advise his influential patient as to diet under such adverse culinary conditions. He wisely remarks: "There are no two things less reconcilable than an excellent cook and a skilled physician."

Why under discussion of the treatment of syphilis page after page should be devoted to such details seems, at first, puzzling. But when the rôle which ancient and medieval medicine ascribed to *dieta* is appreciated, the reason for such lengthy and minute discussion becomes apparent. Not only might diseases in general originate from neglect of the *sex res nonnaturales*, but by their proper regulation alone, humors could be maintained in or restored to a state of euchymia; in other words, syphilis could be prevented or cured by proper attention to *dieta* alone. The importance assigned to regimen in the treatment of syphilis, especially by the earliest syphilographers, is well expressed by a phrase of Benedictus Germanus: „Errorem in sex rebus nonnaturalibus plus nocere, quam sit iuvamentum medicinarum."

The conception that syphilis might originate merely from neglect of *dieta* is well expressed in a passage from Torrella: "Though it [syphilis] originates for the most part by virtue of contagion, it may, nevertheless, also arise from following an improper regimen . . . It may arise in individuals who consume salty, acrid or bitter food and drink, as was the case of Antonius Marcus,

a Catalonian, doctor of arts and medicine, who was infected in this manner when he crossed the sea. Or it may arise in individuals who do not bathe as usual, or who do not change their clothes, who do without exercise and massage, who take medicines or food prone to draw humors to the skin, who drink old acrid wines, wines which are sweet and have fermented a long time in the sun or near the fire. Especially is this so if the body already suffers from a cacochymy. Likewise it may result from anger or wrath, or a long spell of grief, also exercising before food has digested. Such causes may *per se* induce the disease."

In other words, the disease is not due to a special form of contagium, but to a special form of cacochymy, which may arise from a variety of causes, of which contagion is but one.

IV. The Factor of Contagion.

A. Initial Involvement of the Genitalia and the Rôle of Coitus as Interpreted by Syphilographers previous to 1500.

With two such evident facts as the frequent transmission of syphilis by intercourse and occurrence of the initial lesion on the genitalia, it at first sight seems strange that the connecting link, an infecting virus, should have entirely escaped some of the earliest observers.

For the sake of illustrating these primitive conceptions, I have selected passages from seven of the ten treatises made available in facsimile in Sudhoff's „Zehn Syphilis-Drucke aus den Jahren 1495—1498". In addition extracts from the Spaniard Villalobos (1497) are presented. Passages dealing with coitus are quoted as well as such which attempt to explain the fact that the disease first manifests itself upon the genitalia.

I. Konrad Schellig (1496).

In his "Regimen praeservativum": "Excessive and impetuous intercourse is especially to be shunned, for it drains the body of its strength, weakens the vital organs, and injures the sight, all the joints and nerves, and hastens the onset of old age. Those of a very hot or of a cold temperament should abstain, likewise the hungry and those surfeited with food and drink, those exhausted by labor or who have profuse evacuations, whether in the form of a bloody flux, diarrhea, vomiting or abundant sweating. In this disease, frequent and excessive intercourse should be

avoided inasmuch as it diverts the corrupt matter to the outer parts of the body, and impels the hot foul vapors to the surface of the skin, whence the fetor of the body, mouth and gums is generated, the itching and eruption are intensified. For this reason, those indulging in excessive intercourse appear fetid and scabrous. The healthy, the married, those accustomed to the act, may practice it in moderation at this time, provided the urge is spontaneous and not artificially stimulated [1]). The most suitable time for coitus is following the completion of the first and second digestions, in other words, in the morning toward dawn. Coitus should be followed by repose and sleep."

And in his „Regimen curativum „there is merely the brief admonition: „Coitus omnino dimittat."

2. Joseph Grünpeck (1496). In the German edition of this year there occurs the following admonition regarding intercourse:

„Zum fünfften solt die speise mit essig gemacht oder gemüschet sein. Zum sechsten solt man sich enthalten von den frauwen wann [denn] diese krankeyt leycht darvon erwecket wird. Zum sibenden solt man das pyer [Bier] vermeyden."

And for his explanation as to why the disease first appears on the genitalia: "Dise materien arbeytt die natur ausszetreyben und schlecht [schlägt] sy hinab zu der schame; wann [denn] das zeychen scorpionis, in dem die coniunction geschehen ist, hat gewalt über die schem."

3. Nicolaus Leonicenus (1497).

In his very definition he emphasized the occurrence of the first manifestations on the genitalia.

"*Morbus gallicus* consists of pustules springing from various types of corruption of the humors, caused by extreme intemperance of the atmosphere, especially of its heat and humidity; it first involves the genitalia, then the rest of the body, frequently with excruciating pain."

1) This is an old conception. Moses Maimonides, who considers coitus properly practiced as strength to the body, life itself, light to the eyes, but when abused, as consuming the body and crushing life, thus expresses it: „When erection occurs in a natural and unconscious manner, and when after directing one's thoughts to other subjects one feels the erection persist, ... then one needs to have sexual intercourse and it is hygienic to perform the act." (Principles of Physical and Moral Health of Man).

And to find an explanation why the disease first involves the genitalia, he takes down his well-thumbed copy of the "Aphorisms" with their "Commentaries", and comes to Galen's discussion of the aphorism listing diseases prone to occur in summer. Here he finds a satisfactory answer. Galen in commenting on the genital ulcers prone to occur during this season explains:

"Even slight alterations in the atmosphere affect the genitalia inasmuch as these parts, because of their heat and humidity, are by their very nature prone to putrefy from the most trivial cause. Accordingly when summer has attained its maximum heat, those individuals suffering from an excess of humors, are afflicted with putrefaction of the genitalia, for such excess humors will have flowed to these organs."

And the venerable professor of Ferrara, having perhaps an inkling of the lameness of his argument, exclaims: "If anyone thinks he is wiser than Hippocrates, let him explain *morbus gallicus*!" and not a word about coitus in his entire treatise!

4. Gaspar Torrella (1497). To begin his definition, he "baptizes" the disease *pudendagra*, inasmuch as it commences on the genitalia. Throughout the theoretical portion of his treatise, he makes but one mention of coitus and that is under treatment where he states syphilitics should abstain from intercourse for it has a tendency to divert humors to the external parts. And he repeats the centuries old belief that, during the act, a vapor passes to the outer parts, thus causing the fetid sweat so characteristic of coitus. Not a word as to infection by coitus. Everything is discussed in good scholastic fashion with meticulous citation of his authorities and a generous dash of religion is added by this physician who served the Borgias and was himself to be rewarded with the mitre. Coming to the end of this section, he apparently heaves a sigh of relief, for he compares himself to the weary sailor who at last sights the longed for shores. He then proceeds with the practical portion of his treatise, the *consilia* or case reports, and immediately commences his first history in the following fashion:

"Nicolaus, a youth of Valencia, very dear to me, nearing his twentyfourth year, of a sanguineous temperament tending to

choler, had intercourse during the month of August with a woman suffering from *pudendagra*, and was infected with the disease on the very same day."

And in his next *consilium* he warns that intercourse be shunned by syphilitics as much as possible, at least for the time being. Should this be impossible, it should at least be practiced with a healthy woman, or after food has been completely digested. A statement in Torrella's *consilium* for the youth Nicolaus, to whom he shows so much deference and whom Sudhoff surmises to be no other than Caesar Borgia, son of Alexander VI by his mistress Vanozzo dei Cattani, is of interest. To this youth, who asks why he was infected by a single exposure to a syphilitic woman, while on the other hand he failed to infect various healthy women though he cohabited with them on numerous occasions, Torrella has a ready answer:

"I told him he should not be astonished at this. For men are hotter in temperament than are women and have pores in their genital organs to receive the infecting vapors emanating from the womb. Accordingly, intercourse with an infected woman is to be avoided. Women, however, are colder in nature and are infected only by frequent exposures, for the womb is cold, dense and dry and little susceptible to disease. The semen, moreover, is quickly discharged from her [on arising] and even should she remain quiet, is eventually rendered harmless, etc."

And the final abbreviation, which actually occurs in Torrella's text, is highly significant inasmuch as it indicates that he is merely resurrecting ancient doctrines from sources which any contemporary physician would recognize and is applying them to the new malady.

5. Johann Widmann (Meichinger, Salicetus) (1497).

Under *De cura*, where he discusses *animi accidentes*, the sixth division of the *sex res nonnaturales*:

"Since it is the custom of many to associate coitus with mental states, though it can be considered under exercise, we ought to say of it in this place briefly, that coitus, especially frequent coitus, ought to be avoided in all corrupt states of the atmosphere, as Constantinus (Africanus) states; the reason for this is that it saps the bodily strength (omnes virtutes), and has a powerful

dessicating action, also diverts corrupt humors to the skin, as is stated in the seventh (fen) of the fourth (book) (Avicenna's Canon) where it treats of *scabies* and *pruritus*. It seems to divert these humors especially to the genitalia, because of the vigorous concussion affecting these parts. Whence it may be that the present disease frequently manifests itself in these organs first. It is true that in youths and in idle old men, in those following a rich diet, and in those accustomed to intercourse, it is not entirely forbidden, provided it is done according to law, and if it is practiced according to the instructions of Galen in the third chapter of his *Tegni* (Ars parva), namely, when the body is not too replete nor too depleted by evacuations (inanito), and at such intervals, that the body after its completion, feels the least possible exhaustion, and seems lighter and enjoys sleep more. Practiced thus, it refreshes the spirit (animam dilatat), because it expells the corrupt melancholic vapors and discharges the sperm, which otherwise would accumulate and become corrupt by its being retained and held under tension, and in this manner coitus will prevent those serious consequences, mentioned by Haly Abas and other older writers. Practiced by other types of individuals and at other times, it does the greatest injury for reasons already given. In order to avoid the risk of infection, beware above all things of having intercourse with an infected woman (*mulier pustulata*) or with a healthy woman who, a short time before, copulated with an infected male. Experience has taught that the individual who follows freshly in the shoes of an infected male will himself be infected. For this reason shun prostitutes."

6. Conradinus Gilinus (1497—8?).

Under "De praeservatione":

"Above all I wish to emphasize that this disease is contagious and I warn most emphatically against mingling with men or women suffering from this foul disease, above all not to have intercourse with such for I have seen many infected by this means and suffer the greatest agony."

And under "Circa curam":

"Coitus does much harm except in youths of good complexion or in those accustomed to practice it".

In answer to the question why the disease commences on the genitalia, Gilinus has recourse to a section of Galens "*de ingenio sanitatis*" in which it is stated that cancer originates from a foul matter in the blood similar to the dregs of wine or oil. Since the matter is coarse in nature, it passes to the loose, softer tissues rather than to the denser and accordingly the disease frequently occurs in parts so constituted. And with the additional statement of Avicenna that cancer frequently involves the less solid organs, the testicles, the vulva, the anus and lips, he believes the question answered. Why should not syphilis, *passio gallica*, for a similar reason be prone to commence on the *membra pudia*?

7. Bartholomaeus Steber (1498).

In the treatise of this Viennese professor there is not once mention of intercourse. To the question, "Quare primum circa pudenda pustulae appareant?" he answers:

"It is because of the large size of the channels surrounding the seminal vessels, which ramify immediately upon arising from the emulgent (renal) veins and artery. Notwithstanding their winding course, corrupt matter is propelled through their wide spaces or in the surrounding parts because of the great heat; indeed not halting there, but continuing to the penis and other parts of the genitalia, a spongy region, ready to receive the urine as well as superfluous humors. For a similar reason it involves the throat, which because of its spongy texture, so receptive to humors, is certain to be affected."

8. Francesco Lopez de Villalobos (1498) [1].

Chapter xxxvi. Why the disease commences on the genitalia:

"...This is because the liver provokes buboes to form in the groin, whence the disease advances to the surrounding parts, only too disposed to receive it, their flesh being soft and prone to disease. Should it not originate in such a fashion, it may come by way of the urine, which carries from the liver the corrosive humors producing the ulcer."

Chapter xxxvii. Why the disease involves the genitalia such a long time before the rest of the body:

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1) Francesco Lopez de Villalobos. Sur les contagieuses et maudites bubas. (Original Spanish and a French translation) by E. Lanquetin. Paris, 1890.

"Attacked by the disease, the liver undergoes alterations, becoming hot and dry. Its humor becomes adust [1]) and very thick. At first, however, the consistency of this humor is such that it cannot be expelled. Exhausted and corrupted by this humor, the liver impels it through various other channels before the humor passes into the veins. And that is why the disease begins on the genitalia before manifesting itself in other regions."

Coitus is mentioned in chapter lxix, where, under instructions as to *dieta*, he warns to avoid women (*que huya manjares*). He agrees with the theologians that the disease arises from the debauchery of the times. In view of the fact that it is the guilty organ that suffers in this disease, he marvels at the justice of the proverb: "Qual es el pecado tal la penitencia".

Discussion. In the works of these eight syphilographers, there is to be sure a hodgepodge of explanations as to the relation of coitus to the disease and as to the occurrence of the initial lesion on the genitalia. For the most part their ideas originate from Graeco-Roman and Arabian medicine. There is little originality of thought, and even some of the statements, which would seem to show that they were grasping the relationship between coitus and the occurrence of the initial lesion on the genitalia, when carefully scrutinized, are discovered to be mere adaptations from old tracts on plague and leprosy.

The layman Grünpeck blames the evil influence of Scorpio with its tendency to cause "impediments in the secrets or privy members, as running of the reins, the French Pox, stone, or gravel . . ." The most frequently offered explanation for the initial involvement of the genitalia entails the peculiar structure of this region, supposedly encouraging excessive and corrupt humors to be shunted into them. Thus the pudenda and surrounding parts were dubbed a *cloaca* for the rest of the body.

Admonitions for the prevention of aerial infection are blindly copied from old tracts dealing with leprosy and plague. Thus Gilinus warns: "Maxime vitandus est aer veniens abs infecto et etiam habitacio et mora cum eis." And Widmann repeats the

1) Adust, applied to a perverted state of the blood, resulting from dessication with evaporation of the thinner elements.

warning of Rhazes in his "Ad Almansor": Avoid wind blowing from the direction of the patient, especially when the sick have ulcers (alcola) in their mouths and their breath is fetid."

Torrella supposes the disease to enter the body by way of the pores on the genitalia in the form of a vapor. This conception of a *vapor* or *flatus* as the infecting principle is in general accepted by the syphilographers of the next century. Even Fernel, who has such a clear understanding of the origin of the chancre at the site where a fixed virus is deposited, still explained gonorrhea (the doctrine of identity was then universally accepted) as due to a vapor which entered the urethra and ascends to corrupt the blood in the vena cava!

Of great interest are the conceptions of Widmann. Closely following upon his admonition to abstain from intercourse in a corrupt atmosphere, thus introducing the old idea of miasma, we come upon his warning against intercourse with a syphilitic woman or with a healthy woman, who, a short time before, has had intercourse with a syphilitic male. At first glance we are apt to credit Widmann with having considerable insight into the role of an infecting virus. Here is an excellent illustration of the pitfall which confronts one when a passage is scrutinized under the light of present day knowledge. There is nothing original in this statement of Widmann. The identical admonitions are found in Arabist treatises, in Bernard de Gordon and in Henri de Mondeville, in sections dealing with the etiology of leprosy. Widmann, in scribbling off this old stuff, merely conceives of coitus as tending to produce a cacochymy just as the consumption of improper foods might do. And to bear out this contention, we find Widmann complicating his etiology by a strange piece of folklore. All pork is to be shunned, especially from pigs infected with pustules, for in numerous instances he has found the eating of such flesh to be the cause of the disease. Possibly Widmann has confused syphilis with trichiniasis, with its myalgia and occasional dermatosis. His countryman, Ulrich von Hutten, expresses the same thought: "I recall that the eating of peas was forbidden in certain regions, because it was believed that winged worms grew in them, whence originated the disease. Likewise pork was forbidden, for the pig, more than all other animals,

suffers from pustules identical with or very similar to those occurring in this disease."

B. Subsequent Conceptions as to Infection; especially as to the Role of Intercourse.

It remained for the syphilographers of the new century to establish the role played by a contagious virus. Vella and de Vido (1514) well realize the part played by contagion. By 1500 the possibility of aerial transmission of syphilis had been discarded. Two modes of infection were recognized, mediate and immediate.

Mediate Contact. The exaggerated fear of such a mode of transmission was unquestionably justified. Witness the epidemics which cropped up from the unclean instruments used by surgeons and barbers in bleeding and cupping. Thus the fear of infection spread to the wearing of clothing of syphilitics, use of their utensils, sleeping in their beds.

In the course of time the exaggerated fear of mediate infection subsided to a saner level. Brassavolus even allows himself to be swung too far in the opposite direction. Though he has serious doubts as to the actual occurrence of such a mode of transmission, he is not adverse to using caution:

"No one has observed the disease to be transmitted except by coitus, kissing or nursing. Yet I would not live with a syphilitic having an eruption (scabies), nor would I drink from the same cup, nor eat from the same dish, nor use the same napkin to wipe off my lips. Yet I have never heard or known of anyone to be infected by ordinary intercourse (conversatio) alone." And then follows a strange piece of clinical observation: "I have observed that those who live and mingle with infected individuals, should they subsequently become infected and develop a syphilitic eruption, are cured only with the greatest difficulty. They seem to have contracted some malignant disposition from long association with an infected individual."

A passage from Bernard Tomitanus illustrates the gradual development of more rational conceptions as to the danger of mediate infection. He states that at one time those individuals with the telltale symptom, alopecia, were shunned, women scorned their embraces, at dinners they were given special seats and

separate utensils for food and drink. However by his day (ca. 1560) such precautions were no longer exercised, and no one longer feared infection from dining with such individuals.

Possibly Falloppius[1]) was regaling his pupils with another of his pleasantries when he tells of individuals who were infected by putting on breeches previously worn by syphilitics. He (slyly?) states that such a mode of infection was common in the time of his fathers, some twenty years ago, when it was not so much the custom to have garments repaired and cleaned by Jews. He has known some, after being cured of the disease, to become reinfected upon putting on their old shoes.

Direct contact

a. By bodily emanations.

That good or bad qualities could be absorbed by bodily contact is an ancient belief. The fair damsel Abishag was brought to the old and stricken David to lie on his bosom and bring him heat. So it was conceived that disease could be transmitted in a similar fashion. Thus in syphilis, infection was thought to occur as the result of effluvia issuing from the genitalia, the mouth or the skin, especially from the latter if the infected individual were affected with *scabies gallica* (secondary syphilides).

Massa believed in infection by "aer per os inspiratus." Matthiolus explains *morbus Gallicus* without genital involvement in two ways: the infection passes directly to the liver gaining entrance through the lax pores during intercourse or it is inspired during the act of kissing or embracing. A strange piece of advice is given by Rondelet to those who would escape the disease. Intercourse is to be completed as rapidly as possible, without kissing and with heads turned aside.

b. By a fixed virus.

This true method of transmission will be subsequently discussed,

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1) It must be borne in mind that Falloppius' De *morbo gallico* was really a posthumous work based on his lectures. The same holds true for Montanus' work of similar title. Falloppius, in his criticism of the teachings of Montanus, in all fairness to his colleague, remarks: "Ideo oro vos ut non imponatis illi viro, quae olent artis ignorantiam, quae est elegantiam, et ingenium acerrimum, et peritiam sapiunt sua dicito, quae minus, pedagogis illis qui noctuae turpes magnanimam in cathedris aquilam representabant, imponis".

especially in connection with the pathologic conceptions of Fracastor, Fernel and Falloppius.

Intrinsic causes:

These various extrinsic influences, acting upon the viscera and the humors, produced certain intrinsic changes, which gave rise to the lesions of the disease. In a disease with such a wide variation in type of lesion and in region involved, it was a difficult task for our early syphilographers to agree upon any one peccant humor or on involvement of any one viscus as the pathologic basis of the disease. A disease so eminently polymorphous in its manifestations could be ascribed to the corruption of any one of the four humors or vitiation of any one of the vital organs.

In general, the liver, the fountain from which the blood flowed, actually considered a mass of coagulated blood, was held to be the viscus primarily involved, the so-called *minera* or *officina* (Massa, Montanus). Some pictured the liver and brain as involved simultaneously (Aquilinus, Vella, Hock). The more commonly accepted scheme recognized a hot, dry (or some other combination of the four temperaments) state of the liver resulting in vitiation of the blood, the brain becoming involved secondarily. The following passage from Fernel well illustrates such a scheme:

"Should the virus originate from the moistening of the parts with corruption during intercourse, it will at first give rise to pustules and obstinate ulcers of a malignant character. Should a vapor or subtle virus enter by way of the urethra (it is inconceivable that a liquid virus could penetrate the canal), it will vitiate the blood in the vena cava and the spirits contained in the aorta. Then a bubo developes in the groin. As a result of involvement of the spermatic vessels and the kidneys, there develops a gonorrhea, in which the foulest of viruses is discharged. At this point, when the hideous disease invades the liver and stomach, a mild diarrhea annoys the patient. Presently, when the blood in the liver becomes corrupt, resulting in involvement of all the veins, and dissemination of the virus throughout the ligaments, skin and muscles, the dormant scourge, repressed up to that time, erupts. Livid reddish pustules break out, together with crusted sores and herpes. In some there occur excavated

ulcers of a malignant nature; in the bilious, the ulcers are eating and phagedenic; in the melancholic, cancerous; in the phlegmatic, shallower but more foul, discharging an offensive mucus; in the sanguineous the ulcers more frequently assume the form of carbuncles. Should these ulcers with their hard, projecting, irregular edges eat away the flesh, they then consume the bones, first the more delicate ones as those of the nose and palate, then the more solid ones, which in the course of time, becoming foul and carious, slough away. When the disease attacks the brain, the loftiest citadel of the body, there of necessity accumulates an excess of phlegm out of proportion to the needs of the organ. This phlegm, if confined within the cranium, provokes intense headaches. If it extends outward under the scalp, or is dispersed to the joints or ligaments, it causes unyielding and excruciating pain, which for the most part exacerbates at night; or it gives rise to hard tophi or scirrhous tumors, likewise painful."

A third viscus is at times considered instrumental, in part at least, in causing the cacochymy. Due to obstruction of the splenic veins, the spleen fails in its function of ridding the blood of its impurities (*atrabilis*, Widmann; *terrestris foeculentia*, Maynardus). Torella, repeating an old phrase, has the spleen in syphilis attract the adust humors resulting from the dyscrasia of the liver by a peculiar selective action, similar to the delight of a dog in eating feces. Ulsenius names it a *faecalis lien.*

For the most part the blood and black bile (melancholia, atrabilis) were incriminated. Gilinus, who strangely identifies syphilis with *ignis Persicus* of the ancients, thought yellow bile (bilis, flava bilis) mixed with black bile the peccant humor. A few (Béthenconrt, Massa, Fracastor, Rondelet) attributed the disease essentially to an abnormal phlegm (pituita, phlegma).

In the treatment of syphilis as of diseases in general, the essential aim was to evacuate the excessive or corrupt humors and thus restore a state of harmonious blending of pure humors, a state of euchymia. The normal body made use of natural channels to protect the vital organs from an accumulation of waste products, such as the sweat, the stools, the urine, the menses, etc. But in the emergency of disease, nature produced new channels by which the corrupt matter could be discharged.

Such channels, designated as unnatural "emunctoria," varied according to the organ to be relieved. Thus the skin served as an emunctory for the whole body, the cervical, axillary, inguinal glands served as emunctories for the brain, heart and liver respectively. A passage from Paracelsus well expresses the idea of emunctories:

"Den zweierlei seind emunctoria in allen dingen, natürlich und unnatürlich, die natürlich werden selten zum krankheiten gebraucht, sonder allein zu der teglichen reinigung des egest, so sich im leib natürlich samlet. dieselbigen geben die lange gesundheit und so derselbigen eins verstopft oder gehindert wird, alsdan folgt hernach, das du demselbigen emunctorio zu hilf komest. aber in den krankheiten ist es nicht also, dieselbigen haben unnatürliche emunctoria und werden doch natürlich erfunden in baum der krankheiten. dan wie die krankheiten unnatürlich seind, also unnatürlich machen sie auch ire emunctoria so ist es auch natürlich, das krankheiten werden, auch ist es natürlich, das sie emunctoria haben, durch die sie ausgen [1])."

In the case of *morbus Gallicus*, there were two unnatural emunctoria, two pathologic channels of evacuation of momentous importance, gonorrhea and suppurating inguinal adenitis. So enlightening are they in the understanding of pathologic fluxes that I have listed references to these emunctories chronologically as they occur in treatises on syphilis [2]).

Nicolaus Massa (1532): Very often there occur ulcers of the penis, malignant in character, with a cartilaginous induration (duritie callosa), which are slow in healing, . . . Swellings (apostemata) in the groin follow, which, should they suppurate, remove the disease, especially in its incipiency, for the inguinal glands

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1) Sudhoff's Theophrast von Hohenheim gen. Paracelsus Sämtliche Werke, Bd 3, p. 244.

2) Proksch attributes to Paracelsus the statement: "Ideo was ausschlecht und räudig ist, non facit Bubonem, sed was nit ausschlägt, attrahit quicquid in membris pruriginosum". However Proksch comments: "Aber Paracelsus sagt dies Alles noch nicht unter seinen vielen Schriften über die "Frantzosen", sondern in dem Buch von offnen Schäden und Geschweren, Syronen, etc. der Huser'schen Folioausgabe der chirurgischen Schriften". I have been unable to discover this passage in Sudhoff's edition of the genuine writings of Paracelsus.

are emunctories of the liver, through which is expelled the matter, which induces the vitiated state of the liver.

Antonius Gallus (Antoine Lecocq (1540): At times it happens that the poisonous matter breaks forth in the inguinal region in the form of a hard swelling (vomica), which encompasses and walls in these glands, called *adenas*, as if to hem them in. Often it is a good thing if the mass suppurates, for in this manner (as the saying goes) the liver purges itself, provided all the foul matter is ejected at the very outset of the disease and the opening of the abscess remains patent for a long period, as in the case of poisonous bites. If the poison is again repelled to the liver, then it is certain that the disease [syphilis] will not be averted. Some call this condition "chancrous bubo" (cancrosum bubonem), others call it *pulain*, making a wretched jest at the expense of those afflicted with this evil, inasmuch as they walk with their shanks spread apart, as if astride a little nag [1])."

Antonius Musa Brassavolus (1551): "It happens at times that at the very outset of the disease, buboes develop in the groin. Then care should be taken not to apply substances which will disperse the material to the liver and thus contaminate the whole body. Accordingly those who apply the cerate of *Marchasite* [2]) and substances of similar action, expose themselves to criticism. Applications should be made which attract the diseased humors and cause the bubo to mature."

Thierry de Héri (1552): "Bien est vray, que les plus certains signes de la vérole sont, quand après ou pendant les ulcères des parties honteuses (specialement calleux et durs en leur racine) s'apparroissent tumeurs aux aynes, qui s'en retournent dedans le corps sans suppurer ... S'il survient un bubo, en bref l'ulcère

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1) Joannes Sylvius (1557) has a slightly different version: "Bubones nunc in dextro, nunc in sinistro, saepe in utroque inguine insurgere percipiuntur, quos Galli caballos (nags), in re tam seria ludentes, appellitant, propterea quod quem bubones invaserunt, is insidere nequeat, nisi divaricatis tibiis, ut caballo insidere videatur". De Blegny (1692) has the name *poulains* derived from the gait of the nags themselves: Mais le vulgaire les nomma Poulains, à cause (comme je croy) que ceux qui les portent paroissent aussi peu asseurez en marchant que les jeunes Chevaux qui ne sont pas habituez au travail.

2) Composed of mastich, wax, storax, oesypum, opobalsum, oils of nard, of gleucinum, of unripe grapes, stag's marrow, turpentine.

sera curé et guary et sera le patient exempt de la vérole par la méthodique et bonne curation dudit abscez. Maints ont ulcères, cacoeths et malings qui toutefois n'ont pas la vérole."

Gabriel Falloppius (before 1562): "In the incipient stage of every bubo, two purposes should be kept in mind. Take care not to impede the discharge of matter, encourage it, for this is a malignant, contagious material, and experience teaches that youths suffering from buboes, if entirely cleansed of this corruption (a process analagous to a natural evacuation), are cured without medicines. All repellent remedies only fix the disease fast in the viscera. Never at the onset of the bubo should phlebotomy be practiced nor should a purgative be administered, never should a repellent medicine be applied locally to the bubo. By bleeding, the corrupt matter is drawn inwardly, the same result is brought about by drastic purgatives . . . never do I bleed unless the bubo has matured."

Leonardus Botallus (1563): "Menses are protective provided they commence not more than eight or ten days following the infecting intercourse. Males, infants, nurses are never restored to health by any similar natural evacuation. They have no channel through which the corrupt matter (*squalor*), once acquired, can be ejected from the infected part, as for example from the vulva, unless there should occur [a pathologic evacuation, such as] dysentery, frequent bleeding from hemorrhoids, a prolonged gonorrhea, *good fat* buboes (so I dub them), or profuse sweating as occurs in cooks etc."

Discussion. Here we are dealing with observations indicating a considerable degree of clinical acumen. In view of the fact that gonorrhea was considered a symptom of *morbus Gallicus*, it is only natural that abscense of manifestations of generalization in the form of secondary and tertiary syphilides should be ascribed to the cleansing action of the discharge. Our syphilographers still believed as did Aretaeus the Cappadocian that the discharge was a *profluvium seminis*, a flow of semen "running as if through dead parts, stopping not even in sleep."

Of lympf glands, three chief groups were recognized, cervicals, axillaries and inguinals, each of which supposedly served as emunctories to which could be shunted excessive or corrupt

humors from a vital organ, the brain, the heart, the liver respectively. In case of disease of one of these viscera, its dependent glands might become involved. As has been stated, the liver was considered the seat of the disease, the so-called *minera*; hence the inguinal adenitis. Indolence of the adenitis in the case of syphilitic chancre was held to be the ineffectual effort on the part of the liver to throw off contamination, hence generalization, or in the language of the day, *morbus Gallicus confirmatus*. Suppuration of these glands, "nice fat buboes", so welcome to these early syphilologists, meant successful discharge of the vitiated humors and abortion of the disease. This apparently aborted syphilis is our chancroidal infection.

Such was the crude theoretical pathology upon which the earliest dissectors of syphilitic corpses had to base the explanations of their findings. Laboring under such a cumbrous load, little wonder their efforts seem crude to us.

Dissections of Syphilitic Corpses.

With the great interest prevalent in both normal and pathologic anatomy, it is not surprising to find that autopsies or *anatomiae* were frequently performed on syphilitics.

Material for dissection was derived chiefly from three sources. In part it consisted of executed criminals, chiefly with normal findings. An autopsy mentioned by Georg Vella is on a syphilitic who had been incarcerated over a long period, though no mention is made of eventual execution. Other material was obtained by means of clandestine disinterment, in which case the history of the disease causing death would in general be unknown. A third source was material obtained by permission of relatives and friends and in such instances the clinical course of the disease and the postmortem findings could be correlated. Such was the source of the syphilitic corpses in *anatomiae* mentioned by Vesalius and Botallus.

Of interest in connection with autopsies on syphilitics is a statement by Falloppius which indicates the disrepute in which dissections in general were held by the populace, even in Italy, where they were most frequently performed. He states that among the first to use mercury was Jacobus Carpensis (Berengario da

Carpi), famous surgeon, who amassed an immense fortune by treating *morbus Gallicus*. At Bologna he is said to have aroused the ire of the Spaniards by delivering two of their number who were syphilitic into the hands of the anatomists to be vivisected, and for this reason was compelled to flee. Benvenuto Cellini explains his flight as due to recurrence of the disease in worse form than before treatment. The fact is that Vesalius and Falloppius were likewise charged with vivisecting humans. In his "Commentaria" of 1521, Berengario gives a probable explanation for this accusation, where he states that his so-called "anatomiae in vivis" were in reality "anatomiae fortuitae", i. e., necessary surgical operations which afforded an opportunity to gather anatomic knowledge.

Pathologic investigations on syphilitic corpses during the period extending from 1497 to 1563 may be conveniently classified into four categories according to certain prevalent conceptions which they were supposed to support or refute:

1. The actual occurrence of visceral lesions.
2. The role of the liver in syphilis.
3. The role of the phlegm or pituita.
4. Absorption of mercury and its relation to bone necrosis.

I. The Question as to the Occurrence of Visceral Lesions.

Naturally the attention of the early syphilographers was chiefly focussed upon cutaneous and osseous lesions. There was however considerable speculation as to the possibility of visceral involvement.

In the "libellus" of Leonicenus, published in 1497, there is mention of dissection of a syphilitic corpse. As previously stated, his primitive symptom complex consisted of *pustulae* and *dolores*. However, he has no reason to doubt the occurrence of internal lesions. Does not Galen state that the viscera are not to be considered so adamant against disease that they cannot be injured by the same poisons which affect the outer parts? In fact abscesses have actually been found in the inner structures of a syphilitic at autopsy.

"Several physicians, in order to investigate the disease, dissected the bodies of individuals, who during life suffered from syphilis. Their findings were in accord with what common sense and reason would lead one to expect [i. e., abscesses]."

Inasmuch as Leonicenus does not divulge the source of his information, it is impossible to state whether he refers to published accounts, or to unrecorded autopsies, of which there naturally were many. The anatomic theater at Padua was founded in 1490. Indeed it may be that Leonicenus has in mind the very founder of this famous theater, Alexander Benedictus (Allessandro Benedetti), chief physician to the Venetian forces in the war against Charles VIII, professor of anatomy and the practice of medicine at Padua, who in his *Anatomices humani corporis Libri V*, also published in 1497, expresses his astonishment at finding internal abscesses in a syphilitic corpse. "Abscessus innasci mirum est." The details of this autopsy will be subsequently given. Of Benedictus, Astruc says: "Primus est omnium, quos novi, qui dissecuerit eorum cadavera, qui ex lue venerea aegrotaverunt." Benedictus appreciates the value of postmortem examination in solving the perplexities of obscure diseases. In his "Anatomices" he remarks:

"In the case of death from unknown causes, physicians of former times performed autopsies in order to investigate the early changes of diseases, so that under similar circumstances they might render aid to the living. When the cause of death was unknown, Galen was not ashamed to dissect monkies, just as we now dissect syphilitics."

Leonicenus, venerable teacher and Humanist, exerted far-reaching influence on the medicine of his day. Though he did not entertain the possibility that Hippocrates or Galen could err, he dared to find a whole volume of errors in Pliny's *Natural History* [1]) and then had the brazenness to direct his attack against Avicenna, whose *Canon* had been a treasure-house of knowledge for the medieval physician, and in part a textbook for every medical student. A defender in behalf of Avicenna was not tardy in raising a voice of protest in the person of Natalis Montesaurus of Verona. The latter in turn was attacked by Antonius Scanarola of Modena, pupil of Leonicenus and his successor at Ferrara. He finds fault that Montesaurus should

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1) Nicolaus Leonicenus. Plinii ac plurimum aliorum auctorum, qui de simplicibus medicaminibus scripserunt, errores notati. Ferrarae, 1492. (First complete edition, Ferrarae, 1509).

recognize in *morbus Gallicus* two distinct diseases, *bothor* [1]) and *dolor*. Like his teacher he cites Galen to the effect that a single disease may cause lesions simultaneously in both outer and inner parts of the body and maintains that in syphilis "pustules analagous to those involving the external parts may occur in the inner structures. In fact they have actually been found at autopsy in tendons and in joints."

On the other hand, Petrus Trapolinus (d. 1509), a contemporary of Benedictus at Padua, where he was for an extended period professor of philosophy and the theory of medicine, a celebrated physician in his day, who suffered the tragic fate of having most of his life work destroyed by vandals sacking his home, and whose surviving writings remained in manuscript some sixty years before being published posthumously, doubts whether the pains are due to an actual lesion (solutio continui) of the inner structures.

"Nec credo verum esse, quod dolor ille sit accidens apostematis intrinseci, cum nulla ibi sint apostemata, nulla tumor in membris appareat, quae tamen membra sunt valde extenuata, ut experientia docet, & facta Anatomia, nulla intrinseca apostemata apparuerunt, . . ."

As would be expected, it was from the universities of Italy, especially Padua and Ferrara, where unusual facilities for performing sections were available, that most of these *anatomiae* on syphilitics were performed. It is not surprising that these autopsies should be mentioned by German physicians for students swarmed over the Alps to attend the famous Italian universities. Otto Raut [2]) of Ulm, whose treatise appeared in 1501, in a passage clearly originating from Leonicenus, writes as follows:

"Syphilitics having no pustules on the surface of the body, may have such lesions within, associated with great pain. Indeed certain Italian physicians, as is the custom in that country, in order to investigate the disease, dissected the bodies of individuals, who during life had been afflicted with syphilis, and found this to be a fact."

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1) Bothor, the Arabic equivalent for the Latin *pustulae*.

2) Otto Raut. Prognosticum et digressio de malo Franciae (1501) In: C. H. Fuchs. Die ältesten Schriftsteller über die Lustseuche in Deutschland etc., Göttingen, 1843.

Alexander Seitz [1]) (Sytz) of Marbach, who studied from 1488 on in Como, Padua and Rome, likewise remarks in his *Nützlich regiment wider die bosen frantzosen,* published in 1509, on the findings of Italian physicians on sectioning syphilitic corpses: "So verzehrt die natur das zartest und von dem übrigen getorten inwendig frantzosen gemacht werdent, alls ich vilvaltig in welschen landen [Italy] in doten vffgeschnitten menschen gesehen hab."

In France, Jean Fernel was an enthusiastic dissector. In his *De abditis rerum causis,* he well expresses the high value he places upon pathologic investigations: "I have reached the conclusion that no disease will ever be thoroughly investigated and understood, until one has discovered, indeed seen with one's own eye, what abnormal changes occur in it, whence it springs, whether it has its origin in this organ or proceeds from some other, whether some inner cause nourishes it."

And as to Fernel's visceral findings in *lues venerea:*

"Not only does it involve the outer parts, which are exposed to view, but also the inner parts, the viscera themselves, which at autopsy are found corrupted by pustules and ulcers". And subsequently in speaking of treatment: "Its cure is most difficult when it has become confirmed, when it manifests itself by caries of the bones and erosions of the cartilages. At which stage of the disease, there develop in the viscera many ulcers and tubercles, as I have observed in sectioning the corpses of syphilitics".

Vesalius makes mention of visceral lesions in syphilis in his letter *De radice Chynae* to Joachim Roelants, in which are described his experiences with this root, which had been much lauded because of its reputed miraculous cure of the Emperor Charles V (gout?). On the first occasion Vesalius saw the root used, it had been brought from Antwerp by a charlatan who claimed to have used it with good success in Portugal. Owing to the malignant form of the patient's syphilis, treatment was carried out in a half-hearted fashion, the fellow being satisfied to pretend at provoking a sweat. On examination of the viscera at the instigation of relatives and friends, such extensive lesions

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1) Alb. Moll. Doctor Alexander Seitz aus Marbach und seine Schrift über die Lustseuche im Jahre 1509. Stuttgart, 1852.

were found that it seemed inconceivable that life could have been prolonged as it had been. Unfortunately Vesalius gives no details of the autopsy.

2. The Liver in the Early *Anatomiae* on Syphilitics.

A finding in an early autopsy by Alexander Benedictus (1497) seemed to support the contention that a visible change occurs in the liver of syphilitics. "In a certain Roman youth of patrician family infected with morbus Gallicus, almost the entire tunic covering the liver was found to be eroded, though the condition had given rise to no symptoms during life."

Inasmuch as the lesions of syphilis, especially its generalized rash, pointed to a corruption of the mass of blood, it was the liver, the fountain from which sprang the blood, which was in general conceded to be the organ in which the disease had its origin, the so-called *minera* or *officina*. There was however much controversy whether or not the humoral changes occurring in the disease were such as to produce a demonstrable change in the viscus, in the medical language of the day, a *solutio continui*, a *soluta unio*. And it is in the solution of this problem that the interest of many of these *anatomiae* is centered.

Joannes Baptista Montanus, upon wholly theoretical grounds, insisted that the essential change in syphilis was a *solutio continui* of the liver. Two passages from his *De morbo gallico* are here quoted, inasmuch as they bear the brunt of attack from subsequent syphilographers, especially Falloppius and Botallus.

"At quae natura est istius morbi, quaeve essentia? Dico quod est mala intemperies calida, et sicca in hepate per contagium impressa. Verum quia mala intemperies potest esse cum materia, et sine materia, dico, quod prius haec intemperies est sine materia, postea procedente tempore fit cum materia, ac *solvit continuum*, et acquiritur per contagium, cum quis commercium cum infecta habuerit, ab illa enim emanat aliquod virus, in quo existit illa mala et venenosa qualitas, quae figitur vel in ore, vel in praeputio, quae membra sunt laxiora, et magis apta ad recipiendum haec venenosam qualitatem, quae cum ibi est jam impressa, paulatim repit ad venas parvas, deinde ad majores, donec hepar pertingat, quae cum eo pervenerit, ipsum occupat, immutatque ejus naturalem intemperiem, quod hepar

postea sic alteratum primo adurit omnes humores in eo existentes, qui transmittuntur ad omnes corporis partes pro nutrimento, . . ."

And again: "Quod etiam sit materia calida et sicca, cum adustione, declaratur, quia istorum ulcera curantur cum iis [medicaminibus], quibus medemus ulceribus adustis. quod quidem ulcus venis primo parvis paulatim, deinde majoribus transmittit suam malam qualitatem, donec *hepar* pertingat, et ipsum occupet: quod ita *ulceratum*, talem sanguinem, talesque humores, qualis est intemperies sibi adquisita, generat."

It is Falloppius who first vigorously attacks this theory of "hepar ulceratum." He carefully analyzes *morbus Gallicus* in order to discover its *proprium subjectum*, i. e., the fundamental change which characterizes every infection with *morbus Gallicus*. He rejects the genitalia, for the disease may commence on the mouth or on the breast. Moreover there is no genital involvement in children who are born as if half cooked (semicocti veluti Gambari elixi). Likewise he rejects the skin, the legs, the head. He concludes that it is the *actio naturalis* which is always affected, that function which controls the phenomenon of nutrition, the preparation of food, its coction, assimilation and excretion. That this is so is plainly evidenced by the change in color of those infected, the alopecia, the accumulations of excrementous matter in all parts of the body, whence arise gummata and nodules in the bones and periosteum. Thus it is the liver, the source of the *spiritus* controlling this function, which must be the *proprium subjectum*. Such an opinion had already been expressed by his teacher Brassavolus and by other distinguished physicians, as Montanus, Gallus (Lecoq), Massa, Matthiolus. And having reached this conclusion, he attempts to define the nature of the hepatic lesion. There is certainly no demonstrable lesion, no *solutio continui*, as assumed by Manardus [1]) and Montanus.

"At hoc falsum est. quoniam in epate, non tumoris, non ulceris,

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1) In his *Epistola ad Michaelem Sanctannam*, *Chirurgum*, Manardus gives the following definition of syphilis: "Gallicus morbus est soluta continuitas, ab exustis humoribus per contagium fere in concubitu genita, a malignis quibusdam pustulis incipiens, pudenda plerunque, deinde reliquas corporis exteriores partes, caput praecipue, inficiens . . ." I have found nowhere in his writings a specific mention of a *solutio continui* of the liver.

non vulneris adest vestigium, ego volui per anathomen hoc experiri, et secui in uno anno plusquam 50 homines, et nunquam reperivi solutionem continui in epate."

Falloppius points out that there are two distinct types of hot dry livers. In one, the intemperance develops gradually, as in the case of the hot dry liver which accompanies advancing age. Such an intemperance is to be classed as an *intemperies aequalis* and does not constitute a disease *per se*. Where there is actually hepatic disease as a result of a hot dry state, there is bound to be pain in the region of the liver. His opponents may claim that only the covering membrane of this viscus is sensitive, not the parenchyma itself. This argument he answers with a statement based on his anatomic experiences:

"At ego dixi in Anathome contra alios; nervorum infinitas propagines disseminari per totum hepar, ergo epatis substantia habet sensum."

Falloppius insists that the hot dry intemperance of the liver in *morbus Gallicus* is not the essential lesion of the disease, but it is an *intemperies aequalis* which develops very gradually and is actually a secondary phenomenon of the disease.

And having riddled Montanus' explanation, he attempts to explain the fundamental phenomena of the disease. According to Falloppius the disease is to be classed among the so-called *morbi in substantia*. Such diseases do not respond to the usual methods of treatment. To this category belong such diseases as the plague, venomous bites, evil spells cast over children (fascinationes omnes, quae fiunt puerulis). It is a "morbus occultus consistens in tota substantia." Such a disease has some special analogue to a vital organ or to one of the spirits. In the case of a venomous bite, the analogue is with the vital spirits, thus the heart is affected. In *morbus Gallicus* it is the natural spirits and the liver. He has the disease penetrate to the liver "*spirituali modo*", by way of the natural spirits, which are very subtle substances (agentia valde velocia). To give an impression of the rapidity of distribution of these spirits, he mentions the experiment of twelve scholars who were desirous of learning whether it was possible to satisfy the seemingly insatiable lust of a certain prostitute. Whether their curiosity was satisfied or not is not revealed.

Three however carried away unsought for evidence of their zeal for learning. In one a bubo flared up on the very next morning, indicating with what speed the liver may become involved and the vitiated humors developing in this viscus be rejected to its emunctories, the inguinal glands.

Falloppius recognizes two methods by which genital lesions originate, one by the direct action upon the genitalia of a sanies from an ulcer, the other as a result of invasion of the liver by way of the natural spirits with secondary repercussion of the vitiated humors to the genitalia.

In the chapter "de modo generationis morbi" Falloppius gives the following modes of transmission:

"A woman with *scabies gallica* (secondary syphilides), having ulcers of the skin, upon coming in contact with a youth, will infect his skin by a vapor emanating from her cutaneous lesions *(cute scabiosa)*. Should her genitalia be diseased, it will be transmitted by a sanies."

Falloppius lists the following factors as lessening the possibility of infection:

A healthy liver.

Constriction of the *venae, porri, et meatus* making it impossible for a sanies or a vapor to enter.

Frigidity. Especially in the aged, possibly due to the little passion aroused in their companions, or to the greater impermeability of the skin covering the glans and the inner surface of the prepuce.

Mental depression. For this reason those advanced in age are not so readily infected.

Even more sharp than Falloppius in criticism of Montanus is Botallus. He frankly admits his ignorance. He makes no pretence of understanding the essence of the disease: "Forma huius affectus propria incognita est." He attacks the age old dictum, constantly repeated from Galen, that the nature of a disease must be understood before its treatment can be undertaken [1]). Does the pilote have

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1) This dictum is usually repeated by the earlier syphilographers before they enter into the discussion of the causes of the disease. Their treatment was based upon their theoretical explanation of the disease, especially upon the imaginary

to know the substance and cause of winds to be able to sail his ship? Must one know the origin and nature of a flame before one attempts to check a spreading fire? And in a lengthy chapter he lays low Montanus for attempting to explain all the problems as to the origin of *morbus Gallicus*, Montanus who cooks up a hot dry quality as passing, as a result of infection, to the liver, as though one could imagine an incorporeal something as invading the liver and producing a lesion. For everything under the moon (to use Botallus' expression) must either have body or be connected with something corporeal. And he goes so far as to reject completely the liver as the „focus, in quo hujus morbi seminium infigitur fervatque." He discusses in turn the possible lesions of the liver and shows why each could not be present in *morbus Gallicus*. As to obstruction of the bile ducts, not even Montanus suspects such a lesion. Were a hot dry intemperance of the liver present, the viscus would dry out. How could such patients be restored to full health? How could such a liver again become normal?

"Insuper si in iis aegris fit jecur, dum vivunt, migrata anima, in naturalemne habitum restituitur? quandoque hercle horum cadavera secui, nec tale quippiam novi, nec quispiam est adhuc (arbitror) qui tale jecur in iis, qui hac lue intereunt, vidisse fateatur."

As for a scirrhous liver, who has ever observed such a lesion without some swelling, hardness and discomfort in the right hypochondrium, difficulty in respiration and other symptoms? Imagine an hepatic abscess without pyrexia, thirst, dyspnea, a dry tongue and a host of other alarming symptoms? When one considers that those receiving a wound of the liver seldom, yes, never survive, how can one conceive that an abscess of this viscus can be cured? And Botallus ponders over the question why in gun shot wounds (sclopetorum) there develop so frequently inflammation and abscesses of the liver, while following venereal ulcers no such hepatic lesions result.

"quod in multis hoc anno vidi a viris doctissimis D. Joanne

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peccant humor or humors. Galen. On the Natural Faculties, Bk. 2, Ch. 9: For how are you going to be successful in treatment, if you do not understand the real essence of each disease?

Capella Archiatro nostro, et Honorato Castellano Medico Regio, de hoc negotio primum monitus, mox visu certior factus ex diviso cadavere per magistrum Ambrosium merito primarium Regis Chirurgum, et Magistrum Richardum Illustrissimi Domini de Omalla chirurgum exercitatissimum, quod in aliis deinceps multis observavi."

It is to Jean Fernel that we owe the clearest and most accurate account of the method of transmission of syphilis. He rejects entirely the idea that a chancre may be secondary to a hepatic lesion. For Fernel there are three types of diseases of toxic origin:

1. From poisons ingested. Not contagious.
2. Contagious as well as poisonous. As rabies.
3. Pestilential, i. e., transmitted through the medium of the atmosphere.

The second group is again subdivided into those of manifest origin, as phthisis and scabies, which result from a demonstrable putrefaction. Again there are certain diseases, designated as occult, which do not have their origin in a simple putrefaction, but develop from obscure causes, which affect primarily and *per se* the entire body. To this group belong the sting of the torpedo, the bite of a rabid dog, also *lues venerea*. Accordingly he evolves the following definition: "Lues venerea totuis substantiae morbus est occultus, contagiosus, tuberculis, maculis, ulceribus, cruciatibus et doloribus sese prodens, *solo concubitu aut alio impuro contactu contrahendus*."

The virus is not appreciable to the senses; it exists in a humor or in some other substance acting as a vehicle. As in rabies it remains in us some time without manifesting itself. It is especially acquired through intercourse and then enters the body by way of the genitalia. In a like manner the midwife contracts it through the hand, the nurse by way of the nipple. As the virus is not of the most virulent type, it must enter through some defect in the skin, devoid of epithelium. And now follows a statement of momentous significance: "On whatever part the virus is first deposited, it becomes fixed there and produces a pustule, and this insignificant ulcer (ulcuscula), encroaching farther and farther, takes root and gradually extends to the inner structures."

Thus in Fernel we have full appreciation of the role of contact in the transmission of the disease, the infallible occurrence of an initial lesion at the sight of exposure to the virus (true except in unusual instances of syphilis *d'emblée*) the significance of extragenital infection, and finally the insidious action of the infecting virus with its prolonged incubation period.

The loquacious Bernardinus Tomitanus (1506—1576), who like Falloppius taught at Padua, is also of the opinion that no demonstrable change occurs as a constant finding in the liver of syphilitics, though he admits such lesions may at times be found at autopsy.

"Some distinguished writers state that in syphilis there is a demonstrable lesion of the liver. More experienced anatomists know this statement to be incorrect. Those who have carefully dissected bodies of infected men and women, are well aware of the fact that no demonstrable visceral changes occur. Some state they have found at autopsy a liver affected with a sort of scabies or pustule as a result of syphilitic infection. I recall to have seen at the age of eighteen [1524], the autopsy of a certain notorious prostitute of Padua, whose liver was scabrous throughout, though the examining physicians found nothing else abnormal, either in the external parts or in the other viscera. She was a buxom woman with a remarkably white skin, whose lover had strangled her to death in a fit of jealousy. Inasmuch as it was no secret that this prostitute had plied her trade for some thirty years (she was said to be forty-six years of age), everyone suspected that she had been infected with syphilis not once, but many times. And as she was kind of heart and generous with her worldly possessions, it was supposed that she had been promiscuous in bestowing her services upon those who had need of or demanded such. At autopsy, when the liver was examined, it was found that her only visceral lesion consisted of a scabies occupying the convexity of this organ. Though this finding is authentic, it is however a rare one according to the experience of skilled anatomists."

It is impossible to identify the exact nature of this hepatic lesion. The term *scabies* was used to designate a papular or pustular eruption and was modified by the adjective *gallica* to denote syphilides in general. Possibly the scabrous liver was a cirrhotic liver with its nodular surface.

Prosperus Borgarutius (Borgarucci), from 1564 professor of anatomy at Padua, who plagiarized much from the writings of Botallus, expresses himself as follows in regard to the existence of hepatic lesions in syphilis:

"If lesions occur during life in the liver of those infected with syphilis, they should persist after death, or at least there should be definite traces of previous lesions. However, I do not recall ever discovering such changes, though I have dissected publicly at Padua, Paris, and in many other cities, and, indeed, with the utmost attention to detail, the bodies of individuals, who, as everyone knew, had suffered from this dreadful scourge up to their very death. To my knowledge there is no one who claims to have found such lesions in the liver of those dying of the disease".

There is little in favor of the assumption of Alfred Fournier [1]) that Béthencourt was acquainted with syphilitic cirrhosis. Our good Galenist is probably merely following his master, who states that in general the liver and spleen more than all other viscera are most prone to become scirrhous. And as Béthencourt, like all his contemporaries, considers the liver as uniformly involved in syphilis, what more natural than that he should suppose it to become scirrhous?

Such is the fragmentary material dealing with the pathology of the liver in syphilis. The early syphilographers were agreed upon the important role it played in the evolution of disease. However, with the exception of the sections mentioned by Alexander Benedictus, in which the tunic (*jecoris tunica ambiens*) was found to be eroded, and the possible cirrhotic lesion mentioned by Tomitanus, not a single autopsy revealed the presence of a *solutio continui* in this viscus.

3. The Role of the Phlegm in the Genesis of Syphilitic Lesions:

A third group of lesions, among the first to be described in *morbus gallicus*, those involving the skeletal system, were frequently mentioned in these *anatomiae*. In accordance with traditional teachings, these bone and joint lesions were considered

1) Jacques de Béthencourt. Nouveau Carême de Pénitence et Purgatoire d'Expiation. Traduction et Commentaires par Alfred Fournier. Paris, 1871.

to originate from excessive or corrupt phlegm, which accumulated in the brain, and descended by way of the nerves and tendons (prolongations of the nerves) to the periosteum, bones and articulations.

Probably the earliest recorded autopsy of such a lesion is one performed by Alexander Benedictus:

"It is nothing new for bones to become carious. But it is remarkable for abscesses to develop in their interior, which condition we recently found upon dissecting a woman who had died of syphilis. Upon seeking the cause of her trouble, we found under an intact periosteum, the bone swollen and suppurated as far as the medulla."

Heinrich Haeser cites this passage and remarks: "Benedetti gedenkt schon im Jahre 1497 der eiterigen Zerstörung der Knochen bei unversehrtem Periost" [1]).

In the opinion of Sebastian Aquilinus (d. 1513), a contemporary of Leonicenus at Ferrara, where he was professor of medicine, who in strange contrast to his colleague insisted that *morbus Gallicus* was identical with the *elephantiasis* of Galen (the *lepra* of the Arabians), syphilis arises either from a blood vitiated by black bile (sanguis melancholicus) or from a thick phlegm (crassum flegma). Of involvement of the blood he has only clinical evidence. But that the phlegm also is a factor, he has the irrefutable evidence gathered from an *anatomia*:

"There is no question as to the role played by the phlegm. It happened that shortly after the disputations, which were held [at Ferrara [2]) in connection with this disease], an autopsy was performed upon a syphilitic, who during life suffered from pains and other symptoms usual in this disease. In one knee joint there was found a remarkable amount of thick phlegm extending eight finger-breaths above the joint itself. When the bones (cannae) [3]) forming the joint were separated, there flowed out a large amount of fluid, approximately half a cup. This could not

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1) Haeser, Heinrich. Lehrbuch der Geschichte der Medizin. Jena, 1882, 3, p. 311.

2) Leonicenus, in the preface of his *Libellus* likewise speaks of the "abditam nuper Ferrariae de morbo, quem gallicum vocant disputationem, . . ."

3) Cannae. Major canna-tibia. Minor canna-fibula.

be ros [1]), ultimately to be transformed into nutriment, for why should it occur in one knee joint and not in the other? For fluid does not normally accumulate in this fashion, but should afford nourishment merely by moistening the joint, as Galen states in the first book of his *De naturalibus virtutibus* . . . The accumulation of fluid in such locations might be attributed to their dry state and to lack of exercise. [Apparently the subject of this autopsy had either died during incarceration or had been executed]. This may be so. However it is not true that such an abundance of fluid is required. Why was not a similar amount found in other joints? In the left knee almost twice as much fluid was found as in the right. It cannot be contended that the right side ought to be more humid because of the influence of the liver. For, on the other hand, the right side of the uterus is hotter and dryer than the left, as is stated by Galen in his *De spermate*."

Here we have a good example of logic based upon blind adherence to ancient authority. The objection might be raised that the right knee, being on the same side as the liver, a cold humid organ, should contain more fluid than the left. But is not the right side of the uterus, in spite of the dextroposition of the liver, hotter and dryer than the left?

Wendelinus Hock (1502), brazen plagiarist, assumes the disease to be identical with the mentagra (mentum-agra) of Pliny, and holds as responsible two fundamental humoral changes: in the first place, a perversion of the blood resulting from a hot dry complexion of the liver, which, when intense, produces ulcers such as occur in lepra; secondly, an accumulation of phlegm originating from a humid complexion of the brain.

"There is no question that one cause of the disease is an abnormal, cold, moist complexion of the brain. There was per-

1) The Greeks assumed three steps in the process of tissue formation from the nutritional matter originating from the second digestion, i.e. hepatic. 1. Presentation or apposition (prosthesis). 2. Adhesion (prosphysis). 3. Assimilation. The substances formed in each of these three steps were left unnamed by the Greeks and Romans, but they were assigned definite names by the Arabians and appear as follows in the Latin translations of these works. I. Ros (dew), the matter presented. 2. Gluten, the agglutinated matter, the matter which has adhered. 3 Cambium (from the Arabian), the perfect nourishment, varying according to the organ by which it is to be assimilated.

formed at Rome on an individual infected with *mentagra* who suffered from pain and other symptoms commonly occurring in the disease, an autopsy, in which there was found in a joint an abundance of thick phlegm. Upon separating the bones forming the joint, even more fluid was discharged."

The placing of this autopsy at Rome is unquestionably an error or more likely a fabrication. Proksch [1]) wonders how this barefaced plagiarist hoped to escape detection inasmuch as his sources antedate his own work by a scant few years. The phraseology is even that of Aquilinus. Word for word he repeats the subtle line of reasoning which involves the knee, the liver and the uterus.

Georg Vella, physician at Brescia, staunch supporter of the Arabian authorities, whose work on syphilis probably appeared between 1508 and 1517, is also convinced that an abnormal phlegm is the underlying cause of the disease. In a *consilium* he relates:

"... of an autopsy performed by celebrated physicians at Ferrara, in which a remarkable accumulation of thick phlegm was found in and above a knee joint. Such a finding supports the view that an abnormal phlegm is a contributing cause of the disease, and accumulating in this region, could not be converted into blood to nourish the bone. As a result, it became converted into a thick phlegm, which failed to afford nourishment. The phlegm was a result of long confinement in prison, lack of exercise, depression and various other causes. It might have been dissolved by liberal exercise, or at least have been expelled from the joint. The viscid matter, remaining after the more subtle had been dissolved, would eventually have given rise to gummas, firmly attached to the bone, inasmuch as the phlegm had not been properly acted upon by the natural heat."

The dissection of a certain syphilitic with an effusion into his left knee joint, performed in Ferrara sometime before 1500, apparently aroused widespread interest. It is clear that Vella had in mind the identical section described by Aquilinus. A comparison of the phraseology of the two passages does not indicate that Vella copied his account. It is remotely possible

1) Proksch, J. K. Die Geschichte der venerischen Krankheiten. Bonn, 1895, II: 26.

that both were present at the autopsy, possibly both knew of it only from hearsay, or they may both have read it in some previously written account which I have not discovered.

For Nicolaus Massa (d. 1569), celebrated Venetian physician, the humor causing *morbus Gallicus* is essentially an abnormal phlegm, generated and condensed as a result of a cold dry state of the liver. "Et dico, quod basis morbi Gallici est humor phlegmaticus, non naturalis a tali mala qualitate frigida, cum aliquali siccitate condensante ipsam materiam." It is a phlegm imperfectly cocted, which passes, as does the normal phlegm, downward from the brain by way of the nerves and tendons to the bones and adjacent parts. He has often opened *pustulae* and *gummata* and has always found a viscid material, which could only be phlegm. And for the convincing argument in support of his contention:

"I have often found on dissecting the bodies of syphilitic individuals, who during life suffered from syphilitic pains, a great amount of thick white matter in the region involved, at times hard, at times of a softer consistency. For example, in an autopsy performed in 1524 on an individual, who, according to the neighbors, suffered from pains in his legs, there was found upon incising the areas which had been painful, this very same whitish, viscous material adhering to the fascia covering the leg. In the joints and their vicinity of many other syphilitic corpses, I have found a great abundance of this thick white substance."

And again in the thirtieth letter (1538) of his *Epistolae Medicinales*, Massa states:

"I have dissected in hospitals many bodies of individuals, who during life suffered from *morbus Gallicus*. Throughout their bodies the veins were found to be full of whitish material like phlegm. This phlegm greatly exceeded the blood in quantity, and the painful regions were actually drenched in this phlegm-like matter, in some instances, indeed, all the tendons were soaked in this substance [1])."

1) G. Ludwig Dieterich (Die Krankheits-Familie Syphilis, Landshut, 1842) quotes copiously from Fracastor and Massa and seems much impressed by their theories. A little additional knowledge of chemistry has not helped him to clarify the matter: Leider hat die organische Chemie die genannten Stoffe, sowohl von der Syphilis

Fracastor likewise was firmly convinced of the basic rôle played by the phlegm in the production of syphilis. As he sings in the first book of his *Syphilidis sive de Morbo Gallico Tres Libri*:

Tum saepe aut cerasis, aut Phyllidis arbore tristi,
Vidisti pinguem ex udis manere liquorem
Corticibus: mox in lentum durescere gummi.
Haud secus hac sub labe solet per corpora mucor
Diffluere: hinc demum in turpem concrescere callum [1]).

And in the prose of the second book of his *De contagione et contagiosis morbis et eorum curatione, Libri III*:

"Now with regard to its substance, with which those principles were analagous. That this is, as I said, foul, thick phlegm, may be seen unmistakably if we consider the pustules; for they were all plump and discharged an incredible quantity of mucus. The gummata, also, consisted of a mass of phlegm; and even the pains in the muscles will furnish the same evidence, for they lasted long, were extensive, tormented the patient at night, and when dissections were made, viscous matter was revealed coextensive with the nerves and muscles. Accordingly it must be clear to all that the substance of this contagion is foul and mucous phlegm. The pustules seem to have their origin in a somewhat thinner substance, the gummata in a very thick, and the pains in moderately thick substance. For, as the contagion crept through the mass of blood and found nourishment for itself in the phlegm, the thinner and less sluggish part was driven out to the skin, and there by degrees formed into pustules. But the somewhat thicker part, which was less readily driven out to the skin, settled about the nerves and muscles and, extending along them, caused the most acute pains. But the thickest part of the contagion coagulated in certain localities and formed gummata [2])."

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als dem Aussatze, bis jetzt noch nicht einer Prüfung unterworfen. Dieselben können aber nicht wohl etwas anderes sein als Faserstoff, Eiweissstoff oder Käsestoff. Ich vermuthe eher den lezteren, um so mehr, weil dieser dem Blute normalmässig nicht zukommt, obschon die Chemiker hierüber auch noch nicht einig sind.

1) Just as you have often seen on cherry trees or the sad tree of Phylles (the almond tree) a pinguid fluid exude from the moist bark, presently to harden into a sluggish gum, so in this scourge a mucus is accustomed to flow through bodies, eventually to harden into a foul callus.

2) Hieronymi Fracastori De Contagionis et Contagiosis Morbis et Eorum Curatione, Libri III. Translation and Notes by Wilmer Cave Wright. New York, 1930.

Though Fracastor mentions dissections of syphilitic corpses, there is nowhere in his writings evidence that he himself performed any. In contrast to Fernel and Falloppius, we would rather picture Fracastor as sunk in quiet speculation in his retreat at Incaffi on the slopes of Monte Baldo than as standing over the stench of a decaying corpse. In his chapter *De phthisi contagiosa*, where he states "quippe factis dissectionibus quorundam vidimus interdum partem pulmonis sinceram", he probably does not mean that he himself performed the autopsy.

In Fracastor's opinion, the disease, new, just as was *mentagra* in the time of Tiberius, originally developed from some atmospheric alteration (*constitutio aeris*) and at its inception could not by any stretch of the imagination have been propagated by contagion alone. Were this the case, it would be inconceivable for this contagium of such low virulence (*per se segnis*) to have spread through so many countries in so short a time from a single Spanish fleet. However, in the course of years, this peculiar constitution of the atmosphere disappeared, and by Fracastor's time the disease was spread by contact alone.

And in a vain attempt to explain the epidemic nature of the disease at its first appearance as originally described by Leonicenus, Fracastor resorts to astrology. He reasons that as the disease crops up but rarely, it must originate from a phenomenon of rare occurrence. He resurrects the baneful conjunction of Saturn, Jupiter and Mars in Scorpio occurring on November 25, 1484. He does not insist on such an origin, but believes it should be borne in mind as a possibility. From this conjunction an atmospheric putrefaction may have resulted, and the seeds of the disease (*seminaria*) were transferred to us, seeds analogous to foul mucous humors, such as a crass phlegm. The crassness of this humor varies in degree: the least crass is expelled to the skin, the medium accumulates about the nerves and tendons, the crassest coagulates in various regions to form gummas (*gummositates*).

"It is clear that the principles of this contagion were analagous with thick, foul phlegm. For, if we consider the pustules which appeared in this malady, the gummata, and the pains in the muscles (lacertorum dolores), we shall see everywhere only

mucus and foulness, and finally viscous, mucilaginous, thick phlegm. From this we must conclude that the germs also, on which every contagion *per se* depends, were, in their own fashion, of this same character; and that the air also, in which was the source of the disease, had contracted a disposition of that kind; that the germs in it were also viscous and analagous with a precisely similar phlegm, and had power to produce in their turn, in it, other germs of the same kind as were the original germs".

Fracastor's conception of *seminaria*, seeds, transmitted by contact and multiplying, is a startling anticipation of our present day knowledge. The designation *seminaria lenta* is surprisingly adapted to the Spirochete pallida, producing as it does a local lesion with a relatively long incubation period and a train of symptoms in the main characterized by their insidiousness and chronicity.

The conception of *seminaria* is not new with Fracastor. Lucretius in his *De rerum natura*, which work was printed in Brescia in 1493, reprinted in Verona, Fracastor's native city, in 1486, and reedited in 1516 by Fracastor's most intimate friend, Pomponazzi, for the Venice Aldine edition, makes references to the seeds of the disease:

"I will explain the law of diseases. . . . I have already shown that there are seeds of many things helpful to life, and there must also be many that fly about conducing to death and disease. When these by chance happen to gather together and disorder the atmosphere the air becomes distempered."

In all probability Fracastor had no idea of attributing life to these *seminaria*. As the Singers state:

"The theme of conveyance of infection by minute particles having some of the properties of seeds is skillfully developed and interwoven with humoral pathology. Fracastor has not the modern conception of biogenesis. It is probable, from his philosophic standpoint, that he would have refused to accept the usual modern scientific distinction between the organic and the inorganic. It is therefore idle to discuss whether he regarded these germs, seeds or semina as living or non-living since the distinction would not

have appeared important to him. In any event he believed that infectious diseases could originate anew." [1])

For Fracastor there were three modes by which infection could be transmitted:

By contact alone

By contact and fomites

By contact, fomites and in addition at a distance.

Fracastor's own definition will convey in fewest words the meaning of the term *fomites*: I call fomites such things as clothes, linen, and the like, which although themselves not corrupted, can nevertheless harbor the essential seeds (*seminaria prima*) of the contagion and thus cause infection."

And as to the mode of transmission of Syphilis, Fracastor states:

"When it first appeared in our country, the following signs were observed in this disease. In certain individuals it would arise without any contagion having been contracted from another person; in other cases, and these were the majority, it was contracted by contagion, but not from every kind of contact, nor readily, but only when two bodies in close contact with one another became extremely heated. Now this happened in sexual intercourse especially, and it was by this means that the great majority of persons were infected. However, some cases were observed of infants who, by sucking milk from a mother or nurse who was infected, were themselves infected in a precisely similar way. This contagion did not leave *fomes* behind, or only when some especially favorable opportunity occurred, nor did it propagate itself to a distant object." ... "In the course of years, however, there has come about a certain alteration in this disease. Since the original disposing cause which had been in the air had now ceased to exist, the disease had no other means of propagating itself than by contagion from one person to another, and hence it was by this means it persisted."

A dissenting voice ends our comment on this group of autopsies. During the summer and fall, Matthiolus, to use his own words,

1) Singer, Charles and Dorothea. The Scientific Position of Girolamo Fracastoro (1478?—1553) with Especial Reference to the Scource, Character, and Influence of his Theory of Infection. Ann. M. Hist., I: 1, 1917.

had been busily collecting herbs from hill, meadow and vale, drying his specimens, and preparing antidotes, collyria and cataplasms. Now that winter is at hand there is nothing to occupy him except to study the writings of others or to write himself. On the persuasion of his friend, Franciscus Aliger, he takes pen in hand to write on the most discussed disease of the day, *morbus Gallicus*. He is convinced that the phlegm is not the only humor involved in the disease and offers sound arguments for his conviction. To Matthiolus' way of thinking, no one humor is at fault, but all four. Accordingly he differentiates four species of syphilis, *morbus gallicus sanguineus*, *pituitosus*, *melancholicus* and *cholericus*, each with its train of pathognomonic symptoms.

"I recall to have read several authors, [Aquilinus, Hock, Vella?] who write that *morbus gallicus* has its origin in the phlegm, and who do not hesitate to base their contention upon the following argument. They had dissected a certain male corpse, the joints of which had been severely involved by the action of the phlegm. Though I admit this to be true, it proves nothing, for I have already stated which of the humors are corrupted in *morbus gallicus* [i. e., all four]. For inasmuch as the individual had suffered much from phlegm while alive, which humor by its very nature always flows to the joints, it is not surprising that such a condition was found at death. For Galen states in his [Commentaries of the] Aphorisms: "Phlegm, also called mucus, always accumulates in the articulations and joints." Had they said that in twenty anatomized corpses infected with the disease, these same changes had occurred in every instance, I would have been convinced by the weight of their argument. But while I was in Rome, engaged by the Home of the Holy Ghost to care for its sick and where I had as companions the Spaniard Bernard and Barthomew whom you know, I often went to the St. James Infirmary for Incurables, where we dissected numerous individuals who had died of *morbus Gallicus*, in many of which corpses we found absolutely no trace of phlegm."

4. Pathologic Investigations Dealing with the Absorption of Mercury and with Its Toxicity:

A final group of investigations are concerned with the toxic effects of *argentum vivum*, *hydrargyrum*, or *mercurius* as it was at times

later called. Severe ulcerative stomatitis and colitis were common, at times fatal, especially where treatment was in the hands of charlatans.

An oft repeated charge against mercury was that it produced an unnatural method of evacuation, a flux contrary to the usual workings of nature. Had not Hippocrates left behind the admonition to encourage evacuation through the same channels by which nature, unaided, sought to eliminate excessive and corrupt humor? Let us allow Joannes Baptista Montanus, arch-antimercurialist, contemporary of Fracastor at Verona, to present his indictment:

Quoting Avicenna's dictum: "Cum evacuas, cave ne materia transeat per membra principalia," he flouts the users of mercury with trampling under foot this elementary principle in therapeutics: "In my youth, I used the emplastrum of De Vigo, and I appeared to have cured some when I really had not. For the disease recurred in even worse form . . . By God's grace, I saw the true light, by which I was then guided, and it came to me that quicksilver repels everything it meets, dilates the passages, and expels whatever humor it encounters, and this action does not cease, until a thick, adust, phlegm-like humor has been evacuated. And as it is the limbs which are anointed, the humors are forced to retreat and return to the inner portion of the abdomen and thorax. Accordingly, those who use such inunctions, evacuate abundantly by way of the sputum. The result is that all the matter is returned by the action of the quicksilver to the thorax, to the bowels and lungs, and from these organs is then expelled. This action manifests itself by a great abundance of this humor being ejected without cough, without effort, merely by holding the mouth open. Thus the thorax becomes filled with that poison, with that foul quality, which takes complete possession of it. Judge for yourself how good this is. For while the corrupt matter is striving to reach the less vital parts, these fellows drive it back to the vital organs."

This was a much repeated cry. Leonicenus had charged the smearers of mercury with acting the part of the bad cobbler who tries to fit every foot with the same sized shoe (a favorite simile, culled from Galen). Beware of these scoundrels, he warns, who free the skin of its blemishes by driving the disease to the inner parts.

Paracelsus, who abhors mercurial inunctions, repeats the same charge. „Die neuen geschwer nement iren ursprung so die flüss, die do sollen von ir natur wegen in die eussern glider fallen, verstellt und verstopft werden. alsdan so gehen sie zurück hineinwerz und was sie sollen machen in den eussern glidern, das machen sie inwendig im leib, aus dem dan folgt, das der leib nit mag dulden die wirkung, so hend und füss gedulden mögen. aus der ursach dringt es zum tot in aller gestalt und form, wie pleuresis oder andere geschwer" [1]).

„Wie die art mercurii ist, das er austreibt durch den mund also durchsucht er die regiones der lungen und so er sich darin ansetzt zu gleicher weis wie im mund, so bringt er allen den wust in die lungen, den er sol austreiben, und wie er mundfeule macht, also macht er auch lungfeule. so nun die lung mit solcher feule und flüssen uberladen ist, so wird ir nit geholfen als dem mund, doraus folgt der husten, auswerfen, stinkender atem und dergleichen." [2])

And as to the effect on the viscera when administered improperly:

"Wo das quecksilber insitzt in die inwendigen hauptglider, dieselben richt es in feule, als die lungen, lebern, milz auch den magen." [3])

To find an answer to those who reject the use of mercurial inunctions, we can do no better than turn back to the treatise of the very Jean de Vigo (1514), whose ointment Montanus so dramatically slanders:

"And if perchance someone shall condemn the use of the foresaid remedies because they contain mercury, an answer may be found in the ninth and tenth chapters of Galen's *Therapeutica*, where he says: 'A malady, which offers but a single road to health, though that be arduous and beset with hardships, and though the sufferer wish it or not, he must, without exception, pass over this road.' Moreover I am at a loss to explain why physicians in treating this most cruel malady, condemn ointments and other remedies containing mercury, when, in the treatment of many diseases much easier of cure and but little dangerous,

1) Von den Imposturen. 2) Ibid. 3) Ibid.

there are found in both ancient and modern works, many remedies made with mercury, as in the chapters dealing with *scabies*, *phlegma salsum*, *serpigo*, *impetigo*, and other conditions. And though it seems to act in the manner of a repellent remedy (apocrustica medela), because the diseased matter is, to all appearances, repelled from the superficial structures to the inner parts, on the basis of which revulsion the foresaid physicians raise their objections, I insist, with all due respect to them, that they have not well analyzed this type of revulsion, which results from the use of remedies containing quicksilver. In answer to their fears, I state that revulsions are of two kinds. There is one kind which incarcerates the material, and when this is once incarcerated in an organ, holds it fast and causes it to solidify (lapidare?), which kind of revulsion according to Avicenna in his chapter *De apostemate calido* results in the deterioration and corruption of the organ, and an exacerbation of pain over the region where such repellent remedies are applied by the physician. But there is another kind of revulsion, which acts by forcing the matter from the peripheral parts to the inner regions, but is associated with the beneficial action of many purges, such as the urine, the sweat, the saliva, the stools, as a result of dissolving the peccant humor. Wherefore it must be said that this second type of revulsion is the true cure of the forementioned disease (*morbus Gallicus*), since it is followed by such purgations as lead to the cure of nearly all diseases."

It almost seems as though the cart has been put before the horse. De Vigo's shrewd reasoning could readily be presented as a worthy answer to Montanus, though the latter wrote some forty years after the Surgeon to Pope Julius II.

As a further argument, the antimercurialists dug up from an old medieval textbook on poisons an *anatomia* which had been performed two long centuries before. In a controversy, characteristic of the medicine of the time, much ink was wasted in attempting to prove whether mercury was hot or cold, dry or humid. The details of this do not concern us here. Vella makes the following statement to prove its cold quality: "Moreover the *Conciliator*, in his book on poisons, tells of the case of a certain druggist, who died as the result of drinking mercury

through error. At autopsy, the blood about the heart and inside the heart was found to be clotted."

Cataneus comments on the supposed congealing action of mercury and tells of the fate of the "apothecary, of whom Petrus Abbanus relates in the second chapter of his *De Venenis*. To quench his thirst he drank one night, in place of water, a vessel full of quicksilver. In the morning he was found dead. On the discovery of the metal issuing from his anus, he was dissected, and his heart and the surrounding blood were found to be clotted".

Nicolaus Massa, for whom mercurial inunction is an "infallibilis et securissima via sanandi hanc aegritudinem", has the following criticism to make of this story "of a certain pharmacist, who under the impression that he was drinking water, drank by mistake quicksilver, and died as the result of his error. The tale is incredible because of the weight of the substance and the fact that it could not have been swallowed. At section there was found about his heart a great mass of clotted blood, which was attributed to the cold quality of the mercury."

This Peter of Abano (1250—1315), much quoted by physicians of the Renaissance, won the title of *Conciliator* for his endeavors to conciliate the conflicting doctrines of Greek and Arabian medicine. By a strange caprice of fate, this body, possessing a mind so given to conciliation, was saved a heretic's death only by the timely intervention of a natural death. In the second chapter of his *De Venenis*, he relates:

"Concerning those mineral poisons that are natural, some are generated in the bowels of the earth; such an one is quicksilver, which taken inwardly, when it kills by its humidity, it causes to be destroyed the natural humidity of the heart; when it kills by its actual frigidity, by congealing the heart; the proof of which is that a certain apothecary, rising in the night, under a great thirst, found a bottle full of quicksilver which he drank, and was found dead in the morning, and the quicksilver running out of his anus. He was anatomized, and the blood about his heart was found congealed and his heart also, and there was found in his stomach almost a pound of quicksilver" [1]).

1) From the translation of the "De Venenis" of Petrus Abbanus by Horace M. Brown, Ann. M. Hist., 6: 25, 1924.

Another serious charge against mercury was that once it is absorbed, it reaccumulates in syphilitic lesions or in the various parts of the body, especially in the bones. To my knowledge, first mention of this phenomenon occurs in Seitz' *Regiment* of 1509. The conception may date back to 1500 or even earlier and may have originated in Italy, where, as previously stated, Seitz had studied in Como, Padua and Rome. He remarks: "Das sehent wir im wideruffbrechen der bülen, darvon gewonlich gantz scwarz materi get, und das kecksilber offt domit."

A few decades later, Paracelsus[1]), in *Das erst buch von den imposturis*, harangues as follows against the smearers of mercury:

"Ir hauptstuck ist quecksilber, mit dem farn sie seltsam zu acker, sie stampfen in so lang mit schmer oder bern schmalz, bis er iren willen erzeigt, nun wissent, das er gern in leib gehet und so er dorein kompt, so lauft er an der leiblichen werme wider zusamen und legt sich in die concavitaten articulorum. mit was schaden er do ligt, ist offenbar. seche ein exempel in Nidria; alle die umb in wonent seind krumb und lam, leichtlich erstickt, leichtlich erfrorn, nimer mer keiner rechten gesundheit wartent, auch leg die hend auf ein hilzen schüssel, dorin quecksilber lig, etlich mal, so befindest dich so ungesund, das dir dein gmüt darob erzitert, noch vil mer so ein solch gewicht im leib ligt. nimer magst vom selbigen erlost werden, hieraus entspringen verporgen unheilbarlich krankheiten, . . .[2]).

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1) Strange it seems that Paracelsus should have held postmortem study in such contempt. For him the essential aim was to study disease on the living body. „Die Welschen zu Montpellier, zu Salerno, zu Paris berühmen sich grosser Anatomei und sehen doch nichts, so viel gehenkte Diebe sie auch beschauen (Param. I, 56). Soeben befleissen sie auch die teutschen Guckgauch der Ärzte und besehen Diebs u. dergl., gehen nachher zum requiem; giengen sie zu den Leuten dafür (Ibid. I, 56). Nement euch die lebendig anatomi für und lassent von dem toten gaukenspiel (Von Blatern, Lähmi, Beulen, Löchern und Zitrachten der Franzosen etc., Bk. II, ch. 2). So ir dan wöllen den toten cörpel hin und her versieden und braten, schinden und ausstrecken, in was weg wöllen ir daraus nemmen das, so dem lebendigen cörpel zu nuz sol kommen, so von ihm gewichen ist, das ir suchen? als wie zehenerlei öpfel sind, zehenerlei biren und ieglichs under einer anatomei, also sind zehenerlei icteritia zehenerlei paralisis. Wo finden ir solch krankheit in euer anatomei, vermeinen ir das ir vil wöllen grüblen (wiewohl ich bekenn das ir Welschen die Teutschen damit effen) vil kranken zu suchen?" (Ibid. ch. v.).

2) Remaclus Fuchs (1591), antimercurialist, describes the postmortem findings in

As proof that mercury, when inuncted, is actually absorbed, Brassavolus [1551] offers the following evidence:

"Moreover quicksilver has been found in skulls taken from tombs, though the thighs and arms had been originally inuncted with it." And again: "Applied as an inunction, it [mercury] penetrates the body and mixes with the sputum. That it enters by imperceptible channels becomes evident on examining the heads of skeletons of individuals, who, during life, had used inunctions. On more than one occasion, I have found mercury in skulls lying in tombs. I know of a certain individual who had inuncted himself on three occasions on his arms and thighs. While seated on the closet, he vomited up almost a goblet of mercury. Experiencing a heavy sensation from the matter vomited, he had his wife fetch a light. In searching for the matter he had vomited, he expected to find a thick phlegm. But upon scanning the floor, he at first discovered nothing. Close to the walls of the closet, they found a great quantity of mercury which he had thrown up. This experience proves that the metal, rubbed on the arms and thighs, had by imperceptible channels penetrated as far as the stomach."

One wonders whether this patient was not "putting one over" on Brassavolus, usually so skeptical. Possibly this fellow loathed smearing the dirty ointment. He was likely excused from further rubbing after this alarming experience.

Matthiolus (1535), as would be expected, a stickler for the proper preparation of remedies, would blame the finding of these accumulations of quicksilver in the body upon failure to *extinguish* the metal properly with fasting spittle, lemon juice and other substances. He explains the phenomenon in the following dialogue:

Franciscus [Aliger]. Enough, why is it that all the professors of medicine, as if joined in a conspiracy, wield bitter pens against mercury?

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a syphilitic courtier, treated with mercury as follows: Alium non ignobilem aulicum, eodem morbo contabefactum, ante paucos annos chirurgici apud nos dissecuerunt, et pulmonis velamenta ac dextram eius partem, ad quam a capite longo tempore virulentus distillaverat catarrhus, ita putrefactam invenerunt, ut malum et tetrum odorem vix adstanteoo ferre possent.

Andreas [Matthiolus]. Nothing is more simple. The doctors, having discovered its poisonous properties desribed above, have rejected it, and it would seem justly so. Yet for no fault of the mercury, provided it is rightly *extinguished*. As to the modes of preparation, of which the charlatans and others boast, you have correctly termed it not *extinction*, but merely concealing it. For when you melt over a slow fire their ointment, in which mercury has been mixed, you will find that the mercury has again collected at the bottom. Thus it happens that if anyone is inuncted with such an ointment, the mercury, upon reaching the inner structures, reassembles, for the natural heat restores it to its former activity, whence develop serious injuries to the body.

Franciscus. But see how insolently those quacks boast, how they strut about. You would believe the health of mankind depended upon these fellows, whose ignorance was recently revealed to me by a certain worthy surgeon, who stated that mercury had several times issued from a decayed bone in the leg of a certain Pumpilio, who had been inuncted on ten separate occasions by quacks." [1]).

Antonius Gallus, five years later, [1540] appropriates the experience to himself, using the very words of Matthiolus except that he spares Pumpilio on this occasion. "Accepi ex osse eiusdam corrupto, quem perunctum ab Empiricis plus decies ferebant, non semel emanavisse." Here are the same quacks, the same ten trials of mercury, the same startling outcome!

Fernel, bitter antimercurialist, who lays at mercury's door the goiter of the Alps, who charges to mercury an unmistakable death from plumbism, would have us believe that he has often found "guttulae argenti vivi tremulae" in gummas [2]):

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1) The same idea is expressed by Remaclus Fuchs in 1541 in his Morki Hispanici ... curandi ... exquisitissima Methodus: Potest enim argentum vivum, si male sit extinctum, corpori admotum pristinam vivacitatem et partium dispersarum unionem redire per calorem nativum restitutum, et multa mala symptomata in corporibus, quibus adhibitum sit, excitare.

2) This expression is repeated by Joannes Langius of Löwenberg in Schlesien (1485—1565) in Lib. I, Epist. 43 of his Medicinalium Epistolarum Miscellanea etc. Basileae 1554. Ossibus vero adeo infestum est, ut eo inunctus, noctu tamen plus,

"It [mercury] does not even spare the bones, whether inuncted or administered by fumigation in the form of vapor of the pure metal or of its kindred substance, cinnabar. The teeth of those who rub too frequently loosen and blacken with decay, the more compact bones in places become carious. Upon opening up such decayed bones with a knife, I have often discovered quivering droplets of mercury."

Finally Falloppius adds the weight of his authority to the tale:

"I have come across individuals who had previously applied inunctions over a period of three years, and when gummas developed on their skins, I discovered, on laying bare the bones, an accumulation of mercury."

There were however some voices raised in protest against this supposed baneful action of mercury; among them, Ulrich von Hutten (1519):

"It is erroneous to consider tubercles, gummas, sinuses and nodes as not being an essential part of the disease and as not necessarily resulting from it, but as occurring in those who have used inunctions and hence as resulting from the poisonous action of mercury. Yet a large part of the German physicians, even of today, adhere to this opinion. As in many of their other conceptions of the disease, so they err gravely in this matter, and rashly try to press their contention. I have, indeed, seen such lesions develop in many syphilitics, who have never applied inunctions, for example, in my father, Ulrich von Hutten."

Thierry de Héri, mercurialist, denies that the metal ever coalesces in the cavity of an abscess, ulcer or carious bone. He goes so far as to deny that mercury is actually absorbed by the blood or other humors, conceiving it to act by virtue of some peculiar irradiation.

Botallus, with his usual critical mind, refutes the role of mercury in bone necrosis in the following succinct statement:

"I concede that caries of the bones has been found in some bodies. But this is common in syphilitics, irrespective of whether

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quam interdiu, intolerabili osteocopi aut ossium teredine excruciari, inveterascente morbo, experiamur, sub quibus ferro excisis ipse *guttulas argenti vivi tremulas non semel reperi.*

nunctions have been applied, or whether the scourge has consumed their bodies without their having been previously inuncted."

This erroneous conception of the reaccumulation of mercury in the body structures, especially in the bones, has lived down through the centuries. It reappears in Julianus Palmarius, Theodore Turquet de Mayerne, Petrus Castellus, Athanasius Kircher, Theophile Bonetus, Rosinus Lentilius, Richard Mead, Bernardino Ramazzini, Francis Rigby Brodbelt, Adolph Wilhelm Otto and others. Even Bassereau, who by his method of confrontation conclusively proved the dualism of chancres, recovers from the peritoneal cavity a spoonful of metallic mercury! The woman, ill from acute peritonitis, had been inuncted on five successive days on the abdomen (it was the vogue to treat all inflammations of serous surfaces with mercurial inunctions!) He wonders what would have become of the mercury, which had filtered through the abdominal wall into the peritoneum, had not the patient died. This in 1852, two centuries after Harvey had discovered the circulation.

Rudolph Virchow (His *Archiv*, 15: 224, 1858) points out that there are "ganz glaubwürdige Gewährsmänner" who report finding mercury in bones. Though he himself had not made such a finding, he makes the comment: "Die Frage von dem Vorkommen des Quecksilbers in den Knochen ist in der neueren Zeit in so widerstreitendem Sinne besprochen worden, dass es gewiss wünschenswerth ist, dieselbe einmal definitiv erledigt zu sehen."

To this very day, the same belief is reflected in the question so anxiously put by the patient to his physician, who is prescribing mercury: "Doctor, is it true that mercury rots the bones?" Thus the statement of Seitz, four centuries old, is reflected down to our time.

ADDENDUM

There is one *anatomia* which is left until last, not because it is of little interest, but because it does not fall into any of the four categories described. It is a clear account of gummatous necrosis of the cranial bones with extension to the meninges, gradual amaurosis, and exitus from meningitis. It comes from the lucid pen of Botallus:

"At Turin there was a certain official (quaestor) of French

nationality, who had passed several sleepless months, because of intense pain in the region of the temples and sinciput, originating from *morbus Gallicus*. He had consulted all the doctors in town, but in his fretful condition, failed to follow their instructions. In this vacillating state of mind, he tried various remedies. When he learned of my arrival in Turin, he had me summoned. After listening to the entire history from the patient's own lips and from those of his attendants, I found that this stubborn pain had not been relieved by the various medicines prescribed by physicians, nor by those he had tried on the advice of female quacks (mulierculae) or charlatans. So I advised cautery to be applied to the nearest sutures and over the painful parts. Which advice was immediately rejected by the unmanageable and chicken-hearted patient. As I was leaving Turin, I did not see him again for a month. In the course of time, again being summoned, I found him completely bereft of sight. His eyes did not seem to be affected with external disease. He stated that for many days before he lost his sight, objects like gnats or spider webs had floated before his eyes, and gradually he became blind. I urged him to allow his skull to be opened, which again met with refusal. Finally he consented to have cautery applied to the sinciput where the pain was most excruciating. He was however unwilling to keep the wound open, so that when the crust was taken off, it became covered with a scar, whereupon I discontinued my attendance, unwilling to visit the chamber of a patient who rejects the proper remedies. Finally at the end of about forty days, he passed away. With the consent of his friends and in my presence, Lucius Montanus, most skillful surgeon, performed an autopsy, and we discovered in the region of the coronal and sagittal sutures the bone to be decayed and necrotic to the extent of an area covered by a royal crown, and upon sawing through the skull, there immediately flowed forth an abundance of foul ichor like water sprinkled with chimney soot and saffron, discharging from the opening in the bone as well as through the nose and ears. The meninges directly adjacent to the necrotic bone were attached to it and were torn by the merest touch. The brain and optic nerves were found to be corrupted. All other viscera were normal."

CONCLUSION.

Following this period of enthusiasm for dissecting syphilitic corpses, a period of stagnation set in. Two centuries later, Lancisi (1655—1720) and Morgagni (1692—1771), the latter again in Padua, were to take up the task where Fernel, Falloppius and Botallus had left off. The work of these investigators was in turn to be neglected or forgotten. During the lifetime of John Hunter (1728—1793) knowledge of visceral syphilis reached its lowest ebb. With his statement: "We have not seen the brain affected, the heart, stomach, liver, kidneys, nor other viscera; although such diseases are described by authors", he practically nullified the previous accomplishments of Italian pathologists from Benedetti to Morgagni.

The early *anatomiae* on syphilitic corpses assembled in this study led to no great discoveries. But they will be remembered as an expression of a spirit of research which was to result in freeing medicine from the fetters which had held it shackled for centuries. Alexander Benedictus, though accomplishing no great things, will be gratefully remembered as the founder of the renowned anatomic theater at Padua, where Falloppius and Botallus were to dissect, where Fabricius ab Aquapendente was to labor, and where Harvey was eventually to come and carry away inspiration for his immortal discovery.