Notes on clinical medicine / by Willoughby Francis Wade.

NOTES

ON

CLINICAL MEDICINE.

BY

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No. I.

ON DIPHTHERIA.

No. II.

ON A CASE OF AORTIC ANEURISM, IN WHICH A COMMUNICATION WITH THE PULMONARY ARTERY WAS RECOGNISED DURING LIFE BY PHYSICAL SIGNS.

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By the same Author.

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AN ESSAY UPON THE SYMPTOMS, PATHOLOGY, AND TREATMENT OF RETRO-UTERINE HÆMATOCELE. ILLUSTRATED BY NUMEROUS CASES, ORIGINAL AND SELECTED.

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(In preparation.)

ON DIPHTHERIA.

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Four years ago I publiſhed a fragmentary memoir upon diphtheria, intending to finiſh it at an early date. But much remains yet to be done before a complete account of this diſeaſe ſhall be poſſible. The fact that a great majority of caſes occurs in private practice, where facilities for minute obſervation during life are ſcanty, and *poſt mortem* examinations are conſtantly refuſed, is one principal cauſe of our deficient knowledge. Another is, that public attention has not yet been ſufficiently attracted to certain points, the determination of which is eſſential to any ſatisfactory hiſtory of the diſeaſe. In the hope of procuring for theſe points that inveſtigation which is due to them, and which moſt aſſuredly they will eventually obtain, I venture to ſubmit the following propoſitions to the profeſſion. The ſtyle adopted is certainly open to the imputation of curtneſs; but it ſeems to me that by diveſting the ſubject as far as poſſible of extraneous matter and verbiage, thoſe who deſire to do ſo will the more readily arrive at my meaning. I have abſtained from particulariſing the data upon which theſe concluſions are baſed. Some of them are received medical dogmas. With regard to the others, the continued prevalence and fatality of diphtheria will enable every one to judge for himſelf whether or no it preſents the features and phenomena here indicated, and whether the practical concluſions here drawn are wholly, partially, or at all juſtifiable. I have the ſatisfaction of knowing that the principles and practice here recommended are moſt highly approved by thoſe practitioners who have moſt fully teſted them at the bedſide. I have only to add that, in the hope of con-

centrating attention upon certain points in the natural hiſtory of the diſorder, many others of great intereſt have been entirely omitted.

1. At the commencement of the preſent epidemic, being diſſatisfied with previous *poſt mortem* examinations, which had been limited to an inveſtigation of those parts whoſe tiſſues are continuous with thoſe of the throat, and having noted phenomena which were not thereby explained, I determined, when opportunity ſhould offer, to examine the ſtate of other organs whoſe tiſſues were not ſo continuous.

2. The firſt *poſt mortem* furniſhed me with kidneys (of which I retain a drawing) as much altered in appearance as any that we find after death from ſcarlatinal dropſy.

3. Obvious pathological analogies led me then to ſuſpect that ſuch a condition would be attended with albuminuria during life. The examination next day of the urine of a patient under the care of Mr. *Robins* ſhowed that it contained albumen. The frequent occurrence of albuminuria in diphtheria has ſince been univerſally recogniſed.

4. Curiouſly enough ſubſequent diſſections have but rarely furniſhed me with kidneys ſo conſpicuouſly altered as theſe firſt ones. The changes are more commonly microſcopical; conſiſting of crowding and opacity of the epithelium, which is moſt readily detached and rapidly diſintegrates.

5. Caſts of various kinds are to be found in ſome ſpecimens of the albuminous urine of diphtheria.

6. This albuminuria and theſe anatomical alterations of the kidney are important as ſhowing---

(*a*) That the diſeaſe does not ſpread ſolely by continuity of tiſſue, as had been previouſly believed;

(*b*) That in ſome caſes the diſorder has a tendency to migrate; and in ſuch there is more reaſon to apprehend croup and other complications than in caſes where this migratory tendency is not apparent.

7. Albuminuria as a ſymptom of diſeaſe is important from the fact of its being frequently, though not neceſſarily, connected

with and dependent upon conditions which impair the excretory action of the kidneys.

8. In many cases there are indications of diphtherical albuminuria being so associated.

9. These indications are: diminution of urine in quantity; suppression of lithates; nervous symptoms---as indifference to surrounding objects, somnolence, coma---coincidently with the commencement of albuminuria, and not referable to any other known cause but the kidney complication.

10. The commencement of the albuminuria may be attended by an increase of the pyrexia, unexplained by any increase of the local disorder or other efficient cause.

11. These symptoms are relieved by increased urinary excretion.

12. Albuminuria is not necessarily attended by any obvious symptoms of an unfavourable character.

13. An imperfect elimination of urinary elements may be unattended by albuminuria. In one case, sudden diminution of the urinary secretion without albuminuria was attended by swelling and pain of the carpal joints (rheumatic?). The symptoms described in No. 9 are developed coincidently with this imperfect elimination.

14. I have not observed the early presence of albumen in the urine, which, from the concurrent testimony of trustworthy observers, no doubt frequently occurs. Two explanations of this fact offer themselves. In the first place, most of my cases have been seen in consultation, which is demanded in the majority of cases only when fatal symptoms have already supervened. Secondly, my treatment has long been directed to the prevention of kidney complication.

15. Apart from its early occurrence, there seems to be a special tendency to albuminuria about the seventh or eighth day, at which time the disorder has a natural tendency to terminate. Under such circumstances it is to be looked upon as a critical phenomenon. It may occur at any period.

16. Kidney affection commonly precedes other complications, such as croup and purpura.

17. More exact observation upon the amount of urinary

excreta, before, during, and after intercurrent albuminuria, are much wanted. Alſo in caſes where albuminuria does not occur.

18. If there be retention of urinary elements in the ſyſtem, it is probable that it tends to induce other complications. (See Dr. *Parkes'* Lectures on Pyrexia.)

19. I have found ſpecimens (of which I retain drawings) of anatomical alterations of the ſpleen, which has in ſome inſtances been found ſolidified, and of a pinkiſh-buff colour.

20. The microſcope ſhowed that in ſuch ſpleens there was an unorganiſed, hyaline, ſemi-ſolid material filling the interſpaces of the trabeculæ.

21. I have alſo found alterations of the ſpleen ſuch as Dr. *Haberſhon* has deſcribed as occurring in caſes of purpura.

22. In no caſe has maniſeſt alteration of the ſpleen been found after death where purpura had not been obſerved during life.

23. Some caſes of purpura have been ſeen in which I could not undertake to ſay that the ſpleen was abnormal.

24. There is no conſtant proportion between the ſeverity of the purpuric ſymptoms and the amount of ſplenic change.

25. The vaſt majority of fatal caſes have preſented croupy ſymptoms in the laſt ſtage, but many would probably have been fatal without the croup.

26. In no caſe that I have diſſected was the laryngeal exudation continuous with the faucial.

27. In no caſe of croup that I have diſſected has the exudation failed to extend beyond the bifurcation of the trachea. In moſt inſtances it has extended into the minute ramifications of the bronchi.

28. The tracheal and bronchial exudation has varied in conſiſtency from a very firm membrane to a paſty granular layer.

29. In two caſes, beſides (other?) purpuric ſymptoms, I found after death nodules of pulmonary apoplexy.

30. In one caſe I thought that there was ſome hyaline exudation in the ſupra-renal capſules. In that caſe, and in another, theſe organs were intenſely vaſcular.

31. We are juſtified by the preceding obſervations, as well as by other well-known ſymptoms of the diſeaſe, in looking upon

diphtheria as a zymotic diſeaſe; not as *Bretonneau* conceived it to be, a local diſeaſe ſpreading by continuity of tiſſue, and only affecting the ſyſtem in a ſecondary manner.

32. I have never ſtated, and I am not prepared to ſtate, my opinion upon the relation, if any, between diphtheria and ſcarlatina.

33. To thoſe who find less difficulty in coming to a poſitive concluſion on the point, I beg to recommend the following conſiderations:

(a) Scarlatina and diphtheria may be aſſociated.

(b) Scarlatina is not neceſſarily accompanied by efflorescence, or by noticeable fever.

(c) Diphtheria may probably affect the ſyſtem without producing any throat exudation.

(d) Scarlatina may recur.

(e) Certain forms of ſcarlatina may be *accompanied* by albuminuria.

(f) Scarlatinal albuminuria does not neceſſarily produce dropſy; dropſy, in fact, is the exception in albuminuria *accompanying* ſcarlatina.

(g) Any occaſional form of a ſpecific fever may become the type of an epidemic.

(h) Granting that ſcarlatina and diphtheria are both zymotic diſorders, we do not know what is the nature of their reſpective poiſons.

34. Local treatment exerts no known influence upon the general courſe of ſpecific fevers.

35. The true rule of practice in ſuch diſeaſes is to obviate the tendency to death.

36. The tendency to death in diphtheria is ſometimes by aſthenia, directly induced by the blood-poiſon; ſometimes by complications, of which the earlieſt is generally a kidney affection, interfering with urinary elimination. We muſt therefore eliminate the poiſon, and if poſſible *prevent* the complications.

37. In pyrexial diſorders, one of the moſt conſtant and myſterious phenomena is the quantity of water diſpoſed of by the ſyſtem. (See *Parkes* on Pyrexia.)

38. In diphtheria the quantity of ingeſta will be commonly ſmall if the patient be allowed to conſult his own convenience.

39. Water is eſſentially neceſſary to the performance of the urinary functions.

40. Concentration of the urine is equivalent to kidney irritation.

41. Diphtherical albuminuria is often preceded by urine of high ſpecific gravity. The ſupervention of albuminuria may fail to reduce this.

42. It is often preceded by the depoſits of lithates, ſhowing a comparative paucity of the urinary water.

43. All plans of treatment which have been adopted on the large ſcale for the treatment of diphtheria have embraced the ingeſtion, in large quantities, of fluid nutriment as an important if not eſſential element.

44. By the copious adminiſtration of pure water or diluents in diphtheria, the urine may be often enormouſly increaſed in quantity, without correſponding diminution of its ſpecific gravity, which is indeed ſometimes actually higher at the ſame time that the quantity is increaſed.

45. This ſeems to indicate that the detritus of interſtitial metamorphoſis had been previouſly inſufficiently eliminated.

46. I recommend the ingeſtion of bland fluids in as great quantity as the patient will take: half a pint every hour or two, if poſſible, in the caſe of adults.

47. To avoid chills, I recommend that in all caſes the patients ſhould be clothed from head to foot in a flannel gown, and kept in bed. I believe that the adoption of this plan would have ſaved almoſt innumerable lives, more eſpecially in ſlight caſes.

48. Aſſuming the preſence of a ſubſtantive poiſon in the ſyſtem, we know no drug which will act as a direct eliminant but iodide of potaſſium. It poſitively eliminates lead, and we may preſume that it poſitively eliminates ſyphilis.

49. I employ iodide of potaſſium in two, three, or four grain doſes, every two or three hours. I have been in the habit of conjoining with it chlorate of potaſs in five to ten grain doſes.

50. I have known no inſtance of a fatal termination where this plan of treatment had been carried out. I have known no

inſtance of ſerious ſymptoms or of ſecondary paralyſis ſupervening where this plan had been rigorouſly carried out. The difficulty, eſpecially with children, is in inſuring a copious ſupply of fluid.

51. This plan exerciſes a ſpeedy and ſalutary influence upon the general ſymptoms of the diſeaſe. The exudation often diminiſhes with extraordinary rapidity. Eſſential fevers run a definite courſe, and can be rarely if ever cut ſhort. Till the diſeaſe has gone we cannot be free from the danger of complication. Hence the immenſe importance of continuing the treatment after immediate relief has been obtained.

52. Aqueous injections may be employed to ſupplementaliſe ingeſtion by the mouth; but this is a plan of very inferior efficacy. If deficiency of urine be preſent, bitartrate of potaſh, ſinapiſms to the loins, warm bath, and ſolution of acetate of ammonia help to reſtore it.

53. This general plan of treatment does not preclude other remedies in ſpecial caſes, or to meet ſpecial indications.

54. Where it has been carried out I have not found a neceſſity for ſtimulants, nor have I found that theſe, when adminiſtered, have produced that immediate and ſenſible (even if incomplete) amelioration that we expect to ſee in caſes where they have a beneficial influence.

55. The ſame may be ſaid of tonics and iron. I have never met with ſuch marked anatomical alterations as in caſes which had been freely treated with a mixture containing muriated tincture of iron and hydrochloric acid. It does not neceſſarily follow from this that ſuch remedies may never be required; but they ſhould not be uſed indiſcriminately and recklеſſly.

56. It is contrary to the ordinary rules of our art to interfere with the local development of blood-poiſons, except for ſpecial reaſons.

57. The faucial exudation of diphtheria is to be conſidered as the local manifeſtation of a general diſeaſe.

58. Interference with it will not prevent its reproduction, nor will it prevent laryngeal complication, nor will it prevent the ſupervention of grave conſtitutional diſorder. It is, beſides, exceedingly irkſome to young patients.

59. We are juſtified in interfering with the throat exudation

when there is exceſſive fetor, or when it is ſo copious as to interfere with reſpiration or deglutition---not otherwiſe.

60. If the croup always extend below the bifurcation of the trachea, tracheotomy is but a forlorn hope; as ſuch it may be right to reſort to it in ſome caſes.*

61. I am not ſatisfied with that explanation of the ſecondary paralytic affections which attributes them to reflex irritation. Poſſibly minute diſſection might diſcover ſome organic change in (*a*) the nervous centres, (*b*) the nervous periphery, or (*c*) the muſcular tiſſues.

62. Albuminuria may or may not be preſent in caſes of diphtherical paralyſis.

63. Caſes of paralyſis progreſs ſo ſlowly when treated ſimply by quinine and other tonics as to lead to the ſuppoſition that theſe drugs exert no direct influence upon this ſequela, which probably in ſuch caſes wears itſelf out.

64. I believe that I have obtained more ſpeedy reſults with eliminants---as iodide of potaſſium, iodide of iron, and bichloride of mercury with bark.

65. Bliſters to the top of the ſternum, if applied early, ſeem to exerciſe a moſt beneficial influence upon the paralyſis of the palate.

66. Paralyſis may follow, as kidney complication may attend, ſlight as well as ſevere caſes of diphtheria. In one caſe I have heard that the paralyſis has laſted two years, and may be conſidered permanent.

67. I am acquainted with one caſe in which the patient has recovered, but in which albuminuria is ſtill occaſionally preſent, four years after the primary attack.

* According to M. *Roger*, twenty per cent. of the children operated upon at the Hôpital des Enfans Malades in Paris recover.---*Archives Générales de Médecine*, April, 1862.

A CASE OF AORTIC ANEURISM,

IN WHICH A COMMUNICATION WITH THE PULMONARY ARTERY WAS RECOGNISED DURING LIFE BY PHYSICAL SIGNS.*

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SINCE the appearance of Dr. *Thurnam's* memoir but little has been added to our knowledge of varicoſe aneuriſm within the great cavities.

Though ſuch caſes are certainly not common, yet they are ſufficiently ſo to make it deſirable that we ſhould be able to recogniſe them during life.

When the communication has been between the aorta and either of the venæ cavæ at any diſtance from the heart, the nature of the diſeaſe has not been uſually very obſcure. In the only caſe which I have ſeen of this claſs, the opening was into the ſuperior vena cava. Though the patient was only ſeen once I had no great difficulty in making a correct diagnoſis. The opinion formed was confirmed by *poſt mortem* examination.

Communications with any of the great veſſels cloſe to the heart preſent more difficulty for various reaſons. Perhaps the moſt important is that aneuriſms originating ſo near the heart, as thoſe uſually do, rarely attain any great ſize, and hence the preſſure phenomena, upon which the diagnoſis of aneuriſm mainly reſts, are but ill developed.

In the preſent caſe the diagnoſis was rather of a preternatural communication between the aorta and pulmonary artery probably aneuriſmal, than directly of aneuriſm. And it is extremely doubtful whether the aneuriſm could have been diſcovered previous to the eſtabliſhment of the abnormal communication between it and the pulmonary artery.

* This paper is reprinted (with alterations) from the *Tranſactions of the Royal Medical and Chirurgical Society*, by the permiſſion of the Council.

The diagnoſtic ſucceſs here obtained is certainly an encouragement to make the attempt to unravel ſuch caſes hereafter. It will alſo be an aſſiſtance to our future efforts, ſince the acouſtic phenomena were thoſe we might naturally expect to attend ſuch phyſical conditions, and are therefore pretty certain to be preſent in all the caſes of which the anatomical conditions are nearly ſimilar. This belief is fortified by the fact that in Dr. *Hughes Bennett's* caſe, where the leſions were nearly the ſame, the phyſical ſigns alſo correſponded. And although Dr. *Bennett* did not come to any preciſe diagnoſis during life, he nevertheleſs conſiders with me that the relation between the ſounds heard during life and the leſions diſcovered after death was evident. He ſays that there was "evidence of a profound leſion of the heart, although its nature was very myſterious, the more ſo as no thrill or tremor was detected. The caſe, however, was at once made clear, and the nature of the ſounds explained by the examination of the body after death.

James Selwood, æt. 35, married, a porter in the Parcels Office at the New Street Railway Station, applied at the *Birmingham* General Diſpenſary, on May 1ſt, 1860. He was a fine-looking, well-made man, and complained of ſlight cough, ſome general debility, and a little loſs of fleſh. Theſe ſymptoms had been coming on for ſeveral months. Suſpecting phthiſis, I ſtripped him to examine the lungs. Not finding any ſign of diſeaſe in the anterior portions of theſe organs, I applied the ſtethoſcope to the heart, and directly heard ſounds whieh convinced me that the caſe was not one of ordinary valvular diſeaſe. I therefore recommended the patient to enter the Queen's Hoſpital, under my care, which he did in a few days. I found that for four years he had ſuffered much from piles, and about November, 1859, had loſt as much as a pint of blood in a day, and, ever ſince, the loſſes have been conſiderable. To theſe fluxes he attributed the debility and waſting which induced him to conſult me. About Chriſtmas, 1859, his duties, in calling over the parcels, &c., being at that time very onerous, he ſuffered for a day or two from hoarſeneſs, and has ſince often felt a riſing in the throat. Two weeks beſore I firſt ſaw him, while wheeling a heavy truck acroſs the line, an engine ran up, and, to avoid it, he was obliged to make a violent

and ſudden ſpring; he directly felt very faint, and was compelled to ſit down for ſome time, but thought no more about it. He had never had any palpitation. His appetite was good, and he ſlept well. He had a little cough, with expectoration of watery mucus, and ſlight dyſpnœa on exertion; but the cough was moſt troubleſome on lying down.

Phyſical examination ſhowed that the cardiac dulneſs was increaſed in the vertical direction. The apex could be diſtinctly ſeen and felt beating in the ſixth intercoſtal ſpace, and the heart was alſo to be ſeen beating in the fifth. Over the cartilage of the fourth left rib two loud murmurs were heard, inſtead of the uſual cardiac ſounds; that, with the ſecond ſound, being of a hiſſing character, and ſo prolonged as to continue till the commencement of the next ventricular ſyſtole. At this ſame ſpot a very conſiderable purring tremor accompanied the ſecond murmur. The firſt murmur was of a loud bellows character. Both murmurs were audible as high as the bifurcation of the common carotids, in the back, and over all the upper part of the cheſt; they did not ſeem to be peculiarly propagated towards the left ſubclavicular ſpace. At the apex of the heart a ſingle murmur only was to be heart, and this evidently attended, or rather replaced, the cardiac firſt ſound; it could be traced eaſily down to the enſiform cartilage. At the apex, the cardiac ſecond ſound was very diſtinct and quite natural; no trace of murmur.

I found no venous diſtenſion or pulſe. The pulſation of the carotids was very viſible, particularly on the left ſide, and marked by ſome, though not conſiderable, thrill. The heart's action was quiet and regular.

The only abnormal phyſical ſign in the lungs was ſome mucous râles at the baſe of each, equally on either ſide. Pupils contracted, but mobile; liver enlarged, no icterus; urine normal.

From this combination of phyſical ſigns, I concluded---

1ſt. That blood eſcaped either from the aorta or the pulmonary artery during their ſyſtole, from the loud hiſſing, prolonged murmur replacing the ſecond ſound at the baſe of the heart.

2nd. That it was probably from the aorta that the blood eſcaped, from the propagation of the ſound up the arteries of the neck, and their viſible pulſation and ſenſible thrill.

3rd. That the blood did not regurgitate into either ventricle, from the abſence of any regurgitant murmur at the apex of the heart, where, on the contrary, an ordinary ſecond ſound was audible. It is true that ſlight regurgitant murmur is not neceſſarily conveyed to the apex of the heart; but I have never yet found it abſent there, except when the murmur was very ſlight, whilſt in this caſe the murmur was very loud and hiſſing at its point of origin.

4th. That the blood probably regurgitated into one of the auricles, or into the pulmonary artery.

5th. That it did not regurgitate into the left auricle; inaſmuch as, had it done ſo, we ſhould have found more decided pulmonary engorgement, and hæmoptyſis rather than hæmorrhoids or hepatic enlargement.

6th. That the opening was rather into the pulmonary artery than into the right auricle; becauſe aneuriſms more frequently perforate the former. In eighteen caſes of varicoſe aneuriſm recorded by Dr. *Thurnam*, eleven had perforated the artery, and only ſeven other parts, even including caſes of communication with the ſuperior and inferior venæ cavæ. Of twenty-nine caſes collected by Dr. *Sibſon*---

17	opened into the	pulmonary artery.
6	„	right auricle.
3	„	right ventricle.
3	„	left ventricle.
0	„	left auricle.
29		

In ſeven others the aneuriſm had opened into the vena cava deſcendens.

Further, the frémiſſement was to the left of the ſternum, whereas in recorded caſes of openings into the right auricle the frémiſſement preſented its maximum intenſity at the right of the ſternum.

7th. That the communication was probably owing to aneuriſmal perforation of the aorta at or near its origin. Becauſe there was no hiſtory of cyanoſis to indicate any congenital malformation of the heart. The increaſed vertical dulneſs, age, formation, and

occupation of the patient, as well as ſome points of his hiſtory, lent ſtrength to this view.

8th. That the aneuriſm ſprang from the root of the aorta, or near it.

To proceed now with the narration of the caſe.

No change took place in the phyſical ſigns during his reſidence in the hoſpital of about three weeks, except that after a conſiderable hæmorrhoidal loſs the murmurs and frémiſſement all became intenſified; they, however, ſoon reverted to their former condition.

At his urgent requeſt that ſomething ſhould be done for the piles, I allowed Mr. *Wilders*, our able houſe-ſurgeon, to touch them with nitric acid. After this they bled leſs, though the hæmorrhage was never completely ſuppreſſed, nor indeed did I wiſh that it ſhould be.

He declared that he was quite well, except that his breathing was a little ſhort. I could not induce him to remain longer in the hoſpital, as he was determined to reſume his employment, which he accordingly did.

Upon the morning of the 14th of June, 1860, having been at work all night, he was ſeized about ſix a.m. with præcordial oppreſſion and faintneſs, ſuch as he had never previouſly experienced. Nevertheleſs, after getting ſome brandy and lying down for a couple of hours, he was able to walk home, a diſtance of about a mile. After that he became rapidly worſe, and was ſeen by Mr. *Pemberton*, who "found him with laborious breathing, and an intenſe expreſſion of anxiety, referring his ſuffering to a load at the epigaſtrium. The hand placed over the cheſt in the cardiac region experienced a purring ſenſation, clearly and diſtinctly marked. Sounds---theſe were characteriſed by loud, continuous, double-ruſhing ſounds audible all over the cardiac region, but more intenſely ſo at the baſe of the heart and up the aorta. There was entire abſence of ſuperficial venous diſtenſion; hæmorrhage, continuous and arterial, from the hæmorrhoidal veins. The condition of the patient varied only in the occaſional abatement of his feelings of oppreſſion.

"*Treatment.*---Brandy, ether, and counter-irritation.

"He continued much the ſame until the morning of the 28th

of June. I viſited him about eleven a.m., and found him gaſping for breath. He would ſuddenly jump out of bed on to the floor, throwing himſelf at full length, and exclaiming that he was dying. He was truly ſo. And having informed his wife that I did not think he could live many hours, I had gone downſtairs, when I heard a cry, and returned to his room. I found him lying on the edge of the bed, partly on the floor, with his head downwards, and a copious effuſion of blood from the rectum. I at once raiſed him on to the pillow, when he gave a feeble gaſp or two and expired."

Poſt mortem, twenty-four hours after death.---We found congeſtion of both lungs, with ſerous effuſion of no great amount in either pleura. Abundant ſerous effuſion into the abdominal cavity. The liver much enlarged and congeſted. The kidneys healthy. A few ounces of ſerum in the pericardium. The heart enlarged, chiefly on the right ſide. We alſo diſcovered the aneuriſm; but as the ſpecimen was ſubſequently examined by Dr. *Bracey*, I ſhall employ his deſcription of it.

"The aneuriſm ſprings from the origin of the aorta, and projects forwards compreſſing the right ventricle and the commencement of the pulmonary artery. It would contain, when diſtended, a ſmall hen's egg. It communicates with the aorta by a round opening, about ſeven lines in diameter, juſt above and between the right and left ſemilunar valves. It alſo communicates with the pulmonary artery by a vertical ſlit with regular margin, and ſmooth rounded edges, about three lines in extent; this is behind the poſterior diviſion of the pulmonary artery, in the correſponding ſinus of *Valſalva*. Below this and to the right is another opening, leading into the right ventricle between and below the poſterior and right valves; its margins are ragged and thin, greateſt diameter (tranſverſe) about four lines. There are a few ſmall patches of atheroma in the aorta. Heart large; valves healthy."

I may add, that there was no coagulum in the aneuriſm. The edges of the ſlit in the right ventricle were not only ragged and thin, but alſo ſtained with blood, which was not the caſe with the other openings.

As to the ſequence of the leſions in this patient, I ſuppoſe

that the aneuriſm itſelf had exiſted for probably not leſs than ſix months at the time that I firſt ſaw him; for that length of time, at all events, he had been ſuffering from hæmorrhoids, due, it may be preſumed, to the preſſure of the tumour upon the pulmonary artery. Upon this ſuppoſition, we ſhould date the communication with the pulmonary artery from the time that he made the violent effort to eſcape being run over. I cannot doubt for a moment that the perforation of the right ventricle took place on the morning of the 14th of June.

This caſe is of importance as eſtabliſhing---at leaſt, I am diſpoſed to think ſo---the rational diagnoſis of ſimilar leſions in future.

Granting the correctneſs of this belief, a great advance has been made in the diagnoſis of varicoſe aneuriſms in general, ſince, as before mentioned, this particular ſpecies is by far the moſt common of the whole claſs.

At the ſame time it muſt be borne in mind that the key to my opinion was the non-conduction of the ſecond murmur to the heart's apex. We ſhould therefore be at a loſs in moſt caſes where---

1ſt. aortic, or

2nd. pulmonary regurgitation exiſted;

3rd. the new communication produced no murmur with the ſecond cardiac ſound;

4th. there alſo exiſted an opening into either ventricle;

5th. there was an opening into the left auricle or its appendix.

Though we ſhould, I think, be ſaved from error by attention to the phyſical condition of the lungs, as compared with that of the liver, &c.; and, beſides, ſuch a leſion is of the utmoſt rarity.

The caſe is both intereſting and important, as ſhowing with how little inconvenience ſuch a leſion may exiſt.

Much ſtreſs has always been laid upon thrill as an indication of varicoſe aneuriſm; and this rightly, when the ſite of thrill is local and ſo remote from the heart as to preclude the poſſibility of a cardiac origin, but not otherwiſe, ſince there ſeems to be no limit to the amount of thrill producible by ſimple valvular leſions. In the preſent caſe the thrill was not employed to prove the exiſtence of preternatural communication, though its preſence lent a certain

amount of ſtrength to that theory. It was employed, ſecondarily, to indicate the exact poſition of this communication; at the ſame time, even in its abſence, the ſite of the ſecond murmur would have given preciſely as much information as the thrill itſelf. Nevertheleſs, were ſuch a thrill, to our own knowledge, *ſuddenly* developed over the heart, it would have almoſt as great ſemeiotic value as it undoubtedly has in varicoſe aneuriſms remote from the heart.

In caſes of ſuſpected varicoſe aneuriſm it ſhould never be forgotten that thrill may be developed in diſtant arteries by cardiac diſeaſe. A ſtriking inſtance of the importance of remembering this fact came under my notice ſome years ago.

A man received a wound in the right ſide of the neck, from which there was ſo copious an arterial hæmorrhage that the ſurgeon in attendance believed that the carotid had been opened. Finding on the man's recovery that there was very marked thrill and murmur at the ſite of the wound, he came to the concluſion that the vein alſo had been injured, and that a preternatural communication had conſequently been eſtabliſhed between it and the artery. When I ſaw the patient there was no doubt about the exiſtence of loud murmur and great thrill; but upon placing my finger upon the left carotid for the purpoſe of compariſon, I found there a thrill as diſtinct as that upon the right ſide. This led to an examination of the cardiac region and to the diſcovery of free aortic regurgitation and great hypertrophy of the heart, leſions which quite accounted for the cervical thrill, and ſoon afterwards proved fatal. *Poſt mortem* examination proved that a ſmall artery only had been wounded, and that no arterio-venous communication exiſted. The freedom of the hæmorrhage depended no doubt upon the cardiac miſchief; and the hard thrilling radial pulſe, which was really an indication of aortic regurgitation, had been ſuppoſed to reſult from the amount of hæmorrhage and the conſequent hæmorrhagic reaction.

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