

## PERSONAL PLEASURES

# IN PURSUIT OF ANCIENT SURGICAL AND MEDICAL INSTRUMENTS\*

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*The use of travelling is to regulate imagination by reality, and instead of thinking how things may be, to see them as they are.*—Samuel Johnson.

## I

The subject of medical history has keenly interested me since 1952. It was in that year I first read Sir Ernest Finch's Third Sheen Memorial Lecture in the *Cardiff Medical Society Proceedings*.<sup>1</sup> In the space of twenty pages he reviewed the history of medicine in Wales from the dawn of time to the present day. This admirable summary succeeds well in whetting the appetite of the enthusiast but does not satisfy it. Indeed, it was never the intention of the author to be exhaustive: he merely wanted to give an entertaining and accurate outline which would act as a stepping stone to further studies. A similar work has been completed by my colleague, Mr Ivor Thomas, F.R.C.S., of Swansea. It is written in scholarly Welsh under the title "Cyfraniad Cymru i Feddygaeth" and is published by the B.B.C.<sup>2</sup> Originally it was given as a radio lecture and I have been most fortunate in hearing Mr Thomas's private recording of it. Like the work of Finch it gives an excellent general background. Unfortunately, both writers have paid no attention to the aspect of medical history that has given rise to this paper, namely the question of the state of medicine in Wales during the Roman occupation.

Whilst searching for material to use in an intended article on medicine and Roman Wales, I consulted my friend, Professor Davies of the Classics Department, Aberystwyth. He kindly lent me his copy of Milne's outstanding work on surgical instruments.<sup>3</sup> Also, he advised me to visit British museums in order to see the relevant medical and surgical exhibits of the Graeco-Roman period. This I started to do. I then decided to put my plan before the Morgan E. Williams Bequest Committee and extend my visits to Italian museums. I would thus see the best European collections bearing on Roman medicine, especially those concerning ancient surgical instruments. There is no doubt that the British, French, German and Swiss collections are exceedingly interesting but I felt that no study of this kind would be complete without examining the collections at Milan, Rome, Pompeii, and, above all, Naples.

\*This account of visits to Italian and other museums from September, 1956 to July, 1957, was made possible through the kindness of the Morgan E. Williams Bequest Committee.

## II

## A doctor at large

Summary of Itinerary	a.m.	p.m.
1956		
Tuesday, 11 Sept.		Travel to London.
Wednesday, 12 Sept.	Fly to Rome Visit Capitoline Museum	
Thursday, 13 Sept.	Prepare for train journey to Naples	Travel to Naples
Friday, 14 Sept.	Visit Museo Nazionale, Naples	Travel to Pompeii
Saturday, 15 Sept.	Re-visit Pompeii	Return to Rome
Sunday, 16 Sept.	A day of rest and planning	
Monday, 17 Sept.	(1) Re-visit Capitoline Museum (2) Visit the Institute of the History of Medicine, Rome University	Visit St John Lateran Museum
Tuesday, 18 Sept.	Fly to Milan	Visit Castello Sforzesca Museum
Wednesday, 19 Sept.	Fly to London, but called at Paris Airport, en route	Return Llantwit Major
Thursday, 20 Sept.	Re-visit London by car	
Friday, 21 Sept.	Visit the Burroughs-Wellcome Museum and Library	Visit British Museum
Saturday, 22 Sept.	Return home	
1957		
Monday, 22 July	Visit the Royal College of Surgeons	(1) Re-visit British Museum (2) Re-visit Well- come Library and Museum

Above is a summary of my archaeological trip, which is now given in greater detail. As companion I took my youngest sister.

11 September 1956 I boarded the night-train at Cardiff and joined my sister in London.

12 September 1956. At 3.0 a.m. we left by an Italian 'plane (Alitalia) for Rome. The flight was uneventful and although I had been in Italy on two previous occasions, it was a terrific thrill to return. We arrived at Rome Airport at about 7.30 a.m. to be greeted by glorious sunshine, and made our way to our flat at Via Monte Zebio, kindly lent us by my friends and patients, Dr and Mrs Franzinetti. The doctor is a research physicist at Rome University and his wife is a native of Llantwit Major. Everything had been organized for our arrival by Dr Franzinetti's mother and relatives who lived in an adjoining flat. Their friendship and hospitality meant a great deal to us in a foreign country. Moreover Dr Franzinetti's mother spoke fluent English and this was a great comfort to us as our knowledge of Italian was negligible.

In the morning we made our way to the Capitoline Museum and I was surprised and disappointed to find the section of my interest

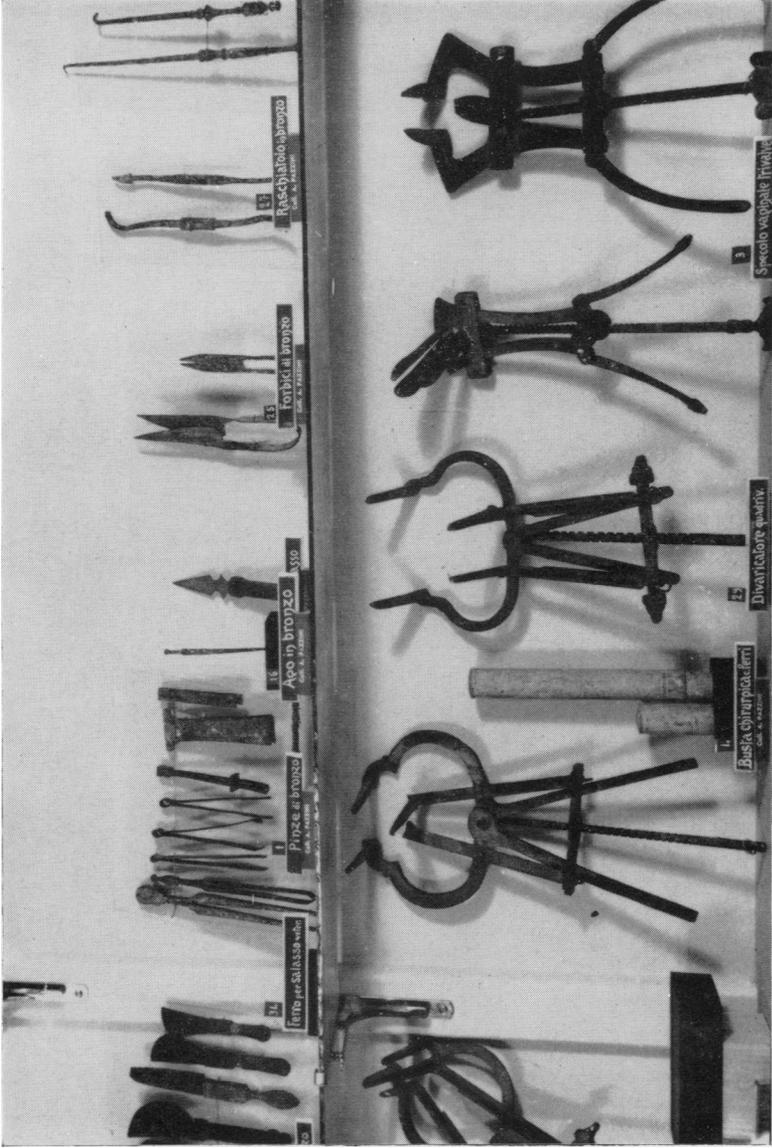


PLATE I

*Graeco-Roman surgical instruments photographed in the Institute of the History of Medicine by courtesy of the director, Professor Pazzini*

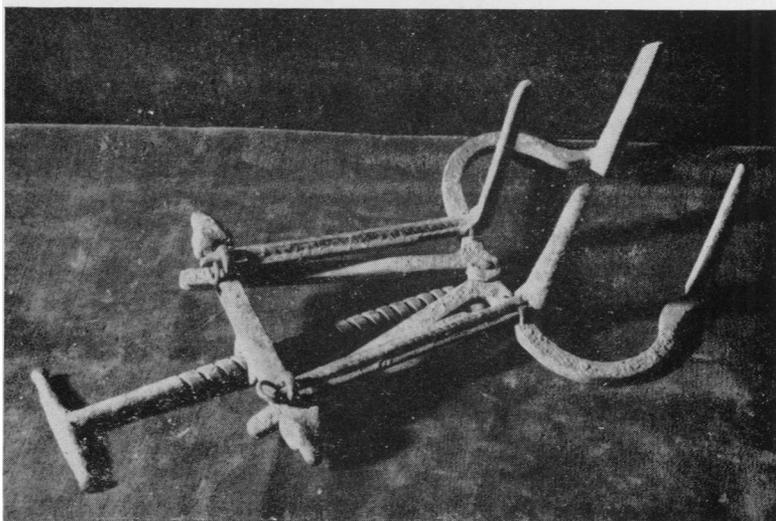
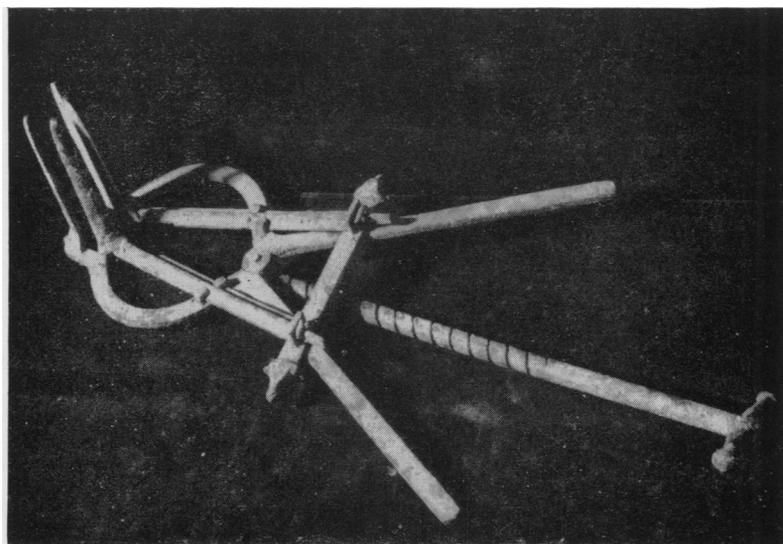


PLATE II

*Graeco-Roman three pronged and four pronged vaginal specula  
Photographed by the author at the Institute of the History of Medicine, Rome,  
by courtesy of the director, Professor Pazzini*

closed to the public. We had to content ourselves by looking at other things of beauty and objects of art. The rest of the day we spent resting as we had missed a night's sleep through travel.

13 September 1956. In the morning we prepared for a train journey to Naples. In the afternoon we made our way to Naples by a fast diesel called appropriately the "Rapido". It was a very pleasant journey. The agricultural lands of the Campania were at their best, the chief crops being grapes and olives. We reached our destination in the late afternoon and put up at Parker's Hotel. This overlooks the beautiful bay with majestic Vesuvius standing on guard over the whole panorama. In the distance smothered in the haze of a September afternoon lay the fairy isle of Capri. This was my third visit to Naples in eight years, but on this occasion academic interests rather than mere personal pleasure were the stimuli. I considered myself lucky to be here: given the right conditions, one could live in this spot for ever.

14 September 1956. In the morning I visited the Museo Nazionale. Again I experienced difficulty in seeing what I wanted. My *vade mecum*, Milne, was a great help. I showed the custodians the 50 or so photographs of Roman surgical instruments at the back of the book and then they knew what I wanted. After deliberating amongst themselves for half an hour I was finally taken to see the collection. They were certainly worth waiting to see. It was a wonderful experience checking Milne's photographs with the actual objects to hand. I must have seen about 200 instruments.

In the afternoon I travelled by train to Pompeii—The City of the Dead. The journey takes an hour by train along the south shore of the Bay of Naples; during it I passed very close to the foot of Vesuvius—"the genius of the scene", but it showed no signs of activity. When I was here in 1948 it was actually smoking. I spent the afternoon, partly exploring the disinterred ruins and partly in the museum. The latter housed a small collection of surgical instruments, mainly bronze, which should be seen for the sake of completeness.

I also saw examples of the so-called "Petrified Men of Pompeii".<sup>4</sup> In my collection I have two illustrations<sup>5 6</sup> of these plaster casts of human bodies—victims of the disaster which occurred in the month of August, 79 A.D. These unfortunates were overcome by volcanic ash. After being moistened by rain, the ashes formed moulds around the dead bodies which, in time, disintegrated and left hollow moulds. On discovery the moulds are filled with plaster which hardens to give a cast of the victim's body. Professor Amedeo Maiuri, the archaeologist, and his team of diggers have recently discovered two further bodies in the north-eastern suburbs of the once rich Pompeii.

15 September 1956. I decided to re-visit Pompeii and seek out the House of the Surgeon, so named because the major portion of the Neapolitan and Pompeian collection was found in this ruin during excavations. In this matter I was helped by Maiuri's guide-book<sup>7</sup> which is furnished with good plans of the city. Senn<sup>8</sup> liked to think of it as being occupied by the principal surgeon of Pompeii, where bleeding and cupping were practised for all sorts of maladies, real and imaginary. There is no need for me to describe its architecture as Maiuri treats the subject fully.

In the late afternoon we returned to Naples and boarded a crowded train for Rome. We had not booked previously and were thus obliged to stand for the whole journey, packed like cigarettes in a tin, surrounded by soldiers, peasants and bambini. We were surprised to find that we had both developed very marked postural oedema of the ankles which lasted for about 18 hours.

16 September 1956. Sunday. We decided to rest our swollen ankles.

17 September 1956. Monday. On this occasion I was successful in seeing the collection of surgical instruments at the Capitoline Museum. The memory of the Neapolitan collection was still very fresh in my mind and in comparison I did not find this collection as exciting. Furthermore, they were not on display, but bundled together in a heap at the bottom of a dusty glass case. There were about 50 instruments in all, some of which were in a bad condition due to oxidation.

Having completed my mission here, I made my way to the Institute of Medical History where I introduced myself to Professor Pazzini. He made me most welcome, and asked if I could converse in Italian, German, or French. Unfortunately, I could not oblige, and, since he had only a little English, we were unable to have any sort of discussion. He must have thought of Portia's words—"Who can converse with a dumb show!?" Nevertheless, he was kindness itself and arranged for me to see his treasure-house. It was a veritable paradise for the medical historian. He had a great variety of exhibits tracing the healing art from the earliest times down to the present day. To my mind the whole was on a par with the Wellcome Medical History Museum in every way. It was an object lesson in the art of display, and would conform to Martin's<sup>9</sup> standards for an ideal museum in every way. The Institute also housed a substantial library of books on medical history, but does not equal the Wellcome Library of Medical History, which has to be seen to be believed. In the basement of the building there was a large lecture room. Another large room was divided into two halves. In one there was a life-size wax replica of a mediaeval apothecary

working in his shop, while in the opposite half was the wax figure of an alchemist watching over his crucibles and retorts. These displays were very real indeed, but reminded me too much of Madam Tussaud's, so I made my way back upstairs to see Professor Pazzini's fine collection of Graeco-Roman surgical instruments. He had good examples of all types. I shall never forget my visit to this Institute and I can thoroughly recommend it to all enthusiasts of medical history, no matter what their interest is in this field.

In the afternoon I visited the St John Lateran Museum. My main interest was in one item only, housed in the Profane Section. It consisted of a tablet of white marble depicting surgical instruments. In this museum the walls are literally covered with ancient inscribed and carved stones of all kinds.

18 September 1956. Tuesday. My mission in Naples, Pompeii and Rome was now complete, so in the morning we flew in a twin-engined LAI plane to Milan, dropping in at Pisa airport en route. In 1952, I had the pleasure of seeing the famous Leaning Tower from the train. Today, my sister and I caught a glimpse of it from the air and it was truly a wonderful sight. Shortly after leaving Pisa we were flying over the Po and the plain of Lombardy, and soon we touched down in Milan. That afternoon I tried to see the collection of instruments at the Castello Sforzesca museum. Once again I failed to see their collection. Dr Rosa, the curator of that section was away on holiday. Apparently, the instruments were stored away in the dungeons ever since the bombardment of North Italy during the late war. Naturally, I was very disappointed. Milne's catalogue of this collection reveals that it did not contain anything unique, but I would still like to have seen this collection to cover everything. Unquestionably, anyone who has been fortunate enough to see both the Neapolitan and the Pazzini collection of Roman instruments can content himself in knowing that he has seen the best and finest in the world.

19 September 1956. Wednesday. Envoi. In the early hours of the morning we boarded a plane at Milan for home. Because London Airport was enveloped in fog, we were diverted to Paris Airport where an interesting two hours was spent. Some of the passengers regarded this as a nuisance, but, frankly, I thoroughly enjoyed it. I thought it quite a novelty to eat a Continental breakfast while we watched air liners from all parts of the globe taking off or landing. Finally we arrived in London. I bade my sister farewell and returned to Llantwit Major that same evening.

20 September 1956. Thursday. I returned to London by car. I regarded this as complementary to my visit to Italy.

21 September 1956. Friday. In the morning I visited the Wellcome Medical History Museum and looked at all the exhibits of the Graeco-Roman period. I enjoyed myself exceedingly but could not help thinking of the high quality of the exhibits at Naples and at Professor Pazzini's Institute.

In the afternoon I called at the British Museum and examined a collection of instruments appertaining to the Roman period in Britain. I arranged for a photograph to be taken of some of the more interesting exhibits and I now have this in my possession. Mr Brailsford, of the Roman Britain department, introduced me to a very fine clamp found in the River Thames. Apparently, it was used for castration in the rites of Cybele. This is a most intriguing instrument which has received full attention in a paper by Francis.<sup>10</sup>

22 July 1957. Monday. On the advice of Professor Lambert Rogers, I travelled to London again and visited the Royal College of Surgeons. On arrival I got in touch with the librarian, Mr W. R. LeFanu, who very kindly took me on a conducted tour of the College. Among other things, he showed me the new council room and also the dining hall. In the library, I was able to consult the pioneer publication of Benedetto Vulpes.<sup>11</sup> This work consists of a series of articles describing all the surgical instruments excavated at Pompeii and Herculaneum up to 1847. Milne states that it is profusely illustrated, but not as fully as I had expected. The best illustrations I have seen to date on this subject are in Milne's own book and in Gürtl's classic.<sup>12</sup> The plates in the latter are superb in quality and quantity.

Unfortunately, I was unable to see Miss Dobson, the curator, for long. Mr LeFanu and I went along to the instrument section of the museum, where, with great regret, we found that everything was stored away in cardboard boxes in readiness for display at a later date when the new extensions are complete. Correspondence dated 8.8.57 from Mr LeFanu confirms that there never were any real Roman instruments at the Royal College of Surgeons but only reproductions of instruments illustrated in Milne's book. I am grateful to Mr LeFanu for all his interest.

In the afternoon, I called at the Greek and Roman antiquities section of the British Museum and looked at a further collection of classical instruments. Finally, I went along to the Wellcome Medical History Library and spent a few hours seeking out more references for this work.

As regards libraries nearer home, I have been fortunate in having the help of Miss Lumley Jones of the Welsh National School of Medicine, and Mr Hopkins of the Cardiff Central Library. Through the good offices of the Misses M. and E. Bruce of Monk Nash, I have been able to borrow books from their private library.

## III

## Some General Comments on Museum Exhibits

There is a wealth of first-class literature dealing with Graeco-Roman surgical instruments and the bibliography has now become vast. It would take a year or more of intensive study to encompass it all. This being the case, it is exceedingly difficult to write anything original or fresh on a topic which has received so much attention in the past. But research is never-ending, so one keeps on hoping that something new will emerge as a result of further efforts. With this in mind, I venture to make a few comments on these ancient instruments, feeling, I must confess, somewhat like a vulture picking at the carcass when the lions have gone. My addition to new knowledge is small, but I seek solace in the fact that my research has helped considerably in opening my eyes to the whole field of Graeco-Roman medicine.

While at the Museo Nazionale, I saw a wide variety of instruments which included bleeding-cups, bone-elevators, bone-forceps, balances, trocars and cannulae for ascites, catheters, cauteries, etui, medicament boxes, needles, ointment boxes, slabs, probes, scalpels, speculae uteri, speculae ani, toothed forceps and whetstones. Most of the instruments were fashioned from bronze and showed a very high level of craftsmanship. Only a few of them showed the destructive action of heat and oxidation, the bulk being in an excellent state of preservation.

Milne devotes almost a whole chapter to the subject of bleeding cups. The extraction of blood by means of cups has been practised from remotest antiquity. The largest bronze cup known is in the Athens Museum and the smallest one I have seen is in the British Museum. The latter is 2-in. in height and has a small hole in its dome, the result of oxidation. In Athens Museum there are several glass cups. Presumably, the glass ones were used when the surgeon wished to mark the quantity of blood extracted. I have in my possession an illustration taken from a "medical calendar" published by Steffen Arends in Lubeck, 1519, and this shows a mediaeval bath attendant adjusting a bleeding cup on a woman's back. A nearby man has three such cups applied to his back. These cups are identical in shape with those found at Pompeii. At the turn of this century our interest in this mode of therapy was heightened by the work of the German surgeon, Bier, who invented a series of vacuum cups to fit every part of the body. These were provided with suction bulbs. I thought cupping in this country had become obsolete until I read in a recent copy<sup>13</sup> of the *British Medical Journal* that dry cupping with a pre-heated bottle was used in the

case of a doctor who had been bitten by an adder. Dry cupping is still practised in Russia and France.

Very ingenious and elaborate are the trivalve and quadrivalve uterine specula. Senn gives a very lucid description of the modus operandi of the trivalve speculum in his informative article "Pompeian Surgery and Surgical Instruments".<sup>8</sup> It is, however, to Neville Rolfe that we must attribute the original description of this instrument. Gürlt gives an ample description of the quadrivalve instrument in his *Geschichte der Chirurgie* and this is accompanied by good illustrations.

With regard to illustrations of instruments, no student of archaeology could wish for anything better than those found in Milne and Gürlt. *En passant*, mention must be made to the illustrations shown in Warner's *Calendar of Medical History* for 1957,<sup>14</sup> in Bailey's *Legacy of Rome*,<sup>15</sup> in Buckler and Caton's article,<sup>16</sup> in the writings of Thompson (referred to later) and in Ricci's comprehensive review of surgical instruments.<sup>17</sup> While at Naples, I was fortunate in procuring a photograph of the more important instruments at the Museo Nazionale, thus adding to my modest, but ever-increasing, personal collection of illustrations relating to Graeco-Roman medicine in general. Charles Dickens pays fleeting reference to these instruments in his *Pictures from Italy*,—nothing ever seemed to escape the observant eye of that master-writer.

Senn states that all the Neapolitan instruments with the exception of the specula and catheters are diminutive in size as compared with the same instruments of less remote and modern times. This may well be due to the fact that most of the operations performed in classical times were surface operations requiring short, dainty instruments which would not be as alarming to the patient as big clumsy ones. Furthermore, the Pompeian surgeon may have been blessed with small, artistic hands. His uvula forceps was certainly diminutive (11 cms.) perhaps suggesting its use in small children with elongated uvulae due to chronic pharyngitis. Alternatively, this forceps could have been used as a pile crusher or for removing pedunculated warts. The multiplicity in the uses of all instruments is always a problem to archaeologists. The double-ended bronze spatula, for example, would have had a number of different uses besides that of being a tongue depressor: they may well have been used for cooking and mixing paints.

In the Neapolitan collection there is a toothed dissecting forceps, which, according to Vulpes, has the engraved name Agathgelvsf. This same forceps is illustrated by Gürlt and Ricci. Both Vulpes and Gürlt regard this inscription as the name of the maker and read it thus: "Agathgelvsf(ecit)". F. H. Garrison quotes three

works on medical epigraphy, a book by Blanchard, an article by Oehler in Janus and lastly another book by J. Arata. I have been able to consult the first two authors, but they make no reference to the above inscription. Arata may be a more fruitful source and I hope to find a copy of his work one day.

Regarding the Capitoline collection, two things stood out in my mind. I was amazed at the way in which the bronze tweezers and forceps retained their "springiness", some two thousand years after they were first fashioned.

Secondly, the blade of one of the scalpels was semi-circular thus resembling in form the ancient Egyptian type.

In Thompson's<sup>18</sup> *Guide to the Surgical Instruments, etc.*, kindly lent me by Professor Lambert Rogers, there is an excellent account of the development of the scalpel with illustrations.

Milne refers to a votive tablet with a box of instruments carved on it which he states is housed in the Capitoline Museum. During my visit here, I made enquiries regarding this, but the English-speaking custodian did not seem to know about its existence. Fortunately, a photograph of this tablet appears in Weinberger's *History of Dentistry*.<sup>19</sup> In Thompson's other book<sup>20</sup> there is an illustration of a Roman bow-saw taken from a stone relief housed in this same museum, but I did not know this at the time of my visit.

At the St John Lateran Museum I saw a votive tablet of white marble depicting surgical instruments, and made a rough drawing of it for future reference. I have now discovered that an illustration of the tablet appears both in Weinberger's and Guerini's<sup>21</sup> dental histories.

One of the high-lights of my continental tour was my visit to Professor Pazzini's Institute. Primarily, my object was to examine his collection of Graeco-Roman instruments, of which he had a very wide range. What he lacked in quantity was made up in the quality of his exhibits. Of particular interest to me were his replicas of the various kinds of drill or terebra used in dental surgery, for removal of weapons lodged deeply in bone, and also in craniotomy. These simple instruments were used in the operation of trephining. Professor Lambert Rogers in his *History of Craniotomy*<sup>22</sup> prefers the term trepan to trephine, stating that from the etymological point of view, it would be more correct to use the former.

After my return from Italy, I wrote to Dr Franzinetti asking him if he could procure photographs of Professor Pazzini's tri-valve and quarri-valve specula. This he kindly did. To them I render thanks for their painstaking efforts on my behalf. I now have several large photographs of these instruments which were taken at the Institute.

In closing this short report, several thoughts pass through my mind. First of all, I should like to record how beneficial this trip has been to me from many points of view. I feel very proud to think that I have made this journey in an age when medical history is undergoing a renaissance. The late Professor Sigerist<sup>23</sup> lamented the fact that in most countries medical history has not yet found the place it could profitably hold in the curriculum, despite the fact that knowledge of it will act as a great source of inspiration to the young student. Men like Osler, Welch and Clifford Albutt had a humanistic education for many years. Osler always stressed the part that medical history should play in the training of students in order to broaden their outlook. Nevertheless, it brings me cheer to think that we are living in a period of fine writing in the history of medicine with first-class research and enthusiasm as its keystone. I also feel that it is most fitting and timely that this report is being submitted in the jubilee year of the National Museum of Wales. At the moment there is wide general interest in things archaeological and historical, stimulated and fostered by television programmes such as Dr Glyn Daniel's "Animal, Vegetable and Mineral"; the subject of this report owes much to these influences.

I have already started a scrap-book consisting of cuttings, pictures, illustrations and photographs covering many aspects of Graeco-Roman medicine. These might well form the basis some day for a small exhibit illustrating one facet of medical history. In the planning of this, I would keep in mind the important article of Sylvia Treadgold<sup>24</sup> which deals very fully with the subject of presentation.

As an offshoot of my present task, I have found that Continental travel has re-awakened my old interest in foreign languages. I think it is a great pity that so many of us drop our interest in French or German when we leave school. I know that College curricula are constantly being over-burdened with new courses and requirements for examinations every few years, but I would make a plea now for the continuation of the study of French or German *pari passu* with our other undergraduate studies. I have learnt to my cost how difficult it is to learn a new language after graduation.

In conclusion, I sincerely hope that the selected bibliography appended to this report will be of some help to a future investigator. Bibliographers, of course, do not create medical history, but, as has been said, the merit of their work lies in the conservation of what the inventive-minded of their professional colleagues have added to the knowledge and tradition of medicine. May I misquote Montaigne slightly and end by saying "I have here only made a nose-gay of culled flowers and have brought nothing but a little of my own and the thread that ties them together".

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**Oral Prednisolone in the Treatment of Varicose Ulcers.** P. G. HARRIS, M.D., B.A.O., *The Practitioner* (July 1959), 183, 72.

Dr Harris treated a series of 32 patients with viscopaste bandaging for varicose ulcers, and gave prednisolone to 20 of them in doses averaging 15 mg. daily for six weeks. There seemed to be no doubt that the prednisolone group healed more quickly—an average time of six weeks, against eleven weeks in the controls. Some of the controls healed quickly when finally transferred to the prednisolone group.