

PIERRE FRANCO: HIS TIMES AND HIS SURGICAL PRACTICE.

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It sometimes occurs that men of humble origin and low station, by superior mental attributes and facility in adapting themselves to the wants and understanding of their contemporaries, are able to impress their personality more deeply upon their age than those who, by high position and extensive power, would seem to possess exceptional opportunity for acquiring fame. A man of this character was Pierre Franco. Born at Turriers in Provence about the year 1500, he entered upon the practice of the art of surgery in Lausanne in 1526, and some years later removed to Berne, where in 1556 he produced his "*Petit traite contenant une des parties principales de chirurgie, laquelle les chirurgiens hernieres exercent,*" a thin octavo of one hundred and forty-four small pages.

This century was a remarkable period of activity, intellectually and practically. Europe, writhing under the yoke of ignorance and oppression, its heritage from the dark ages, was awakening to new energies. Charles V had brought the nations nearer together by his great empire, and, leaving his domains to Philip and Ferdinand, filled out the measure of his days in quiet at Saint Just. France was groaning under the arrogant scepter of Francis I, whose days were spent in civil war and Huguenot persecutions, vying with his royal cousin, the vindictive Mary of England, in attempts to abolish heresy, while over them all the proud Paul IV extended his power from the city of seven hills. Loyola, after a life spent in the service of the Society of Jesus, had passed to his rest the very year that Franco issued his little book. And in spite of his life-work, the reformation of Luther, Erasmus, Melancthon and Zwingli was growing to be a mighty power, even under the stern sway of Calvin at Geneva.

A new literature was being born to the western world in this epoch, glorified by the names of Tasso and Ariosto in Italy, by Marot and Rabelais in France, by Cervantes, Ercilla, Lope de Vega and Quevedo in Spain, while England lagged behind with Shakspeare and Spenser, Ben Johnson and Walter Raleigh, Marlowe and Massinger, Sidney and Bacon.

At this time Ambroise Paré was at the height of his power in Paris, the surgeon and friend of the king. Tagliacotius was making new noses and lips in Bologna, where the noble Aldrovandus was adding treasures to the studies of ornithology, entomology and physiology. Vesalius had just surprised the world with his portly folio on anatomy, with plates drawn from his dissections by Johann von Calcar, the favorite pupil of Titian. Eustachius, starving in poverty at Rome, was produc-

ing his famous plates, which, published a hundred and fifty years after his death, rendered him immortal as one of the great restorers of anatomy. Fallopius, at Padua, was filling the chair recently vacated by Vesalius, and investigating the mysteries of the human frame with the aid of his pupil and successor, Fabricius at Acquapendente. Columbus was dissecting and demonstrating the valves of the veins and the pulmonary circulation at Rome, and standing upon the threshold of the discovery which made the English Harvey immortal. Michael Servetus, the hot-headed and versatile anatomist and theologian, the pupil of Guentherius and the fellow-student of Vesalius, had within a few months been burned at the stake for heresy by John Calvin, in the neighboring city of Geneva. The Tuscan Cæsalpinus, was engaged in the studies which have caused modern Italy to crown him as the discoverer of the circulation of the blood instead of Harvey. Thomas Gale, the "Pare of England," was preparing his "Enchiridion," and greatly assisting the progress of scientific surgery in London. Conrad Gesner, the "Pliny of Germany," was gathering new plants and investigating their medicinal virtues at Zurich, and this long procession of names, famous in medicine, was closed by Camerarius, Cardan, Etienne, Bauhinus, Mercurialis, Alpinus, Valverde and many others whose names are indelibly engraved on the tablets of the history of our art. Verily a period memorable in the annals of medicine!

Not the least among these was Pierre Franco, of Lausanne. Born, probably of poor, certainly not of noble, parentage, with no influence except that of his own personal exertions, he made his name to be quoted with honor centuries after his death. Of his life and career, we know almost nothing. That he was born at Turriers, that he taught anatomy at Fribourg and at Lausanne, that he practiced surgery at Berne, and that he prepared some skeletons and presented them to the library of that city, is about all. Never holding an official chair, protected by no influential patron, not even possessing a university degree, by his own merit he places his name above oblivion. He was a representative, perhaps, of the highest class of peripatetic operators of the sixteenth century, going from town to town to relieve the people of the surgical ills to which their flesh was heir. To one of these, a trip to "Sauagny" near "Neufchastel," "for hernias, hare-lips and stones," he refers in his book.

After thirty years of practice, as we learn from his preface, seeing that the branches of surgery, to which his life had been devoted, had been neglected by reputable authors, he conceived it to be his duty to lay before his fellow-practitioners, the results of his experience; to disseminate a proper knowledge of the art of surgery for the benefit of "those who practice their profession with fidelity and fail only from ignorance," and "to

repress the arrogance of the sharpers who deserve to be punished by the magistrates as robbers—the more as, under a pretense of giving aid, they torment their poor patients and make them die in misery.”

He published two works, or rather two editions of the same one. The first I have already quoted; the second, published also at Lyons, five years later, was a much more voluminous and extensive work, of more than five hundred and fifty octavo pages. More common than the first, it is entitled: “*Traité des hernies, contenant une ample déclaration de toutes leurs espèces et autres excellentes parties de la chirurgie, assavoir de la pierre, des cataractes, des yeux, et autres maladies, desquelles comme la cure est périlleuse, aussi est elle de peu d'hommes bien exercée; avec leur causes, signes, accidens, anatomie des parties affectées et leur entière guarison.*” The first edition is exceedingly rare, and copies of it are secured with difficulty, and, when obtained at all, at extravagant prices. To the editors of the Paris *Revue de chirurgie*, then, are due the grateful acknowledgements of the student of the history of surgery, for their fac simile reprint of this edition published during the past year (1884).

This edition presents what the old master himself conceived and executed, uninfluenced by authority, and bears the impress of originality in every line. The style is pleasing because of its honesty and sincerity and the simplicity of the language—the diction of a man accustomed to handle the scalpel rather than the pen; that of the later is more artificial, and not possessed of the freshness so attractive in the first.

Franco is best known in modern times by his connection with the supra-pubic operation of lithotomy, which he probably devised, and of which he certainly performed the first recorded case although, doubtless unknown to him, the method had been suggested by Archigenes fourteen hundred years before. Hypogastric section was, however, performed by him only once, and in that case as a *dernier ressort*, he fearing, in common with his contemporaries, that an incision of the body of the bladder would almost necessarily be fatal to the patient. He warned surgeons against following his example, leaving it for Rousset, twenty years later, in his “*Traité nouveau de l'hysterotomotomie*,” to show that incision of the body of the bladder was not fatal, nor even dangerous, by its analogy with incision of the uterus in the Cæsarian operation. Rousset may then be said to have been the first to advocate the operation to which Franco's name has been attached—an operation performed many times with great success in England by Douglas and by Cheselden, whose “*Treatise on the High Operation for Stone*” is a classic; in France by Morand and Souberbielle; in our own country first by Gibson, of Philadelphia, and in Germany latterly by Peterson, of Kiel, who has devised a method of raising the bladder into a position favorable for the operation by introducing into

the rectum a small rubber bag connected with a tube and distending the bag with either air or water. Franco's account of his case is as follows:

"It occurred once that I wished to remove a stone from a child of ten years or so, but in spite of all my efforts, I could not bring it down to the neck of the bladder. In view of the fact that the patient was very much exhausted by his sufferings, and that the parents desired rather that he should die than live in such agony, and also that I did not wish it to be a reproach to me that it should not be extracted—although it was foolish, I decided to incise the bladder from the pubis, a little to the left. This I did, cutting upon the stone which I had raised up with my fingers inserted in the fundament and held under control with the hand of an assistant who compressed the abdomen into the pelvis: and in this way I extracted it. The stone was as large as an egg. Nevertheless the wound consolidated and was healed. However, I would not advise anybody to do this, but rather to use the procedure devised by us, of which we have spoken."

He describes with approval three other methods of extracting stone. The ordinary method was, first to require the patient to jump two or three times to jar the stone down, then to assume the lithotomy position which is described with great minuteness. The patient then being held in this position, the operator introduced the finger of one hand into the "fundament" and pressed upon the lower portion of the abdomen with the other, thus forcing the stone down to the neck of the bladder, which was the only part of that viscus that he thought it safe to incise; this done, an incision was made "between the fundament and the testicles, two or three finger's breadth in length and about an inch on one side of the commissure of the perineum, the left if the operator was right handed," and *vice versa*. The knife was small and preferably two-edged. The operator cut very gently down to the stone and then cut the neck of the bladder upon it. The stone was then seized with forceps or crotchet and extracted.

A second method which he described as the *grosse ferremete* was done with the aid of a properly curved grooved sound for guiding the point of the knife. This was introduced and held so that the groove was to the left, the incision made as before stated and the neck of the bladder cut on the sound, instead of on the calculus; upon the grooved sound, as a guide a gorget—"gorget"—was introduced, on which strong forceps, called the *grosse ferremete* were passed into the bladder, the gorget withdrawn, the stone firmly grasped with the forceps and removed.

If the stone did not present itself at the wound, or if it was very large he followed a procedure which he described as "Another Method of Extracting Stone, incomparably better

than any other, since it is without danger and great pain, devised by the Author." The peculiarity of the method was that it was done on two different days. The incision was made and, if the stone were small and presented itself at the opening, it was removed at once and the operation completed. If it were large and its removal would involve wounding the walls of the bladder, which he considered dangerous and usually fatal, or if it did not present itself at the opening, the patient was allowed to rest and recuperate for a day or two. The stone was then extracted with forceps if small; if not, it was broken with cutting forceps which he had devised and the fragments removed. This would seem to be the origin of perineal lithotrity.

He devotes a chapter to the causes, symptoms and medical treatment of lithiasis and the removal of urethral calculi. As symptoms he quotes a sense of weight at the pubis or perineum with pain referred to the glans penis and frequent erections, together with strangury and perhaps a history of renal colic. He also describes a metallic catheter and sound, which he considers of value in suppression of urine, and as a means of diagnosis. If the operation would be very large, he quotes the authority of Guy de Chauliac for joining the edges by a single suture, but he never stitched a lithotomy wound himself, finding it sufficient to draw the patient's legs together. If inflammation of the bladder arose, he injected a "decoction of mallows, violets, roses, chamomiles and similar things, adding as much as might be thought desirable of the oils of violets, roses, lilies, *scorpions* and the like." This introduction of oil of lilies and oil of scorpions into the same preparation would seem almost like a touch of grim humor on the part of our old worthy. If any stone had been left in the bladder after an operation he advised that the blood of a newly killed goat be injected, which "has the faculty of easing pain and dissolving the stone" as well.

The mode of extracting calculi from the female bladder varied, but little from that in vogue until very recently. If the stone were small, it was extracted through the dilated urethra, which could be enlarged sufficiently to admit the finger; if large it could be crushed with cutting forceps, and the pieces extracted in the same way. If a cutting operation were held to be preferable, the stone was removed through the vagina or "neck of the uterus," as he called it, into the neck of the bladder.

This work has been spoken of for three centuries as a work on hernia, although the first edition treated simply of "most parts of surgery practiced by what may be called hernia-specialists." These "parts" included the widely diverse branches of amputations, cataract, hare-lip and wens. Nevertheless, about half of the book is occupied with the subject of hernia, under which he included all scrotal and inguinal tumors—hydrocele,

sarcocele, varicocele, and humoral and gaseous tumors, and rupture proper, intestinal and omental, and bubonocele. His operations for the relief of hernia proper are radical indeed. Using the word didymis for the "two tunics, which envelope the spermatic vessels, and their contents," he defines intestinal hernia as the descent of the intestines into the scrotum; after the patient has been "well purged under the direction of a physician," an incision was made at the most dependent part of the scrotum for drainage. The intestines having been returned—by taxis I infer—and kept back by an assistant pressing in the pubic region, the testicle was seized at the lower part of the scrotum and removed together with as much as possible of the didymis. The stump was then firmly grasped by peculiar clamps, while a ligature was passed through the middle of the didymis just above the clamps, then, including half of the didymis it was passed back and out upon the other side, and the two ends tied. The clamps were then loosened, the stump cauterized and allowed to drop into the abdominal cavity, the ends of the ligature hanging from the wound. The parts were then bandaged with a compress over the pubis and the patient allowed to recover. In case of severe inflammation and the formation of "bad humors" free openings should be made for drainage and antidotes administered internally, lest "*the poison mount to the heart and suffocate it.*"

A second method, which has the great advantage of not requiring the removal of the testicle, consists in drawing the didymis through an incision at the superior part of the scrotum, dividing it into four equal parts and ligating the two middle ones as in the preceding case. A third method is similar to the second, except that the ligature is of gold wire, which is permitted to become encysted, since it is "a friend of nature, like lead."

He devoted a long chapter to a description of his method of couching for cataract, and to a discussion of the difference between hard and soft cataract. His procedure was simply to force the lens backward and downward into the vitreous with a needle, directing that, when pushed back, it should be held there "during the time of saying the Lord's prayer two or three times or more as would seem expedient."

In opening his section on hare-lip, he fulminates his belief that the opinion that "what God has given from birth cannot be cured, is not only wrong but heretical, as Guido says. I have cured many by the help of God: wherefore I will show how it is necessary to proceed." Having freshened the edges of the fissure, he drew them together with two triangular pieces of adhesive plaster, which, adherent to each side, were so drawn as to bring the two edges in opposition and stitched together. Another method was by passing needles through the flaps in the manner of hare-lip pins.

In his chapter on the "Manner of Extirpating an Arm or Leg," he is very brief, giving directions as to the mode of placing and fastening the patient to the table, and to encircle the limb tightly with a band an inch or two above the proposed point of incision. He performed the circular operation allaying hæmorrhage with the actual cautery or with boiling oil. Then with a chapter on "*Luppies*" or wens, he closes his account of "those things of which, from his experience he considered himself especially qualified to speak."

His work is illustrated with rude wood-cuts of quaint and roughly made instruments gorgeous in ornamentation and clumsy in construction. Rude though they were, in the hands of the master, with his careful, almost timid, surgery, they accomplished far more than did his successors for many years with instruments of better construction but with less personal dexterity and well-founded judgment.

The life of Franco should be an especial stimulus to the general practitioner. With no college professorship, with no hospital facilities, with no official position, with none of the *ecldt* attendant upon high social position, he fought his way by force of his own sterling worth to the point where his name can be read by all succeeding generations. The thought that even like him, success may crown his work cannot but be an encouragement for "each manly worker to do his best, under a sky full of eternal eyes, and leave the rest to time."