

Year : 1982 | **Volume :** 28 | **Issue :** 3 | **Page :**
123-48

Medicine in Goa--a former Portuguese territory.

SK Pandya

Correspondence Address:

S K Pandya

How to cite this article:

Pandya SK. Medicine in Goa--a former Portuguese territory. J Postgrad Med 1982;28:123-48

How to cite this URL:

Pandya SK. Medicine in Goa--a former Portuguese territory. J Postgrad Med [serial online] 1982 [cited 2012 May 21];28:123-48

Available from: <http://www.jpgmonline.com/text.asp?1982/28/3/123/5573>

Full Text

INTRODUCTION

The history of the development of medicine in Goa forms an important chapter in the medical history of our subcontinent. In my admittedly short and incomplete study of this topic I have been fascinated by the ups and downs of personal and institutional fortunes; the tales of romance, bravery and rebellion against unjust authority; and the biographies of pioneering geniuses such as Garcia da Orta. I hope to pass on some of the thrill I experienced to you.

In an attempt at assisting the reader in establishing temporal bearings I recapitulate some relevant historic landmarks.[29] The Arab conquest of Egypt and Persia in the 7th century closed the earlier direct communication between Europe and India. Henceforth, all trade was through the Moors who, in the process, acquired enormous wealth. The Portuguese kings of the 15th century, desirous of the riches of the East, spurred their navigators into discovering a direct sea route to India. Bartholomew Diaz de Novaes circumnavigated Africa by rounding the Cape in 1487. On May 20, 1498 Vasco da Gama, with three tiny ships, anchored at Calicut. Calicut was then governed by a Hindu prince known as the Zamorin. The Arab traders prevented da Gama from doing much business. He returned to

Lisbon in August 1499. In 1500, the king of Portugal dispatched a larger fleet under Pedro Alvares Cabral. The resistance of the Arab Moplah merchants to the intrusion of their European rivals provoked horrid cruelties by the Portuguese commanders. In 1510, Affonso de Albuquerque occupied the island of Goa--the principal port in the dominions of the Sultan of Bijapur. The Sultan's officials in Goa, led by Timoja (his Hindu governor), had invited Albuquerque to move into Goa. Timoja's expectations of munificent rewards did not materialise, Albuquerque allotting him two districts only. The death of 74 year old Yusuf Adil Shah at Bijapur helped Albuquerque consolidate his hold on Goa.

After Albuquerque's death in 1515, the government of Portugal, under the guidance of King John III--a bigoted fanatic--pursued a policy of enforced mass conversions of Indians to Christianity. The Inquisition was established at Goa in 1560. The union of the crowns of Spain and Portugal occurred in 1580. The involvement of tiny Portugal (with limited resources) in the European quarrels of Spain spelt the ruin of its economy and its Goan empire. Its Indian settlements fell easy prey to Dutch and English rivals.

In the north of India, momentous changes were set afoot by Babur's entry into the Punjab in November 1525. Humayun ascended the throne on Babur's death in 1530. Akbar, in turn, was crowned on Humayun's death in 1556. The Portuguese appear to have established themselves at the Mughal court only after Jehangir's accession in 1605. They appear to have reached their acme in Shah Jehan's court (1627-1658) though Aurangzeb too was inclined to favour the Portuguese (1658-1707).

The Portuguese ceded Bombay in the charter of King Charles II in 1661--yet another instance of declining Portuguese power. The cession was made in order to secure English support against the Dutch. (The king, not realising the value of his acquisition, granted the island to the East India Company for ten pounds a year!) By the 18th century, Portuguese India consisted of Goa, Daman and Diu--a total of 1470 square miles.

Native medical practices before and after the arrival of the Portuguese.

Medical, education and practice in ancient and pre-Portuguese Goa is poorly documented. Research in this field is woefully poor. In the 75 pages dealing with Goan society prior to the 16th century, for instance, D'Souza[21] makes no reference to medical education, practice or health care. We do know that the Hindu culture predominated before Albuquerque's arrival and that his acquisition of Goa was, in fact, prompted by the general desire in Goa to avoid Muslim rule.[10], [21] We also know that whilst the priestly class dealt with matters spiritual, the vaidyas looked to the ailments of the body and sometimes of the mind as well. It is interesting to see a memorial unto one of the latter tribe in the main square of Ponda even today and witness the continuation of the role of healer, albeit in modern form, in the practice of Dr. Sharad Vaidya.

The vaidyas of yore, of course, practised Ayurveda and as with Ayurvedic physicians elsewhere, had reached their heydays centuries ago. Inbreeding, blind and unquestioned obedience to ancient texts and a failure to innovate gradually reduced their capabilities. Even so, early European travellers through Goa were impressed by their performances. John Huygen van Linschoten, who lived in Goa from 1583-1588 noted that they were held in esteem and were honored by customs.[5] "There are in Goa many Heathen physitians which observe their gravities with hats carried over them for the sunne, like the Portingales, which no other Heathens doe, but (onely) Ambassadors or some rich merchants. These Heathen physitians doe not onely cure their owne nations (and councitriemen) but the Portingales also, for the viceroy himself, the Archbishop and all the monkes and friers doe put more trust in them than in their owne councitriemen, whereby they get great (store of) money and are much honoured and esteemed." [5], [6]

Linschoten also made some observations on local ailments.[5] "...The sicknesses and diseases of Goa and throughout India which are common come most with the change of the times and the weather. There reigneth a sickness called mordexijn which stealeth upon men that it weakneth a man and maketh him cast out all that he hath in his bodie and many times his life withall. The bloody fluxe is very common and dangerouse as the plague with us. They have many continuall fevers which are burning agues and consume men whereby within four or five days they are whole or dead. This sickness is very common and dangerouse and hath no remedy for the Portingales but letting of blood but the Indians and the Heathens doe cure with hearbes and other such like ointment wherewith they ease themselves. This sickness consumeth many Portingales every yeare, some because they have little to eat and less to drink of that which is nourishing and use much company of women because ye land is naturall to provoke them thereunto... Pockes and piles with other secret diseases, they are very common and not concealed... They heal them with the root China... The plague hath never been in India... but poysoning, witchcraft and suchlike whereby some lose their lives is their dayly exercise... The stone, the gravel and rupture reigneth much especially among married men by reason of the great quantitie of water that they drink, being given to all pleasures and riotousness, enjoying what their hearts desire, sitting always with their bellies open in their shirts in gallerie, recreating themselves with the wind that cooleth them... "[5]

Linschoten noted that poisoning as a weapon of court intrigue was widely used by the Goans. (He did not recall that almost 50 years earlier, Afonso de Albuquerque, unable to defeat the Zamorin of Calicut at war, had set an example. In his letter to the king of Portugal, Albuquerque had stated: "I hold it for certain that the Nambiadiri slew the Zamorin with poison, because in all my letters I bid him do so and that in a peace treaty I will come to an agreement with him. . . "[10]). Linschoten also felt that many Portuguese husbands were poisoned off by their native wives. The climate, he stated, developed feminine sensuality to the point of consuming appetite. "...The women go altogether naked onely with a cloth before their privie members, which openeth chewing all they have, which is by them ordayned to the ends that by such means it should tempt men to lust after them and to avoid the most abominable and accursed sin of Sodomie.. . There are among the natives those that doe sowe up the privie member of their female children as soone as they are born, leaving them but a little hole to void their water. And when she marrieth the husband cutteth open as great or as little as he will... I saw one of those women in Goa whom the surgeon of the Archbishop's house did cut open..." The women of Goa, Linschoten noted..... have likewise an hearbe caled Deutroa which beareth a seed whereof bruising out the sap they give it to their husbands eyther in meate or drinke and presently therewith the man is as though he were halfe out of his wits and without feeling or else drunk, laughs and sometimes it taketh him sleeping like a dead man, so that in his presence they will and take their pleasure with their friends and the husband never know of it... The women have many devilish practices which they devise to make nature more lively... They doe use to eat those betteles, arreques and chalk and in the night it standeth by their beds. They eat whole handfuls of cloves, pepper, ginger and a baked kind of meat they call chachunde... all to increase their lechery... and they are not content therewith but give their husbands a thousand hearbes for the same purpose to eat, they not knowing, thereby to fulfil their pleasures and to satisfy their desires. .." He also referred to the custom by which "... the bride with music is brought to the pagoda which is made of ivory and by force they make the image take the bride's maydenhead so that the blood remaineth still upon the image and then after other devilish superstitions and ceremonies bring the bride home, where she is delivered to the bridegroom who is joyful and proud that the pagoda hath honoured him so much and eased him so much labour..."[5]

Francois Bernier visited Goa in the late 1560s. His observations on Indian medical practice embrace various parts of India but may be taken as representative of those in Goa. "...Of Physic they have a great number of small books which are rather collections of recipes than regular treatises. The most ancient and the most esteemed is written in verse. I shall observe, by the way, that the practice of the Gentiles of Hindoustan differs from ours, and that it is grounded on the following acknowledged

principles: a patient with a fever requires no great nourishment; the sovereign remedy for sickness is abstinence; nothing is worse for a sick body than meat broth for it soon corrupts in the stomach of one afflicted with the fever; a patient should be bled on extraordinary occasions and when the necessity is most obvious as whenever there is reason to apprehend brain fever or when an inflammation of the chest, liver or kidneys has taken place. Whether these modes of treatment be judicious, I leave to our learned physicians to decide; I shall only remark that they are successful in Hindoustan and that the Mogol and Mahometan physicians who follow the rules of Avicenna and Averroes adopt them no less than do those of the Gentiles, especially in regard to abstinence from meat broth. The Mogols, it is true, are rather more given to the practice of bleeding than the Gentiles, for where they apprehend the inflammations just mentioned, they generally bleed once or twice, not in the trifling manner of the modern practitioners of Goa and Paris but copiously like the ancients, taking 18 or 20 ounces of blood, sometimes even to fainting; thus frequently subduing the disease at the commencement according to the advice of Galen and as I have witnessed in several cases."[6]

Bernier further observed: "It is not surprising that the Gentiles understand nothing of anatomy. They never open the body either of man or beast and those in our household always ran away with amazement and horror whenever I opened up a living goat or sheep for the purpose of explaining the circulation of blood and showing the vessels discovered by Pequet, through which the chyle is conveyed to the right ventricle. Yet, notwithstanding their profound ignorance on the subject, they affirm that the number of veins in the human body is [5],000; neither more nor less just as if they had carefully reckoned them..."[6]

Charles Dellon, of whom more later, also provided an interesting insight into contemporary medical practice in Daman and Goa.[3], [27] "The pagan physicians, whom they call Pandites, are a sort of people without learning or any knowledge or insight into anatomy. All their skills are confined to a certain number of receipts which they have received from their ancestors. These they apply promiscuously without making the least alteration as often as they meet with a patient afflicted with the same distemper, without making the least reflection upon the different age, sex, constitution or strength of their patient. They are very timorous and rather will let a patient perish than run the hazard of a remedy which, as they believe, not being sufficiently approved by experience, appears doubtful to them, though they judge the distemper to be mortal or incurable without it..."[3]

Charles Dellon gave credit, however, where it was due to the native physician of the 1670s: ". . . Nevertheless it is observed that by their long experience they have made such observations concerning certain distempers peculiar to those countries, that they practise with better success than the most learned foreign physicians, who upon certain, occasions must follow their footsteps if they expect to succeed, in their cures, in this climate. They allow their patients afflicted with fever in the Indies, neither meat nor eggs nor broth... They allow them no other drink but fair water and for the rest of their substance they give them a Cange (made of rice, salt and pepper). The Cange, besides that it nourishes well, serves also to quench the thirst. I must confess I prefer this much before our jelly broths. . . Letting of blood is much used among the Indians and that with good results; the Pandites being by long experience convinced of the usefulness of this remedy will let blood 20 times one after another without the least reluctance to be observed in patients who never grumble here at what their physicians do but are exactly observant of their orders much beyond what is practised in most parts of Europe, where the patients, their friends and the nurses propose their own remedies before the physician's prescriptions. They let blood most commonly in the foot with extraordinary success... They prescribe leeches and cupping in those distempers where they don't think it proper to let blood. Clysters are also much in use among them as also purges. . . "[3]

Charles Dellon has left us a fascinating account of one-upmanship in the Goa of the 1670s: "The Pandites perceiving the urine of the patient that is afflicted with a fever to be white, they judge it to

proceed from a cold cause without having the least respect to the delirium and other symptoms... for which purpose they put pepper in the Cange and which they apply to the patient's head to warm the brains, which, they say, are too cold. For the same reason, they will not let blood in such a case till they find the urine to be of a high colour. I have made it my particular observation that of all those that ever I saw who were seized with a delirium before they were let blood and whose urine appeared white in the beginning, very few escaped with life unless, by good fortune, they happened to light into the hands of some European physicians who are better acquainted with the true cause of the distemper and its symptoms... I had, sometime before, under my care the younger daughter of a certain lady of the best quality... who had fallen dangerously ill of a continual fever with a delirium. The lady, upon the persuasion of a certain Pandite who had been physician to the family for a great while, made use of his prescriptions without letting me know anything of the matter. Finding her child grow worse, she sent for me, unknown to the Pagan physician, desiring my advice concerning her daughter. It was the ninth day when I was called in to her and finding her urine of a whitish colour and the fever very high with a violent delirium, I derived a far different indication to what the Pandite had done and having remonstrated to the mother the danger of her daughter who was not above seven years old I ordered her to be let blood immediately. The Indian physician, happening to come in at the same moment, maintained in my presence that the fever proceeding from a cold cause, the young lady would infallibly die if she were let blood. But I laughed at the weakness of the argument and my advice prevailing, she was let blood. I took from her head the pepper mixed with the Cange of which there was near half a pound, very finely beaten, upon the child's head. I let her, in all, five or six times, blood. after which the fever left her and I consummated the cure by giving her two or three purgations, contrary to the expectation of the Pagan physician, who thought death to have been infallible. . . "[3] (From this account it does appear that Abbe Carre was justified in stating that "... all of Dellon's science consisted in knowing how to bleed"[27]).

John Fryer, described as the most observant and learned of all the physicians and surgeons of the East India Company to come out to India, visited Goa in 1675. He too provided an excellent account of medicine as practised then. "Whilst magic and judicial astrology, grammar and rhetoric are held in high esteem, elocution, physick, and metaphysick are not out of their element. Their philosophers maintain an Aristotelian vacuity... Anatomy is tradition, being able to give a very slender account of the rational part thereof... They are unskilled in anatomy, thinking it unlawful to dissect human bodies whereupon phlebotomy is not understood, they being ignorant of how the veines lye, but they will worry themselves martyrs to death by leeches, clapping on a hundred at once, which they know not how to pull off till they have fulfilled themselves and drop off of their own accord. Chirurgery is in as bad a plight... pharmacy is in no better condition, apothecaries being no better than perfumers or druggists at best, for he that has boldness in practice makes up his own medicines which are such generous draughts that if in their own energy work not yet the very weights must force an operation. They pretend to understand the pulse but the urine they will not look upon. Midwifery is in esteem among the rich and lazy only. The poor, while they are labouring and planting, go aside as if to do their needs, deliver themselves, wash the child and lay it on a hammock and return to work again... Physick here is now, as in former days, open to all pretenders, here being no bars of authority or formal graduation, examination or proof of their proficiency but everyone ventures and everyone prescribes on former experience descending in their families, not considering either alterations of tempers or seasons but what succeeded well to one they apply to all. . . " Some of the prized native remedies puzzled him. "Butter of 400 years' standing is much prized by the Gentiles as high as gold, prevalent in old aches and sore eyes. One of these tanks was opened for my sake and a present made of its black, stinking, viscous balsam... To correct distempers of the brain as well as stomach, the natives eat hing-a sort of asafoetida-whereby they smell odiously. For all lethargic fits, they use garlic and ginger given in oil and butter..."[4]

In the above accounts it is often difficult to determine when the authors refer specifically to Goa and when to practice in the rest of India. This may account for the discrepancies regarding phlebotomy

and urinoscopy. I have been unable to locate accounts by native Goans on pre-Portuguese medical practice.

The supremacy of native Goan practitioners persisted only as long as there was an unwillingness on the part of able Portuguese physicians to brave the risks and difficulties of the long voyage to India. Upto the 1530s only those with neither practice nor prospect in Portugal ventured forth. As competent Portuguese physicians started coming to Goa and familiarised themselves with local language and customs, the demand for vaidyas (gentiles or heathen physicians) diminished.

It must be pointed out that the Portuguese physicians helped their ascendancy by several non-medical means as well. In 1567, the First Provincial Council banned non-Christian physicians from treating Christian patients "on account of the many evils resulting therefrom both to Faith and to Morality,"[1] knowing fully well that there were, then, no physicians among the native Christians. In fact, there were few native Christians then.,[10] In 1574 (1572 according to Priolkar[27]) the Portuguese physicians "stirred themselves to such an extent that they caused the governor, Antonio Moniz Barreto, to issue a notification on 15 December, banning native physicians from going about the city and suburbs on horseback, in palanquins and on andores (a kind of sedan chair) . . . ",[1] thus lowering the prestige of the vaidyas. (Interestingly, the governor excepted the pandit who was the private physician of his own household from this bans). On 3rd November 1618, the Senate of Goa decreed by a regulation that no one could practise as a physician, surgeon or bleeder without having previously been examined by the fisico-mor (chief physician) or cirurgiaomor (chief surgeon), [1] The decree condemned the Hindu physicians practising in Goa for not conducting themselves properly in the treatment of their patients, leaving them whilst seriously ill and absenting themselves upcountry. They were therefore ordered not to leave the city without obtaining the Senate's authorisation. Finally, it was decided that only 30 `infidel physicians'-provided that they possessed the certificate of examination held by the fisico-mor- may practise in the city, the number of 30 never to be exceeded., Many Hindu physicians therefore fled to other parts of India.

Whilst the ancient Greek form of medicine, translated into the Indo-Arabic unani was practised in Goa, the hakims had a much smaller impact on the populace in Goa than in the Deccan, north and central India. Albuquerque nurtured a bitter hatred against the Moors and therefore did not tolerate Muslim physicians in Goa. On the other hand, he was patron and friend to the Hindus during the early part of his stay. (He remained reluctant to take in his expeditions Hindu physicians in whose professional ability he had little confidence). Albuquerque's antipathy towards the Muslims, of course, had a political basis. Before the appearance of the Portuguese, Asian trade was entirely controlled by the Muslim Arab merchants who thereby dominated the North African and European markets and helped in the propagation of their religion. The Portuguese were anxious to break the Arab monopoly on Asian trade and halt the spread of Islam as expeditiously as possible.[10], [20],[21] Ironically, Vasco da Gama was piloted to Calicut by the Arab, Ibn Majid.[10]

The best known hakim in Goa at that time was, interestingly, an outsider, Abu Ali Hussein ben Abdullah ben Sina, earlier personal physician to the emperor Akbar. Amancio Graciasl states that "it was to his clinical error that the famous sovereign was said to have succumbed." Sent to Goa as ambassador from the Mughal court, he was converted to Christianity at Cambay and baptised in Goa in 1610!

Garcia d'Orta[8], [9], [11], [24]

This most famed of the earlier European physicians in India was born in 1501 or 1502 in the village of Castelo de Vide (Alentejo, Portugal). His father, Fernao d'Orta, a native of Valencia de Alcantara had emigrated when the Jews were expelled from Spain in 1492. Fernao and his wife (likewise of Spanish-Jewish extraction from the border town of Albuquerque) were forcibly baptised in the mass

conversions ordered by King Manuel I of Portugal in 1497.[8] The converted Jews and their descendants were known as Christaos-novos or as marranos (swine). The family was sufficiently well-to-do for Garcia to study arts, philosophy and medicine at the Spanish universities of Salamanca and Alcala des Hanares, probably beginning his university studies around 1515. He returned to Portugal in 1523, two years after the death of his father. Although a certain amount of practical work was involved, medicine was principally studied through reading and memorising texts, chiefly those of Hippocrates, Galen and Avicenna. Humoral pathology formed the basis of medical education, disease presumably following imbalance between the humors in the body. Enemas, bleeding and stimulants were used together with drugs from herbs and plants to restore balance. After graduating in medicine, d'Orta practised in his native town for three years and then went to Lisbon for the following eight years. He was appointed to an University chair in 1530 and elected member of the University Council in 1533. It is recorded that he either absented himself from or attended late 40 of his own lectures during the first term in 1533-34.

On March 12, 1534 Garcia d'Orta sailed for Goa with his lifelong friend and patron Martim Affonso da Souza, second of the Lord vi Labruja, Captain Major of the Indian Ocean in 1534-38 and Governor-general of the Portuguese territories in India from 1542 to 1545. It has been suggested that the increasing pressure brought to bear upon the Christaos-novos, culminating in the establishment of the Portuguese branch of the Inquisition in 1536 impelled d'Orta's emigration. (It was probably thanks to Martim da Souza's influence that he was able to leave in contravention of the 1532 law prohibiting any Christaos-novos from leaving Portugal). The other motive, of course, must have been his passion for exploration. D'Orta toured Bombay, Mahim, Bassein, Chaul, Diu, Cochin and Colombo with Martim da Souza and studied local botany, geography, ethnography, languages and chief diseases. He accompanied da Souza in a march from Kathiawar to Ahmedabad. When Martim da Souza returned to Portugal in 1538, d'Orta stayed behind in Goa where he soon established a lucrative practice. He became the personal physician of governors and viceroys. He was physician to Burhan Nizam Shah, Sultan of the Deccan kingdom of Ahmednagar and visited him often. He was a close friend of the poet Luis da Camoes who praised him in one of his sonnets. (This sonnet is only to be found in d'Orta's magnum opus.)

As physician to the viceroy, he had his own house in Goa with a garden stocked with medicinal herbs. He traded in materia medica, jewels and precious stones as a side occupation. Later, when physician to viceroy Pedro Mascarenhas (1544-55), he was granted a long lease on the island of Bombay at a cost of Rs. 537 per annum. He sublet part of the island to Simon Toscano. D'Orta lived in Bombay at Manor House at the southern tip of the island and spent several months of each year there in luxury. A big retinue of male and female servants attended him at Manor House. Dr. Fryer, visiting Bombay in 1673, described d'Orta's garden, filled with medicinal plants, fruit trees and vegetables) as "... the pleasantest in India." In the Colloquios, d'Orta referred to the mango tree from which his tenant Toscano obtained fruit twice a year.

Apart from extensive reading of available documents and works in several languages, he corresponded with eminent medical scholars and writers and conversed in depth with vaidyas and hakims. He sought medical information and plants from them as from itinerant yogis and traders.

Around 1541 he married one of his cousins, Brianda de Solis, of a prominent Spanish-Portuguese Christaos-novos family. Although he had two daughters by her, he never referred to her in his work, perhaps because she was a shrew. She later separated from him and looked down on his social status as compared to that of the house of Solis. D'Orta and his family preserved an appearance of strict Roman Catholic orthodoxy at Goa, especially after a branch of the Inquisition was established there. In his opus, he stressed his friendship with the local Franciscan and Dominican monks and the Jesuit priests. A few months after his death, however, his brother-in-law told the local inquisitors of the doctor's faith in the law of Moses and celebration of the Yom Kippur. Whilst d'Orta was never a

victim of the Inquisition during life, he was never appointed fisico-mor. Many of his relatives in Portugal, including his mother and two sisters, were arrested, interrogated and imprisoned by the Holy Office for short periods. After his death, his sister Caterina was arrested in Goa and burnt at the stake in 1569 as an impenitent Jewess. (It is of interest that the first European expedition to India led by Vasco da Gama was possible due to the astronomical guidance provided by Jewish astronomer Abraham Ben Zakudi.[10])

Contrary to the glowing account of his last days by Gerson da Cunha,[11] d'Orta probably suffered shame and penury shortly before his death in Goa in 1568.[8] His wife had to borrow a clean sheet from the neighbours to wrap his corpse. On December [4], 1580 the final insult was provided by the Tribunal which condemned him, disinterred his bones and publicly burnt them at an auto-da-fe at the cathedral in Goa as a posthumous punishment inflicted on those Jews who had escaped the stake in their lifetime. (I am surprised by the lack of any reference to d'Orta in Priolkar's carefully researched work.[27]). Amancio Gracias' stated that d'Orta's book was looked upon as a dangerous work and underwent strict examination by the Holy Office after his death. Contrary to Amancio Gracias' assertion, however, Boxer[9] is emphatic that there is no evidence that any copies of the Colloquios were destroyed by the Inquisition after d'Orta's death.

The *Cooloquios dos Simples e Drogas da India*, d'Orta's magnum opus,[24] deals not with the practice of medicine in general but, as indicated by the title, with Indian materia medica. It was printed in Goa in 1563, in the first printing press ever in India. Hippocrates, Celsus, Dioscorides, Pliny, Galen are referred to in the text. Andreas Vesalius is referred to, not, as might be expected, for his revolutionary anatomical studies but in connection with the use of the China root in the treatment of syphilis. As pointed out by Boxer,[8] whilst d'Orta always remained respectful of the classic authorities, he was, at the same time, ready to correct, contradict or amend their observations when his own observations or those of reliable colleagues convinced him they were wrong. This may seem appropriate today but was then revolutionary for the works by the masters were considered gospel. Boxer reminds us that in the Cambridge medical school, Galen was a prescribed text down to the middle of the 19th century. "Don't try and frighten me with Dioscorides nor Galen because I am only going to say what I know to be true." said d'Orta in his 9th Colloquy when discussing the Benjuy tree. (Page 60[24]). In the 15th Colloquy, discussing cinnamon, he stated: "For me the testimony of an eye witness is worth more than that of all the physicians and all the fathers of medicine who wrote on false information." (Page 125[24]). Discussing nutmeg, (32nd Colloquy), he described errors in the descriptions by Galen, Avicenna ("... he did this imitating the Greeks whom he always held in much respect and veneration, thinking that they could not be wrong...") and Dioscorides and then answered the comment that according to Serpio, the Greeks knew of the mace and nutmeg: "That was because he was afraid to say anything against the Greeks. Do not be surprised because even I, when in Spain, did not dare to say anything against Galen or against the Greeks. When seen in the proper light it is not strange that medicine should be known in one age and not in another, new things being constantly found..." Pages (274-275[25]). Boxer[3] rightly groups d'Orta with his more reputed contemporary. "As Vesalius earned with the scalpel the right to amend Galen, so d'Orta's long sojourn in India gave him the right to correct Dioscorides."

As is evident from the title, the *Coloquios* was written in the form of a dialogue. Although he includes his Spanish colleague, Dr. Dimas Bosque, his slave girl Antonia and his Hindu physician, Malapa, the book essentially consists of a dialogue between himself and a fictional Spanish colleague, Dr. Ruano. Ruano is the upholder of classical doctrines which d'Orta then demolishes on the basis of personal experience. In addition to Indian materia medica, the book discusses ivory, diamonds, bezoar stones, the history and politics of Gujarat and Deccan, case histories of some of d'Orta's patients, tales of elephants, cobras and mongoose, accounts of Indian chess figures, the fable of Parizataco and the camphor tree, the effects of bhang, the etiquette in the usage of supari, theft from a lady under the influence of datura and the Elephanta caves. In addition to such varied exotica, d'Orta also provided

a vast amount of information (for the first time in European literature) on several important Indian medicinal plants.

In the 42nd Colloquy he dealt with the Pao de Cobra (known to us as *Rauwolfia serpentina* in honor of Leonhard Rauwolf 1540-1596). Ruano asks d'Orta : "Here, in this house, I have seen given to the children a root or stick called Pao de Cobra which is said to be good for rheumatism. I beg that in a few words you will tell me what it is, from what country it comes, whether it is considered detrimental by people and whether it is useful in any way." In his reply, d'Orta stated: "It is not only efficacious in the treatment of poison from serpents or cobras but has been tried for rheumatism, measles, small-pox and cholera, which is called mordexin in these parts, and it has the common fame among the people where this stick is grown..." He then described the root being used by a 'mungoos' fighting a cobra. In the process he described two mongoose-cobra battles, in both of which the mongoose came off victorious. Although the plant is named after Rauwolf, as seen above, the credit for having described? it first goes to Garcia d'Orta.

Asiatic cholera was a disease unknown to European physicians at this period, their acquaintance being limited to the milder European variety. D'Orta, for the first time, provided a vivid and detailed description so complete as to be deemed a classic. In the 17th Colloquy, as Ruano and d'Orta are chatting, a messenger arrives. "Don Gerinomo sends me to request that you will come and visit his brother, and it must be soon, without waiting for the regular visiting time for there is danger in delay and my master will be greatly obliged to you." In response to d'Orta's query regarding the illness, he answered: "He has the morxi, and it is two hours since he has taken ill." As d'Orta promised to hasten to the patient, Ruano asks: "Is this the disease that kills many people quickly and from which few escape?" D'Orta replied: "Among us it is called the Choleric Passio. The Indians call it morxi and we corrupt the word into mordexi. . . It is more acute than in our country for it generally kills in 24 hours. I have known persons who have not lasted more than 10 hours, and the longest endurance of it is [4] days. As there is no rule without an exception, I have seen a man, with the gift of much endurance, who lived for 20 days, always vomiting colora curginosa. Finally, he died..." He then described the signs: "The pulse is very low and can scarcely be felt. Very cold, with some sweat, also cold. Complains of great heat and a burning thirst. The eyes much sunken. Vomits much but so weak that he is unable to discharge anything. No sleep. Cramps in the legs..." He then elicited this story from the patient: "It must be two hours that I felt myself attacked and I was in great consternation. I have vomited nothing but water without any bitter taste nor acid smell. I have been taken with the cramp three or four times and I treated it with strong rubbing, the hands being dipped in warm grease of cocoa-nut... I have eaten fish, rice with milk, some cucumbers..." D'Orta then prescribed the treatment: "This case will brook no delay. Put chafing dishes and hot poultices to the body and rub it with rough cloths. He must drink no water in any form. If it is necessary to quench thirst, a little that has been boiled may be given. Cauterise the feet with warm iron and administer an emetic. Put on a purgative clyster. Anoint him with warm oil from the nape of the neck to the spine and on the legs. When the emetic causes him to vomit and the clyster has made him purge, send and tell me what he passed Tell me whether the vomit was in quantity, whether the patient becomes warm, whether he has any cramps, whether the pulse gets stronger: because we have to work in conformity with these signs. For in this disease the constant care of the physicians is necessary and that of the servants of the patient... For food take a fat fowl, first taking out its fat and give it between slices of quince..." Answering Ruano's query as to who was susceptible to this disease, d'Orta replied: "Those who eat most and those who consume most food. I knew a young priest who died of eating cucumbers. Also those who have much intercourse with women. The disease is most prevalent in June and July... and it is brought on by overeating... The best medicine for it is three grains of bezoar stone... It is of such use that it miraculously dilates the powers of the heart..." He also used small quantities of opium. in a treacly compound called triaga, which, perhaps, was more useful to the patient than the bezoar stone.

I have quoted just a little from this vast storehouse of fact and legend. I warmly commend it to you for there is much that we can learn from it even today. Certainly, one is the richer for having studied what is undoubtedly a masterpiece in Goan medical literature. Sir Clements Markham, responsible for bringing d'O'rta's work to the scrutiny of the English speaking world, must be permitted the last word on this great physician: "There have been eminent Indian botanists since his time. One needs only mention the names of van Reed, Roseburgh, Wellich, Wight and Hooker. But in the first place must always stand the name of the illustrious Portuguese physician, Garcia d'Orta." It is, indeed, a pity that no authentic portrait of this pioneer has survived to our times.[9]

Other Early European Physicians in Goa.[1], [27]

Amancio Gracias[1] credits physician mestre Joham, accompanying the expedition of Pedro Alvares Carbral in 1500 as the earliest European physician not only in Goa but in all India. Mestre Joham settled in Goa and married a local girl. In 1503, Afonso de Albuquerque brought Goncalo Fernandes in his expedition. Fernandes was made head of Hospital da Santa Cruz where he treated the wounded and invalid arriving from Portugal as well as Portuguese suffering from venereal disease. In 1512, mestre Afonso, surgeon, arrived. "A lustful lover of erotic adventures"[1], he soon eloped with a married native woman and married her only after he was chastised by Albuquerque. (Cunha[10] gives us another version of this episode.). Afonso appears to have deserted Albuquerque in the latter's hour of need for in a letter to the king of Portugal, Albuquerque fulminated: "...We are here without a fit surgeon. What we have are many good-for-nothing barbers..."[1]

Albuquerque held in esteem the German priest, Father Joham, and got him transferred from Cananore to Goa where he was appointed to the staff of the Royal Hospital. (See later section.). Father Joham was friend and confidant to Albuquerque, the latter commending him in glowing terms to the king when the Father went to Portugal.

As Goa had, by then, become the capital of all the Portuguese eastern dominions (and, in fact, rivalled Lisbon in importance), it is possible that many other Portuguese physicians visited it for varying periods en route other destinations

Portuguese apothecaries also visited and worked in Goa. The two best known of these were Gaspar Pires and Tome Pires. Gaspar was used by Albuquerque as envoy to Calicut and the Nizam. Tome, more learned, was an eminent naturalist as well and sent from Cochin a long list of medicinal plants to king Don Manuel in 1516. Some authorities place his work on par with that of Garcia d'Orta. Tome eventually went to China as ambassador, was cast into prison on arrival in Peking and died there. Portuguese physicians and apothecaries in Goa were often at loggerheads, the latter encroaching upon the practices of the former. As a consequence, the physicians often moved the government to issue injunctions against the apothecaries. Some of these were doubtless justified, as for example that warning Francisco Lopes (1519) against preparing substandard and adulterated medicines and ointments.[1]

Another 16th century physician of interest to us is Mestre Jeronimo Dias. Priolkar[27] quotes Gaspar Correia to give us a detailed account of his tragic end. "In this very year (1543) it came to pass that a bachelor of medicine, residing in Goa, named Jeronimo Dias, of the caste of New Christians, in the course of familiar discourses with his friends, spoke of certain things which were against our holy faith. The bishop, on being informed of this, ordered that he should be arrested and tried and that witnesses should be examined. When arrested, together with some other persons who had discoursed with him, he continued to uphold certain things of the old law against our holy faith, all of which showed clearly that he was a Jew, and the proceedings were concluded... The judgement signed by the bishop, ran as follows: "Having seen the sentence of the Holy Church, in which bachelor Jeronimo Dias stands condemned in a case of heresy, the justice of our sire the king,

pronounces sentence to the effect that in respect of the said case, by public proclamation your body be burnt alive and reduced to ashes... In case you seek pardon and repent and confess your error and desire to die as a Christian, you shall first be strangled to death so that you may not feel the torments of fire." He confessed, was strangled and then burnt and reduced to ashes. (The Inquisition started functioning in Portugal in 1541 and was established in Goa in 1560. As noted, however, persecutions were launched from 1543). Another physician to suffer the same fate was Mestre Gil Oria. He too had come to Goa to escape the fury of the anti-Semitic wave in Portugal. He was deemed competent enough to be appointed to the Royal Hospital in Goa. He was burnt on September 6, 1597.

Yet another physician of that age deserving recognition (though for a different reason) is Cosme Saraiva. He (along with Garcia d'Orta) had come to Goa in the expedition of Martim Affonso da Souza in 1534. He too attained a certain eminence after years of practice in Goa. In 1554, when the body of St. Francis Xavier was brought from China to Goa (Xavier came to Goa in 1541, fell ill and died in Sancian, China on 3rd December 1552) and was found to be quite fresh and uncorrupted, a formal medical examination was requested with a view to removing any doubts about its miraculous state. The certificate reads: "I, Doctor Cosme Saraiva, physician to the viceroy, certify that when St. Francis Xavier's body arrived in the city of Goa, I went to see it and touched all its parts, especially the belly, where I found the bowels in normal state inspite of not having been embalmed and despite no other means having been used to preserve them from corruption. I saw a hole or wound on the left side, near the heart and when, on my request, two priests of the company put their fingers into it, blood gushed out, which I smelled and found that it did not give off any bad smell. The legs and other parts of the body were entire and with flesh which could not be kept in natural state by any artificial means of physic or medicine during the year and half since his death and nearly a year since he was buried. I certify this on oath of my post." It is significant that Garcia d'Orta does not figure anywhere in connection with this event.

I referred briefly to Dimas Bosque above as one of the doctors featured in d'Orta's Colloquios. Native of Valencia de Alcantara, he had arrived in Goa in 1558. His activities provide an interesting glimpse into the varied aspects of the physicians' careers in Goa. A respected physician with a good practice, he also traded extensively. He imported goods from Portugal and sold them in Goa at profit. He also bought curios and specialities of the region wherever he travelled in India and sent them back to Portugal for sale. He thus came to amass a large fortune. He purchased the island of Santa Cruz (near Mormugao, since called Sao Jacinto) at a public auction. He returned to Portugal around 1570.

Dona Juliana is the only woman physician of that time whose account has come down to us. She practised in Goa a while after arrival from Portugal but later moved to the court of Emperor Akbar. She was held in great esteem by him. At his commendation, she married a French officer at his court, John Philip Bourbon. She continued to favour the Portuguese at the court and it was from her intervention that the Jesuits were able to obtain a foothold at the Mughal court for the first time.

We must refer briefly to 'Manucci, the quack'. Nicolau Manucci, the Venetian, landed in India in 1656 and visited Goa twice. He set up a successful practice in the city. This appears to have aroused considerable jealousy in other physicians and it was probably at their instigation that he was denounced to the Holy Office as a quack and wizard who treated patients without having a medical diploma. Despite the many cures he was known to have effected, the Tribunal initiated steps towards his condemnation. News of this soon reached him. Manucci left Goa in a Carmelite gown and proceeded to north India where his talents and capabilities were better valued. He eventually settled down as physician to Dara, son of Shah Jehan.[28]

The presence of these foreign experts notwithstanding, the old town of Goa was a notoriously insalubrious place by the mid-16th century. Its 400,000 inhabitants lacked hygiene and medical

assistance. By 1670, the population was down to 40,000. Ten viceroys and governors had been claimed by death. Between 1602 and 1632, 5000 soldiers died at the Hospital Royal. "Goa is the cemetery of the Portuguese", wailed viceroy Conde de Alvor.[17]

Charles Dellon's Misfortunes[3], [27]

At this stage, Charles Dellon's story is of interest. After studying medicine in France, Dellon took up employment with the French East India Company and started for India on March 20, 1668. In 1673 he was relieved from his post and moved to Daman where he was soon in a flourishing private practice. Young, good looking, intelligent and knowledgeable in Latin, he soon won local prestige. The story of how this pleasant situation was rudely disturbed is best described by the Abbe Carre (quoted by Priolkar[27])

". . . The next day. 23 (December 1673), we left before daybreak and after crossing three rivers, following the seashore, arrived at Daman about 10 o'clock in the morning. At first I went to stop with M. Nicholas Vidal of Provence, as I usually did when passing through this place, but I soon saw that there was trouble and unpleasantness in his family on account of his wife. I drank a glass of wine with him and though he pressed me to stop there, I withdrew to the house of Senhor Antonio Guiard... M. Vidal had been married in Daman for 15 years and had amassed great riches and honour by the annual voyages which he made to Eastern kingdoms as commander of both Moor and Portuguese ships. Nevertheless he was not better off on this account as his wealth, wife and family were at Daman and he could never remove any of them from Portuguese territory. By this wife he had only a small son, now 8 years old and his chief consolation next to his wife, who was very handsome. Until now he had always thought her virtuous because she had so well hidden her love affairs, of which he had only slight suspicions. But this year, on his return from a 10 months voyage to Mozambique, as captain of a vessel belonging to Manuel Furtado de Mendoza, governor of Daman, he was much astonished to find his wife seven months gone with child. He learnt with extreme displeasure that she had led an immoral and disgraceful life, both in her own house and also that of the governor, where she went every night. The governor, who was a near relation of the viceroy thus set a fine example. Not only had he a wife and a twenty-years-old son with him but also a troop of concubines and besides he now debauched the wife of an honourable man... About this time there was a young Parisian Frenchman, a M. Dellon, who in 1668 had left France for India in the ship La Force as surgeon's mate. .. He was considered to be the cleverest doctor in India... Being French, he freely visited the family of M. Vidal, where he became like the son of the house. The Portuguese governor, madly jealous of him, resolved to do something unexpected to prevent his visits to this house where the governor's own affections were deeply involved... So knowing the habit of this young surgeon to argue about our religion, he asked him civilly to bleed his son and laid a trap for our young doctor by attaching an ivory figure of St. Antony to the boy's arm. This Portuguese plot succeeded as they had hoped, for before the doctor began to put a ligature on the arm of the governor's son he asked the boy to take off his St. Antony as it hindered the operation. Thereupon the boy replied that he would not do so as St. Antony would prevent any mistakes or accidents that might happen during bleeding. The young doctor did not fail to say that it was an absurd superstition to imagine that St. Antony had any effect on the operation. So from these and other words there arose a sharp quarrel on the merits of St. Antony and M. Dellon spoke a little carelessly, though without malice. The witnesses, who had been placed there for the purpose, went at once, on behalf of the governor, to the Father Rector of the Paulists, who was also the local Commissary of the Inquisition at Goa. They accused the French doctor of heresy and uttering words against the Holy Faith..." Dellon was imprisoned, transferred to Goa where the Inquisition imprisoned him for a further two years and then condemned him to a further five years on Portuguese galleys. In 1676 he was set free and after returning to France, wrote of his experience. (Priolkar[27] quotes extensively from Dellon's works as well)

That this was not an isolated instance of persecution prompted by sexual desire is evident from the statement the Archbishop of Evora made in the cathedral of Lisbon in 1897: "If everywhere the Inquisition was an' infamous court, the infamy, however vile, however corrupt and determined by worldly interests, it was never more so than the Inquisition of Goa, by irony of fate called the Holy Office. The Inquisitors even attained the infamy of sending to their prisons women who resisted them, there satisfying their beastly instincts and then burning them as heretics." [10], [27]

It is to the credit of the medical doctors of the 17th century in Goa that they were inclined to question and argue whenever arbitrary beliefs were thrust at them. The father-rector of St. Paul, head of the Inquisition, talking to Abbe Carre about Dellon stated : ". ..Nearly all these doctors are inclined to be heretics and atheists. .."[27]

Diplomatic usage of physicians[1]

As Amancio Gracias points out, the early Portuguese physicians coming to Goa proved valuable assets to the government in extending Portuguese sovereignty in India. Their professional expertise and supremacy over the local physicians placed them in great demand at the native royal courts. They were thus often instrumental in establishing friendly intercourse between their own government and the native kings and princes.

The story of Fernao Lopes d'Orta epitomises the diplomatic entanglements that some Portuguese physicians got into. Fernao Lopes established himself in Goa and soon had a wide practice. His fame spread to Vijaynagar where Adil Khan was ill and could not be helped by his native physicians. In response to his request to the then Governor of Goa-Fernao de Albuquerque-Lopes was sent to Vijaynagar and speedily cured the king. He thus became persona grata at the court and exercised powerful influence over the king's mind. He settled in Vijaynagar but served the dual role of physician to the king and spy for the Portuguese government, transmitting all the happenings at the court to the authorities at Goa. On the king's death, the native physicians accused Lopes of causing the king's death and spying for the Portuguese. The first could not be proven but the latter was and in punishment, his nose and an ear were cut off. His son and negro wife were imprisoned. Later, the family was released and travelled to Goa where Lopes was received warmly. Despite his disfigurement, Lopes was able to re-establish himself in private practice. The viceroy, Count of Linhares, later recommended him to the Mughal court and Lopes travelled to Delhi on invitation. He appears to have pleased Shah Jehan and the royal family so much that later, Aurangzeb too made a request for a Portuguese physician from the then viceroy, Count de Alvor.

Also on record is another Portuguese physician (`half-caste') travelling to the Mughal court from Goa. He won the confidence of Shaista Khan's wife to a degree where she confessed to him that she was instrumental in causing miscarriages in [8] women in the harem in order to ensure that only her own children survived!

Indeed, so well did the Portuguese physicians establish themselves at the Mughal court that in 1699, the then viceroy in Goa-Gonsalves de Camarra Coutinho-was able to suggest to the emperor in Delhi: "I suggest that your general, Qhana Alam Umbrao, come over to Goa where he will be cured with all care if his disease be curable, for neither can medicines reach where he is in the state of being efficacious when used nor is it possible to say which of them are useful. So if he comes down to Goa he will be treated not only as his person deserves but as a man recommended by your highness to whom I earnestly wish to be useful by all the means in my power. . . "

It was not only at the Mughal court that the Portuguese physicians influenced matters. Pedro da Silva Leitao rose to eminence in the court of Savai Jai Singh II in Jaipur. Francisco Pereira was consulted not only by Aurangzeb but also by the Maratha court.

The Royal Hospital and the Beginnings of Modern Medical Education.[1], [15],[16],[17], [19], [25]

The Royal Hospital was founded by Afonso de Albuquerque soon after his conquest of Goa (on St. Catherine's day 25 November 1510). From small beginnings near the chapel of St. Catherine (west of the present Archeological Museum in old Goa) it grew in stature. It was the pride of successive viceroys of Goa and rulers of Portugal who bestowed great care on it. It was rapidly acclaimed as one of the best hospitals in the world. De Figuerado brought to public notice a relic of this hospital in 1960.[18]

Contrary to what is stated by D'Souza[21] and Neelameghan,[25] attempts at teaching western medicine to the natives actually started around 1546.[1] The Jesuit priests at the Collegio de Sao Paulo dos Arcos or the Seminario da Santa Fe, founded in 1541[26] taught medicine along with theology, mathematics, astronomy and philology. (It is noteworthy that this institution is Asia's first western style university.[26] It was to the chapel of this university that Xavier's body was taken on its arrival in Goa on March 16, 1554). A Jesuit letter dated December 1, 1560 mentions: "In January 1560, philosophy began to be read for those who had finished their lessons in logic: to three lay brothers of the house and to the boys of the college, eleven of whom are Malabar and three external students. Father Francisco Cabral lectures on medicine every morning from 7 to 9." The conferment of degrees at this college often took place in the presence of the viceroy and other high officials. In many of these functions, Garcia d'Orta is reputed to have taken an active part. It is not clear whether he, himself, ever taught medicine. From simple beginnings, as Francisco de Souza noted, the Colegio "so grew in shape, in amplitude of structure, in the number of disciplines as well as in the exercise of knowledge and virtue that it can be compared to all of Europe's colleges." [26] The teaching of medicine started here was later augmented by the *fisico-mors*.

In 1591, the administration of the Royal Hospital was placed in the hands of the Jesuits. Francois Pyrard de Laval, French seaman, was an inpatient for 3 weeks in 1608 and has left us a vivid description: "Viewing it from the outside, we could hardly believe it was an hospital; it seemed to us a grand palace, saving the inscription above the gate: *Hospitale dil Rey Nostro Seignoro*. The beds are beautifully shaped and lacquered with red varnish; the sacking is of cotton; the mattresses and coverlets are of silk or cotton, adorned with different patterns...., pillows of white calico. Provided with pajamas, cap and slippers, bed-side table on which was a fan, drinking water, a clean towel and handkerchief, a chamber pot under the bed. Each patient served with a complete fowl. and the plates, bowls and dishes were of Chinese porcelain. . . In the evening they brought us supper at the appointed hour, to each a large fowl roasted, with some dessert so we were astonished at the good cheer we received... This hospital is, as I believe, the forest in the world, whether for beauty of the building and its appurtenances, the accommodation being in all respects excellent, or for the perfect order, regulation and cleanliness observed, great care taken of the sick, and the supply of all comforts that can be wished for... It is of very great extent, situated on the banks of the river and endowed by the kings of Portugal with 25,000 *perdos* (about Rs. 75,000), let alone the endowments and presents which it receives from the lords. This is a large revenue for the purpose in those parts, seeing food is so cheap, and the management so good; for the Jesuits who carry it on send as far as Cambay and elsewhere for wheat, provisions, stuffs and all other necessities... It is managed and governed by the Jesuits who appoint a Father to the post of Governor. The other officers are Portuguese, all men of quality and gentility; as for the servants and slaves, they are Christian Indians. The Jesuit Father is superior over all the rest, who are like inmates of a large monastery, each having his own office... There are physicians, surgeons, apothecaries, barbers and bleeders who do nothing else and are bound to visit each of the sick twice a day. The apothecary is one of the household and lives in the hospital and has his shop well stocked at the hospital's expense... The sick are sometimes very numerous and while I was there, there were as many as 1500, all of them either Portuguese soldiers or men of other Christian races, of Europe, of every profession and quality.

Indians are not taken in there, having a hospital apart wherein are received only Christian Indians. .."[25]

Several of these observations were corroborated by other visitors such as Linschoten[5] and Tavernier.[25], [30] Neelameghan[25] points out that even in the days of its greatness, the mortality rate in the Royal Hospital appears to have been excessive. Cholera, scurvy, enteric fever and venereal disease took their toll.

By the mid-17th century, Goa, generally, was already on the decline. Tavernier[30] visited Goa twice -at the end of 1641 and at the beginning of 1648. During his latter visit, the Dutch had blockaded the port. "Before the Dutch had beaten down the power of the Portuguese in India, one saw at Goa nothing but magnificence and wealth but since these latecomers have deprived them of their trade in all directions, they have lost the sources of their gold and silver and are altogether come down from their former splendour." The following example, quoted by Tavernier, is poignantly indicative of the general decline. "On my first journey to Goa, I saw people who had property yielding 2000 ecus of income (2000 ecus = £ 450), who on my second journey came secretly in the evening to ask alms of me... especially the women, who, coming in pallankeens, remained at the door of the house whilst a boy, who attended them, came to present their compliments... When one goes in person to them to give them charity... one enters into conversation with the fair one and in honour bound invites her to partake of refreshment which lasts sometimes till the following day..."

Tavernier noted that the hospital too had decayed, with poor treatment of patients. In 1675, John Fryer noted that "The physicians are great bleeders, insomuch as they often exceed Galen's advice in fevers, hardly leaving enough to feed the currents for circulation, of which cruelty some complain invidiously after recovery.' 14 The lack of a steady supply of young, well trained doctors was also being increasingly felt. In 1687, Dom Christovam de Souza Coutinho was forced to record: "... Patients at the Royal Hospital are abandoned to themselves without any medical aid because the fisico-mor who cures them cannot now study, as he has to look after a hundred patients (and sometimes more) of different infirmities. He is now so old that when he goes to see them he rather passes off through them without paying heed to them or caring to have the slightest look at them... (John Fryer too had noted: the physician Gaspar Antonio was old, almost blind.[4])" Dom Christovam then recorded a plea that was to be repeated at intervals until well into the 19th century: "If two or three physicians came here from Portugal they could teach medicine to many natives, who are very clever and would easily learn it and turn not the worst physicians, so that the fisico-mor would have many physicians to help him in the treatment of patients, the vassals of his Majesty. They would also be able to visit pharmacies and examine the medicines, which, for being very often stale and corrupt, if they do not kill the patients, do not work successfully on them..."

It is obvious that the fisico-mor taught medicine to natives in addition to treating patients at the Royal Hospital in Goa. Equally obvious, the natives were proving excellent pupils. In Goa, as later in Calcutta, Madras and Bombay the principal factor motivating foreign (government or Company) doctors to teach medicine to natives was not a desire to overcome deficiencies in the native practice of medicine (of which they were aware) but rather to bring up a second grade cadre of assistants unto themselves so that their own burdens would be eased and, as is so aptly stated, 'the vassals of his Majesty' would be looked after.

In 1691, Manoel Rodrigues d'Souza and Feleciano Gonsalves, Licentiates of the University of Coimbra, were ordered to come to Goa but as they did not accept the appointments for teaching medicine in India, the orders proved ineffective. In 1694, five or six Goan students were selected to go to Coimbra to learn medicine at the expense of the Goan village communities as the people suffered hardships for want of proper medical assistance.[1] It is not certain whether they were actually sent. The situation worsened both for the natives and for their rulers. Public health was

accorded low priority. Sicknesses proliferated and death statistics reached unimagined peaks.

The general decline in Portuguese Goa in the 17th century left the state in severe disrepair. The causes for this decline were analysed by Danvers.[12] The Portuguese had never laid down the foundations for a permanent empire in the east. The forces at their command were never sufficient to inspire confidence in themselves or terror in their opponents. The inhuman barbarities resorted to by the Portuguese raised a spirit of opposition in the populace. The obligation placed upon the Portuguese by the Bull of Pope Alexander VI to propagate the Catholic faith in all lands discovered by them necessitated the appropriation of large funds for the maintenance of the ever proliferating religious orders. The priests and monks usurped not only the revenues of the state but also caused a worsening of the relations between the state and the people by forcible conversions to the Catholic faith. Eventually the government lacked funds for the proper support of their establishments, and the Royal Hospital was but one of those downgraded as a consequence. The final blow came when Portugal fell under Spanish domination and Philip II absorbed all revenue from India in his fruitless effort to subdue Holland. Increasing duties to meet his demands drove away trade. The religious orders, no longer able to draw large revenues from the state, turned hostile to government. A laxity of government, general corruption among the servants of the state and a general disregard for public interests contributed to the destruction of what had been a great colony.

In the second half of the 18th century, Dom Luis da Costa Portugal was commissioned to study the causes of the fearful epidemic that was raging throughout Goa. He did compile a lengthy report to the government but the measures suggested by him were so impractical that none of them were carried out.[1] Though he was asked to start a course in medicine for the natives at the college, he evinced little interest in doing so, probably being keener on disappearing from the epidemic riddled state as fast as possible. He applied for transfer to Mozambique and when he departed, took with him the reputation for being "... ill-tempered, presumptuous of his knowledge and too covetous." [1] Nearly two years passed after his return without any successor being appointed. Amancio Gracias conjectures that the *fisico-mor* Dom Luis, having been unpopular in Goa due to his haughty behaviour with the natives, might have spread strange and exaggerated stories about the conditions in Goa or the antipathies of Goans towards the Portuguese, sufficient to turn away prospective successors from what he called "that hotbed of diseases". [1]

In 1770, Secretary of State in Portugal, Martinho de Melo e Castro wrote to the viceroy: "The want of a professor which is felt throughout the state will perhaps be remedied by the establishment of a school of medicine and surgery with practical medicine being taught in the hospital (Royal)." [19] This is the first time, that the formation of a medical school, anywhere in India, to teach scientific principles and practice was suggested.

In 1785, Francisco Manuel Barroso da Silva arrived in Goa bearing the chief surgeon's appointment. (This post carried a smaller salary than that of the more exalted post of *fisico-mor*). Da Silva brought with him a letter of introduction from Secretary Martinho Castro to governor Dom Francisco Guilherma de Souza in which the secretary directed that the surgeon be made "... to devote himself to teaching medicine to the natives of India for it is here (in Portugal) very difficult to get able surgeons to go to work in Goa." Da Silva brought with him some instruments and other items needed for medical and surgical work but he was unable to start a course in medicine as urged for want of a building to accommodate his class. Amancio Gracias [1] refers to the bitter disappointment among many young natives who had been eager to join the course and had already made preparations towards it. Many years passed whilst the processes involved in obtaining a lease for a building to hold the intended school were completed. In the meanwhile, as noted above, want of trained medical personnel led to much suffering and high mortality at the Royal Hospital. These struck governor Francisco Antonio da Veiga Cabral (who arrived in Goa in 1794) so harshly that he repeatedly asked the home government to remedy the situation and send him a *fisico-mor* who would not only

superintend the Royal Hospital and treat the patients but would also teach medicine and surgery to the natives. After several reminders and the passage of a few more years, Antonio Jose e Miranda e Almeida was appointed fisico-mor by royal decree in November 1799. (If the above story rings familiar to the contemporary physician dealing with present day bureaucrats, it only supports the old observation that there is nothing new under the sun!)

Antonio Jose reached Goa in January 1801 and immediately took charge of his office. (He stayed in Goa till 1816 when he returned to Portugal.) He started a three year course of lectures in medicine and surgery under the auspices of Aula de medicina e cirurgia de Hospital Militar de Goa. This school was to develop, on 5 November 1842 into the Escola Medice-C'irurgica de Nova Goa.

De Figuerado[15] and de Mello[19] have traced the development of the medical school. Anatomy and physiology were taught in the first year. In the second year, botany, materia medica, chemistry, pathology and therapeutics were taught. General pathology, legal medicine and semeiology formed the subjects for the third year. (Semeion = sign; semeiology = symptomatology). In 1821, surgeon-general Lima Leitao remodelled the course to cover 4 years. Pathology, medicine, surgery, history of art (of war?) and materia medica were now taught in the 3rd year. In the 4th year, clinical medicine and midwifery were taught. This course continued upto 1840. The title Medicos de Sua Magestade was bestowed on the graduate. Rodrigues Moacho, the founder of the Escola in 1842, further reformed the course and also founded a 3 year course in pharmacy. In 1865 the course was extended to cover 5 years. Later, a 2 year course for midwives was also established

The numbers of graduates in the early years were as follows:

1846-47 : 8 1847-48 : 5 1848-49 : 11 1849-50 : 6

1850-51 : 12 1851-52 : 11 1852-53 : 8 1853-54 : 4

1854-55 : 10 1855-56 : 2 1856-57 : 3 1857-58 : 1

1858-59 : 6 1859-60 : 2 1860-61 : 2 1861-62 : 6

1862-63 : 1 1863-64 : 2 1864-65 : 3 1865-66 : 3

1866-67 : 1 1867-68 : 2 1868-69 : 8 1869-70 : 6

1870-71 : 7 1871-72 : 6 1872-73 : 1 1873-74 : 6

1874-75 : 9 1875-76 : 6 1876-77 : 7 1877-78 : 7

1878-79 : 3 1879-80 : 9 1880-81 : 8 1881-82 : 5

1882-83 : 4 1883-84 : 6 1884-85 : 7 1885-86 : 6

1886-87 : 15 1887-88 : 10 1888-89 : 4 1889-90 : 8

1890-91 : 8 1891-92 : 12 1892-93 : 10 1893-94 : 19

1894-95 : 5 1895-96 : 10 1896-97 : 9 1897-98 : 13

1898-99 : 7 1899-1900: 13

If, then, we draw a continuous descent of this medical school of new Goa from the primitive school started by the Jesuits in the 16th century, through the teaching of medicine and surgery by the *fisico-mor* and *cirurgia-mor* at the Royal Hospital and the subsequent school started at the Hospital Militar in 1801, it can be termed with justifiable pride for Goans, the oldest medical school in the East and one which has survived more than one attempt to suppress it.

The first native Goan to have successfully obtained the diploma of *fisico* appears to have been Inacio Caetano-Afonso, a native of Piedade. He was examined by the *fisico-mor* in 1735. His success in practice earned him the title 'Aesculapius of Goa'. Another early native Goan graduate is Jose Lopes de Souza. He was examined by the Licentiate Andre Pereira Rodrigues and obtained in 1742 the diploma *Cirurgiaomor nas parts da India em Hospital de Todos os Santos e squarellaca de Goa*. He was later appointed physician at Daman.

In 1842, the Hospital Militar was transferred from Panelim to the Campal ward of Panjim and installed in the house of Diogo da Costa Ataide e Teive 'Maquinises', amidst ricefields, palmgroves, marshlands and sand dunes by the Mandovi river. The Escola Medico-Cirurgica de Nova Goa was established in November of that year (as already noted) and admitted eight students in its first year of existence, among them Agostinho Vicente de Lourenco and Bernardo Wolfgango da Silva. The first Goan woman doctor, Lucinda Pinto, completed her course in 1919.

De Mello[19] and de Figuerado[15],[16],[17] have detailed the contributions by doctors trained at this school in the mid and late 19th century. Its graduates were appointed as consultants to Boards of Health in Mozambique, Angola, Timor, Macau and other Portuguese colonies. In 1881, 43 of the 67 physicians in Portuguese overseas medical services were products of the Goan school. "Without the school of Goa we would never have had the necessary medical assistance in our overseas provinces." wrote the then director of the school, Fonseca Torrie. Many Goan doctors distinguished themselves during the Portuguese expeditions in Africa by treating the wounded under enemy fire. Figuerado especially mentions Joaquim Francisco Colaco, Caetano Florencio Colaco and Andre Eustaquio Monteiro who were decorated for their services in the cholera epidemic in Mozambique in 1859; Leonardo Barracho who fought the smallpox epidemic in Dili in 1870 and Luis Caetano de Santana Alvares who fought the plague in Magude, Mozambique. He also refers to the contributions of A.J. Socrates da Costa on sleeping sickness in Cabo Verde and Guinea and Jose Pedro Ismael Moniz who first used arsenic in the treatment of this disease. De Mello[19] provides information on the eminent professors at the school. He has discussed in detail the scientific work done at the college and hospital on typhoid, Maltese fever, cholera, epidemic cerebrospinal fever, bacillary dysentery, diphtheria, leprosy, sarcoidosis, trypanosomiasis, malaria, toxoplasmosis, haematological disorders, fungal infections (a paper on medical mycology being presented at the Seth G. S. Medical College, Bombay in 1929), helminthology, tuberculosis, tetanus, the poxes, hygiene, nutritional disorders, ethnography, anthropology etc. with detailed bibliographic reference to publications under each heading. He has also described the medical journals published in Portuguese Goa and citations to Goan researches in international journals.

The Striking Absence of the Hindus from the Medical School[10], [27]

From the late 16th century onwards, not a single non-Christian name figures in any medical account. All available accounts on medical education and the early decades of the medical college refer only to

Christian native students. The general observations made by Priolkar[27], Cunha[10] and Bhembro [7] are relevant in this context. The staunch advocacy of Christianity, enforced conversions and the destruction of Hindu culture-including its temples and monuments-during the Inquisition ('the most pitiless in Christendom') played havoc with the Hindus. (The first conversions made by the Portuguese in India were of women, the need for avoiding sinning by Portuguese soldiers with heathen women providing the stimulus). In Goa, Afonso de Albuquerque got his soldiers married to the wives and daughters of Turkish officers who, trusting him, accepted his hospitality. The men were slaughtered and the women, after conversion, offered to the Portuguese. Frei Domingos de Souza, accompanying Albuquerque had opined that any woman living in concubinage with a Christian becomes Christian, her sins being pardoned-thus obviating even the need for conversion. By 1540 large scale persecution of the Hindus was ordered. On 3rd March 1546, king D. Joao III ordered the viceroy to destroy Hindu temples, forbid Hindu festivities, banish Hindu priests and physicians, punish the makers of idols and give public jobs only to new converts. On 23 May 1559, Hindus were barred from any public office. Another law in the same year handed over the property of Hindus dying without a male heir to whichever relative turned Christian. Then came the Inquisition. On 4 December 1567, Hindus were compelled to attend Christian religious instruction and forbidden their own religious books. As noted earlier, specific strictures were passed against the vaidyas.[10], [27]

A significant segment of the Hindu intelligentsia, seeing the signs of the times, emigrated to other parts of India. Those choosing to remain embraced Christianity, often to curry favours with the authorities and take advantage of the increasing numbers of incentives being offered. Timoja, caretaker in Goa for Adil Khan, had provided a historic precedent when he invited Albuquerque to conquer Goa and was rewarded with Salcete and Bardez in return.[10] The Brahmins, Prabhus and other high class converts were given land on small quit rents, education in the Portuguese language and customs and even provided facilities for marrying Europeans.

It may, thus, be that the native Goans whose Christian names figure in the medical narratives may have been descendants of high caste Hindus. A prominent example of a Christian of Hindu origin is Abbe Jose Custodio Faria, whose ancestor was named Anant Shenoy.[13], [23] (Though Abbe Faria did not obtain a medical degree, his researches on hypnotism make him an important figure in Goan medicine).

Later Eclipse of the Medical College[10], [22]

In the late 19th century, even Christian parents were despondent about the facilities for medical education offered in Goa. The father of Caetano Antonio Claudio Raimundo de Gama Pinto (better known as Claudio Gama Pinto) sent his son to Lisbon in 1872 "since Goa offered no further opportunities to a talented boy." [22] Claudio Pinto completed all his medical studies at the Escola Medica in Lisbon and never returned to his home land. The possibility of his returning as a Professor at the Escola Medica in Goa was shattered when he chose to accept an European post in preference. [13], [22]

In the first quarter of the 20th century too, medical education in Panjim was under fire. "The only establishment for higher studies in Portuguese India is the Medical School of Nova Goa where doctors take their degree and are allowed to practise in this colony only. The learning is administered through French books, as the Portuguese language possesses no scientific literature. It is to be noted that there also the education is absolutely bookish, dozens of medical practitioners leaving the school without having ever dissected a single corpse. Doctors passing out of Portuguese India must, in order

to practise in Portugal, submit to an ignominious repetition of their medical studies - every single subject of them - in the Portuguese universities though they are the most insufficient and backward universities in Europe." [10]

Obviously, the dynamism and elan vital that brought initial glory to the medical school in Goa was lost as the years passed by. (In Bombay we are familiar with a similar loss at the Grant Medical College). The native of Goa, noted to be "very clever and would easily learn it (medicine) and turn not the worst physician" in 1687 remains so. Hence the emergence of Claudio Pinto, Bossuet Afonso, Bhau Daji Laud, Jose Camilo Lisboa, Ernest Borges and many others well known to all of us. It is worth pondering, though, that in all the instances just mentioned, the soil necessary to provide fruition was found outside Goa. It was not so when Joaquim Colaco or Andre Monteiro were students.

History is replete with instances of fluctuations in the fortunes of institutions as of individuals or nations. It is therefore more than likely that the deterioration in Goan medicine in the 20th century is transitory and that the historian of the future, picking up this story from where I leave off, will once again record an upswing in medical education and practice in this warm and pleasant land.

ACKNOWLEDGEMENT

I am indebted to many for help, guidance and information. Professor Doutor Pacheco de Figuerado in Panjim promptly and generously sent me whatever I requested and in doing so furthered my study considerably. Professor Antonio de Vasconcellos Marques, eminent Lisbon neurosurgeon, diligently searched for and provided two important texts. Professor C. R. Boxer, eminent British scholar, provided important information on Garcia d'Orta. Mr. Alfred D'Cruz of the Times of India, Bombay lent me some of his own publications and introduced me to others. Dr. Gune and Mr. Aravind Yalagi of the Department of Archives in Panjim generously loaned me some key volumes. Mr. Antonio de Menezes of Panjim provided me several references, some of which remain unstudied owing to their inaccessibility. Mrs. S. L. Chinappa obtained a much needed reference for me. Professor John Correia -Afonso generously made available to me two relevant works and referred me to Professor de Figuerado. Dr. Ramesh Sanzgiri awakened a dormant interest in the history of medicine in Goa and stirred me to prepare the above text. We are also grateful to him and the trustees of Dr. Ramesh Sanzgiri Foundation for permission to publish this oration. Dr. A. P. Karapurkar made it possible for me to reach key journals in Panjim.

References

- 1 Amancio Gracias, A.: Medicine in Goa in XVI-XVIII Centuries. Its contribution towards strengthening Portuguese diplomatic relations with Indian courts. Arquivos de Escola Medico-Cirurgica de Nova Goa. Ed. Jaime Rangel. Serie A, Fasc. 15, Tipografia Rangel-Bastora, 1941, pp. 221-292.
- 2 Anonymous: Early European Writers on medicine in the Orient. 1. Garcia da Orta and his work on the "Simples and Drugs of India". 1563, Goa. Bull. Dept. Hist. Med. Osmania, 1: 57-63, 1963.
- 3 Anonymous: Charles Dellon. A French surgeon of XVII Century. Bull. Dept. Hist. Mec'. Osmania 2: 185-196, 1964.
- 4 Anonymous: John Fryer, M.D., F.R.C.S. British traveller of 17th century and his impressions of medicine in India. Bull. Dept, Hist. Med. Osmania. 2: 241-250, 1964.

5

- Anonymous: A Dutch physician of XV I century on Indian drugs. Linschoten's account of spices and drugs of India supplemented and annotated by Dr. Bernardus Paludanus. Bull. Dept. Hist. Med. Osmania, 3: 173-184, 1965.
- 6 Bernier, Francis: "Travels in the Mogul Empire." AD 1656-1668. Ed. Archibald Constable. Archibald Constable & Co., London, 1891. (Volume 1 in Constable's Oriental Miscellany.).
- 7 Bhembro, Keshav: "The Hindus of Goa and the Portuguese." In, "International Seminar on Indo-Portuguese History., Ed. John Correio-Afonso S.J., Heras Institute, St. Xavier's College, Bombay. 1978. pp. 25-28.
- 8 Boxer, C. R.: "Two Pioneers of Tropical Medicine: Garcia d'Orta and Nicolas Monardes." Wellcome Historical Medical Library, London, Lecture Series No. 1, 1961.
- 9 Boxer, C. R.: Personal communication. 7.3 May 1980.
- 10 Cunha, Tristao Braganza: Goa's Freedom Struggle. Dr. T. B. Cunha Memorial Committee. Bombay, 1961.
- 11 Da Cunha, J. Gerson: The Origin of Bombay. J. Bom. Br. Roy. As. Soc 20: 1-368, 1897-1900. (Extra Number).
- 12 Danvers, Frederick Charles: The Portuguese in India-being a history of the rise and decline of their Eastern empire, London. W. H. Allen & Co. Ltd. 1894, Vols I, 11.
- 13 D'Cruz, Alfred: The Indian who figures in 'The Count of Monte Cristo'. Early Indians in Europe-1. East Meets West, Mirror 18(2): 23-25, 1978.
- 14 D'Cruz, Alfred: The Ophthalmologist. Early Indians in Europe. IV. East Meets West. Mirror 18(5): 89-91, 1979.
- 15 De Figuerado, J. M. Pacheco: Escola Medico-Cirurgica de Goa. Esboco Historico. Arquivos da Escola Medica da Goa. No. 33, 1960. Tipografia Rangel Bastora, Goa.
- 16 De Figuerado, J. M. Pacheco: The Medical School of Goa. The Clinician. Pages 3-6, 1967.
- 17 De Figuerado, J. M. Pacheco: Goan doctors in the Portuguese-speaking world. International Seminar on Indo-Portuguese History. Ed. John Correio-Afonso S. J. Heras Institute. St. Xavier's College, Bombay. 1978. Pages 33-34.
- 18 De Figuerado, J. M. Pacheco: Personal communication, 30 July 1980.
- 19 De Mello, Indalencio Froilano: A la Vielle de Centenaire. Arquivos da Escola Medico-Cirurgica de Nova Goa. Series A, Fasc. 15, Pages 1-144. Ed. Jaime Rangel. Tipografia Rangel-Bastora, 1941.
- 20 De Menezes, Antonio: Panjim through the centuries. In, "International Seminar on Indo-Portuguese History." Ed. John Correio-Afonso, S. J. Heras Institute. St. Xavier's College, Bombay. 1978. Pages 5-9.
- 21 D'Souza Bento Graciano: Goan Society in Transition. A study in Social Change. Popular Prakashan, Bombay, 1975.
- 22 D'Souza, J., Patriciano and D'Cruz, Alfred: Dr. Claudio Gama Pinto. In, "Saligao: Focus on a Picturesque Goan Village". Mae de Deus Church (Saligao) Centenary Celebrations Committee. Bombay, 1973. Pages 123-129.
- 23 De Souza, Nora Secco: Abbe Faria: priest, rebel and hypnotist. Times of India, 18 May 1980.
- 24 Markham, Clements, R.: Ed. "Colloquies on the Simples and Drugs of India by Garcia da Orta". Henry Southeran and Co., London, 1913.
- 25 Neelameghan, A.: The Royal Hospital at Goa as described in some 17th century documents. Ind. J. Hist. Med. 6(2): 52-56, 1961.
- 26 Pereira, Jose: Lost seminary of Goa's culture: Sao Paulo dos Arcos. Marg 32(4): 57-64, 1980.
- 27 Priolkar, Anant Kakba: "The Goa Inquisition." Being a quatercentenary commemoration study of the Inquisition in India with accounts given by Dr. Dellon and Dr. Buchanan. Published by A. K. Priolkar. Bombay, 1961.
- 28 Reddy, D. V. S.: Medical adventures and memoirs of Manucci. An Italian quack doctor in India in the 2nd half of the 17th century. Ann. Med. Hist. 3rd Series 3: 195-202, 1941.
- 29 Smith, Vincent, A.: "The Oxford history of India from the earliest times to the end of 1911." Oxford, Clarendon Press, 1919.

Tavernier, Jean Baptiste: "Travels in India by Jean Baptiste Tavernier, Baron of Aubonne. Translated from the original French edition of 1676 with a biographical sketch of the author, notes, appendices etc. V. Ball, London, Macmillan and Co. 1889.

Monday, May 21, 2012

[Site Map](#) | [Home](#) | [Contact Us](#) | [Feedback](#) | [Copyright and disclaimer](#)