Mechanical or Biological Decision?

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"The indications of the Delphi Oracle were not to be received passively; the beneficiaries had to live the message..."

Clarification: in the development of this text, the terms "cardiology" and "cardiologist" also comprise cardiac surgery and the cardiovascular surgeon.

I. Bedside reading book

Highlight: *"The study of Medicine begins with the patient, continues with the patient, and ends with the patient..."* (William Bart Osler - 1849-1919).

Highly pedagogical medical books – the patient collection – are edited by the bedside; title pages are precisely the faces of patients. There are chapters so revealing of the human being that the text seems to be written in the patient-author's own handwriting; some of them become bedside books in light of the empathy involved in the doctor-patient relationship.

With due permission, we reproduce an extract of a book about prosthesis- dependency that started to be written more than thirty years ago by a person with aortic valvopathy. Currently, he is living with his fourth prosthesis and says that quality of life "between operations" has always been excellent:

"*I never faced the issue from the position of 'exchanging one disease for another'; it's always been clear to me that I was a participant in a decision-making process and that whatever could allow me a daily life as close to normal as possible would be the best for me – to work, have and raise children, support my family, be able to exercise, have an active sex life, be able to travel, etc., etc., etc...; from a certain angle, the 'decision' process in the four operations I had was situated within this pattern of expectations: to understand the problem, obtain the information necessary from my physician and, along with him, make the best decision for my quality of life. The first time, the weight of the doctor's information was heavy. I was young and unfamiliar with the variables, and had the aortic valve surgery without many choices (or maybe alternatives to prostheses were not presented to me at that time). It was more or less a case of being bound to the risks of surgery versus the risks of not having surgery. The other three times, however, when I had surgery for a new valve change, the issues of 'life the closest possible to normality' were decisive and, I confess, had little to do with the need for anticoagulation.*

At my second operation it was because I had the experience of a 'normal life' during the period of using the duramater prosthesis, and at the third, I almost implored to receive a prosthesis similar to the previous one, since I was convinced that the prosthesis I used was 'better' for this stage that I call 'normality'. I never considered the possibility of implanting a mechanical valve and it wasn't because of anticoagulation aspects; the decisions were linked to my positive previous experience, to what I had lived, an experience I considered positive and the type of life I led. At my last operation, I accepted the recommendations to live with a mechanical prosthesis because I became convinced, from the information given me, that I possessed a heart that had already been handled a lot and that my chest was not a zipper that could be opened or closed at will. In other words, in the fourth operation the possibility of having surgery once again, whenever and in whatever condition that would be, bore a lot of weight juxtaposed to facing the possibility of PTs [prothrombin times] and use of warfarin. Therefore, it is not a case of this prosthesis being better than that; circumstances and personal values are very important, and the physician can, at best, warn, inform, and present options. I believe that the options/decisions were the most appropriate, since they fit into my perspective of life at those moments when I was living them. It is all about scientific issues and human aspects and this is why doctor-patient interaction is so crucial....."

This declaration is an example of a new state-of-the situation in selecting the type of valvar prosthesis to be used[1]. It privileges the impact on quality of life and therefore, the target is mobile and the use of algorithms is discouraged. Hence, simplification of *"bioprostheses are preferred after the age of 70 and mechanical prostheses in younger age groups..."*[2] should be replaced by a more encompassing appreciation: *"besides mortality and morbidity endpoints related to the prosthesis, one should consider endpoints of postoperative quality of life*[1]*..."*

A recent research noted that, for the aortic position, the bioprosthesis was considered superior to the mechanical prosthesis (80% *versus* 70%) as to the endpoint of degree of satisfaction with prosthesis-dependency. Data included the patient's desire to maintain the same type of valvar prosthesis in an eventual reoperation[3], as had been previously shown.

Key-words

Valvopathy, valvar prosthesis, bioethics.

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The statement that personifies the *center of our attention,* referred to in the second article of the Code of Medical Ethics, teaches us lessons about opting for quality of life. "Visualization" of the prosthesis by the patient with valvopathy is essential; inner reality, according to analogous facts that are experienced externally, initially advises a choice and the subsequent commitment to it. The patient's memory, as an aspect of prudence by education and experience, is valid especially in cases of a new valve replacement in which the content of the previous chapter infers the "good decision" that will be reproduced in a later chapter. The limits of positive memories as counselors occur when the physician's duty of informing carries a convincing argument for the patient: the multiplicity of scenarios; that of the fourth operation involved him in playing a different role, one better adjusted to him. It is important to note the value of the lexicon, the key thought in motivating the decision - *zipper.*

II. The Navigator and the Pilot

Highlight: *In a current view on decisions, the physician is the navigator and the patient is the pilot* [4,5].

To the sound of the beauty and richness of the Portuguese language, the mechanical decision, since it is not personalized, or the biological decision, since it is individualized, allow for both the mechanical and the biological types of prostheses.

Replacing a portion of the heart that was born with you is situated in a medical priority that is surrounded by ambivalence because of imperfections that bear a price to be paid. It is an occasion that makes feelings churn and heightens the sensitivity of the valvopathy patient to acts of humanization. To hold onto the handle of the gavel represents a gesture of self-alienation, a symbol of integration of the therapeutic method with one's own values.

The core of this gavel is universal scientific knowledge that includes solid national experiences. The gavel, however, does not prove to be so compact; there are spaces that still lack randomization and cases that are more homogeneous for comparison, and require filling-in time – each new model requires about fifteen years. On the other hand, we intend its impact surface to be flexible enough to adapt well to the human being's natural resistance and to be complacent with the configurations of the health system.

As to modeling the handle, one question, which is the essence of this article: should it be molded to the hand of the physician or of the patient?

The premises for the gavel handle to be held by the cardiologist are well known; they are the "best *in vitro*" reinforced or annulled by the *in vivo* socioeconomic adaptations. For patients they are more complex, since they need to overcome a tendency to abdicate making decisions and bring together some traits. These qualities are *capacity* – being of age in full control of his/her mental capacities –; *instruction* – obtaining necessary knowledge –; *comprehension* – apprehending the basics to be able to decide –; *persuasion* – being convinced of the authorization; *incoercibility* – being free from pressures regarding authorization –; *decision* – emitting the authorization.

We leaf through the album of experiences and our eyes are caught by pictures that sometimes show the handle of the decisive gavel in the hand of the valvopathy patient, who is not always well informed, and sometimes in the hand of the cardiologist, who is frequently ambiguous, or in the hands of both in a shared manner.

For the person with a valvopathy, the issue of heteronomy or autonomy in decision-making is an enormous burden that is added to the pre-load and post-load. We could say that it is a crucial moment in the natural history of the valvopathy, in which the need for a correction of the hemodynamic overload provokes a 'human-dynamic' overload. This type may be more difficult to deal with, as Fiodor Dostoievski (1821-1881) portrayed in *The Brothers Karamázov*: "…because he was crushed by the terrible burden of freedom of choice...."

How would the valvopathy patient perceive the right to the freedom of adjusting his choice and commitment priority, the getting involved with the *yes* and disposing of the *no*, when in seeking the basics, conscientious of being prudent as to his future (because, in fact, the implications are not exactly immediate, they manifest themselves months or even years after the operative act), his cardiologist, who is experienced in the quotidian and has the memory of analogous situations, does not have the labels *scientifically correct answer, scientifically incorrect answer?*

The reluctancy that is felt by the patient is evident in the following consultation published in the *Heart Forum* from the *Cleveland Clinic* some years ago:

"I am a 36-year-old man who is going to undergo an aortic valve replacement in London. The surgeon recommended a mechanical prosthesis, but admitted that others would have proposed a Ross operation; however, he considers it has greater risks and merely a few theoretical advantages. What are the disadvantages of warfarin? Is Coumadin the same thing? Will I have to reduce my alcohol intake? Does it make a noise? I am a light sleeper. This might sound trivial, but it truly is bothering me. Some have told me I should choose a homograft that lasts for about 20 years, and others say that I should not fear a new operation. I feel insecure..."

This patient clearly is not ready to see a decision within himself. His physician's clarifications seem to be insufficient in certain details, but especially in making him aware of the fact that there is no perfect decision. Whatever decision is made, it will be "excellent" considering the various possibilities for these circumstances.

In pursuit of answers as to who should hold the handle of the decision-making gavel, we were touched by the concept of physician-navigator and patient-pilot[4]. In this way, the cardiologist is the one who gives course-plotting coordinates, and the valvopathy patient is the one who pilots the decision about valvar prosthesis. In this composition, no one abdicates of his/her values; both remain sovereign at the bedside, each in his own way.

Therefore, the sequence of *inform-opine-decide-concur-act* is thus distributed: the first two parts essentially belong to the physician, the third portion belongs to the patient, and the last two are once again determined by the physician. The objective is to individualize management, educate the

patient regarding circumstances, elevate his/her compliance with treatment through sharing, and reduce the probability of dissatisfaction because of poor communication.

We found this pertinent comparison in a text about the classic function of the navigator[6]:

"The navigator is the person responsible for orientation according to pre-established norms and identification of critical points. Thus, it is important for the navigator to know the norms in detail and be capable of making reliable interpretations - to "delay" or "not indicate" a reference to risk may result in an undesirable event. The navigator is not permitted to err. Any doubts that the pilot might have as to the quality of navigation will result in losses for the decisions on conduct. Therefore, it is the responsibility of the navigator, above all, to transmit SAFETY to the pilot..."

When we declare that the valvopathy patient has the right to an opinion about his/her valvar prosthesis, we don our respect for the saying: *every man to his own taste;* we furnish the raw material necessary for forging the gavel – sharing of information – and the patient is the one who pounds the gavel – decision-making.

Our expertise advises us on what needs to be done and if it should be done (expectations), while the patient's values give the basis for his/her allowing it to really be done (his/her will). Thus, we accept the bioethical and anthropological paradigm that the approximation to each person should always be individualized when he/she is in the patient's situation.

It is important to bear in mind the distinction proposed by the Austrian philosopher Martin Buber (1878-1965), between the ME-THIS and the ME-YOU. In this case, the ME-THIS would correspond to the cardiologist's concerns with the heart that is deficient because of valvopathy and with the therapeutic prosthesis, and the ME-YOU, would represent the cardiologist's support for the patient in comparisons and in decision-making, and then making it a clinical reality. This complementarity helps one to see a synthesis of the navigator-pilot relationship at the bedside: nothing just by me, nothing without me.

III. Reality is still not Harken

Highlight: *"Daring ideas are like chess pieces that move forward; they can be eaten, but they can also begin a victorious game..."* (Johann Wolfgang von Goethe - 1749-1832).

One of the objectives of Cardiology, the ideal valve substitute, shall come[7,8]. It will bring hemodynamics and hemocompatibility similar to those of the human body in a mechanical prosthesis that does not form thrombi, or in a bioprosthesis that does not calcify. Communication at the time of pounding the gavel on the type of valvar prosthesis will prove highly beneficial.

The ideal valvar prosthesis takes time in laboratories and does not yet merit the approval certification signed by Harken[7], which represents the hope that a not too distant future generation will pose the progressionist question of all time *"How could it have been [done] that way?"*. In the meantime, seven in ten individuals operated for valvopathy exchange incapacitating valvar stenosis or insufficiency for an artificial open-and-close condition in a ratio of four biological prostheses to one mechanical prosthesis (data from InCor).

What is truly available is capable of producing benefits for classes I or II-A[9], something we intend to reach by reprogramming intracardiac flow. When the damaged valve is removed from the path of the blood so that it can pass through a valvar prosthesis, the pathophysiological mechanism remodels itself inversely, backwardly in the direction of physiological flow.

The international demand for valvar prostheses causes a growing economical and financial implication; the market in the United States of America estimated a worldwide profit of more than one billion dollars in 2005[10].

The manifestation of prosthesis as a material good is negligible in valvopathy patients, but supreme in its manifestation as a benefit for mankind.

We pool low, average, and high-level technology for the exercise of Cardiology. This is not enough. We would like to have more and be able to prevent and treat heart diseases better. We do not consider the justifications for the present limits as final. They are a mere semicolon in a moment that will progress.

In favor of beneficence, we feel encouraged to transcend; in the search for that which is even more useful and efficient, we are driven by the mythological symbolism of the wings on Hermes' caduceus – no matter how heretical this may be[11,12]; for the pro-ethical connotation, the important thing is the presence of wings that are absent on Aesculapius's staff. The mere wisdom of the serpent is not enough when the patient is our guest for the flight.

Dedalus managed to reach his destiny and Icarus did not, in spite of father and son having used the same wax to fix their wings. In his ambitious enthusiasm, Icarus forgot his father's advice about the Sun and rose to such a height that the wax melted. We should remember that ethics might be defined as the limits that should be imposed on the search of one's ambition.

In this way, the span of our flights from the air shuttle between science and humanism is under the control of ethics – *"the physician is prohibited…"* constitutes the *caput* of 77% of articles in the Brazilian Code of Medical Ethics. Once the flight plan is approved, the cardiologist can take off the ground the capability for accomplishment, professional endurance, and patient survival.

Technology's inaugural flight in valvar prosthesis happened on September 11, 1952, at the Georgetown University. The artifact was made of plexiglass with an inner ball and was used to treat aortic insufficiency. The implant was made in the descending aorta (located after the subclavian artery branch) of a 53-year-old woman, by the author of the project, the American surgeon Charles Anthony Hufnagel (1916-1989). The patient benefited from his pioneer spirit for eight years without taking anticoagulants. The Hufnagel prosthesis produced a characteristic sound audible one meter away every time the patient opened her mouth.

Development of extracorporeal circulation and oxygenation opened the way for valvar replacement. On September 21, 1960, Philip Amundson, a 52-year-old patient with rheumatic

mitral valve insufficiency gained ten years of life after receiving the implant of the first commercially available valvar prosthesis developed by Starr – Edwards (Albert Starr, 1926- , and Miles Lowell Edwards, 1898-1982, an engineer who had rheumatic disease at 13 years of age).

Half a century later, the dramatic element of all the valvar prostheses available – each with its intended *plus* feature – is that as soon as it fulfills its function, it becomes a seed for germinating degeneration, calcification, or thrombosis[13].

IV. A good idea, but...

Highlight: *"It's useless to fight for an idea - when it is good it follows its own path..."* (Roger Fournier - 1954-1989).

To invest in a non-maleficence effect of pulmonary dependency on prosthesis is like trying to describe, from the bioethical point of view, the valvar operation of translocating the pulmonary valve as a substitute for the aortic valve. The operation idealized about 40 ago by Donald Ross, an eponym born in South Africa and dubbed *Sir*, is difficult to reproduce and therefore is one of those surgical techniques that end up acquiring the label of an experience that is successful in the hands of certain teams.

The principle is defensible in light of what we know happens with a bioprosthesis implanted in the so-called left heart of young people; nevertheless, available data do not allow any advancements in analyses of benefits.

What usually happens it that the cardiologist-navigator whose institution does not practice it, does not customarily mention it as an option of choice to the patient-pilot who could meet inclusion criteria for this technique.

V. Withdrawal Syndrome

Highlight: *"Those things we cannot do without, we don't possess, they possess us..."* (Ivern Ball).

Uncertainties provoke effects at the bedside, lure us to abuse state-of-the-art technology, and seduce the "syndrome of the latest article." It is precisely in conditions of doubt that grows the influence of intuition, that obscure short-circuit on reason that resorts to some "personal rules," those diffuse networks created around life experiences that participate in composing expertise[14].

We sense each excision of a damaged valve as *alea jacta est, cast toward* the reality of hemodynamic benefit, submissive to the imperfections of the artifact. This can be synthesized in the old adage: valvar replacement is the exchange of one disease (already symptomatic) for another (yet asymptomatic).

On the one hand is the clinical benefit, the foundation for quality survival. On the other, the harsh truth noted in obituaries of patients with valvar prostheses: regardless of what type of prosthesis is used, mortality is superior to that of individuals in a corresponding age group that live with their natural valves, and around 50% of causes of death are directly related to the valvar prosthesis.

It is under this emphasis of medicine as the science of probabilities and the art of uncertainties that a dependency relationship is formed, which like any other, combines good and bad experiences that permeate one's lifestyle, many of them fruits of good and bad decisions.

The good experience is the recovery of lost, modified, or avoided activities along the natural history of the cardiac disease that the valvopathy patient expects to maintain by the benefits of a prosthesis-dependency[15]. It will be original for that patient, but at the same time, a copy of so many others from the professional cardiologist's point of view.

The bad experience happens when, after a period of well-being, the terrible reality of any dependency is manifested – the withdrawal syndrome. In the withdrawal syndrome for a prosthesis, the valve function becomes lacking in the circulating blood and the cardiologist administers a "new dose" called a replacement, but not without first slamming the gavel once again.

VI. "If you kneel, you have to pray"

Highlight: *"...difficulty in foreseeing the behavior of any person, including our own..."* (Gustave Le Bon, French psychologist / sociologist - 1841-1931).

Kneeling

Acts that are initiated require a commitment to a sequence of interdependencies. We sought a phrase that would synthesize this behavior and we found "*If you kneel, you have to pray*." It is a bioethics-friendly proverb.

Adjusting it to the surgical treatment of valve diseases, this teaching from folk wisdom could use a paraphrase: "*If you operate, you have to PRAY.*" This is because the one who exposes the operatory field has to effect combinations of *Repair* (prolapsed mitral valve leaflets), *Eliminate* (a giant auricle), *Replace* (a valve by a prosthesis), *Add* (a constrictor ring), or *Move* (the pulmonary valve to the aortic position).

The "R" – **r**eplace a valve by a prosthesis – is the third therapeutic method after many years of clinical surveillance on damaged valves (first option), and when there is no recognized chance of repair (second option), the initial 'P' in **p**ray[15].

When we see an indelible change in the valvopathy patient's quality of life, we change our appreciation of non-maleficence that functional classes I/II saw as predominating over the virtual benefit of a valvar prosthesis implant[16,17]. We immediately invert the benefit/non-maleficence relationship of the valvar prosthesis and advise the patient to get rid of the valve generated in his mother's uterus and accept one that was conceived in an industrial matrix. This should be made clear: functional class I is a surgical recommendation class III, and a functional class III is a surgical recommendation class I; this is the linguistic code of the cardiologist for surgical indications in valvopathy.

Pray

The communicative force of *hears everything well* (in the physician-patient sense) and *says what interests him/her* (in the patient-physician sense) is the stability factor of the physician-

patient bond in face of the impossibility of any prognosis coursing across a perfect sky on board an ideal "valve clone".

"Routine" communication without adaptations in feedback means running on an automatic pilot that is insensitive to the turbulence of the route projected for the longitude of the plurality of authorized prostheses and the latitude of the scarceness of endorsable options according to the viewpoint of each team. Being thoroughly imposing, information ends up creating more than an opinion - a belief.

The cardiologist knows the turbulence. It happens amid the formation of clouds heavy with complications caused by prosthesis-dependency and with many lightning bolts of charged frustration. There is no lack of acmes and nadirs; that which seems a good thing for cardiology can have negative repercussions for the valvopathy patient. Good and ethical communication is the safety belt when the forces of Nature show their superiority over science and incite, for example, a terrorizing shower of thrombi.

The priority of our profession is the endeavor for the good result to happen; the priority of the patient is the result that has already happened, that is, the prosthesis functioning as a valve standard. Therefore, even if a decision were made rationally in the preoperative phase according to clear criteria, the intellectual comprehension of the subject might not be enough in the postoperative phase. In other words, the anticipated understanding about the pros and cons of an implanted prosthesis may not be enough to help the patient deal with his more immediate desires to return to his life routine.

When we transmit probabilities, the patient may do "simultaneous translation" and consider it as a promise, since that is his/her wish. In the name of harmony, we need to be willing to go through as many decoding processes as necessary in the waiting room of the decision-making; the objective is to keep the hemodynamic swirling from becoming an ethical eddy, or even the transformation of the heart murmur into a din in the cardiologist's conscience.

The natural valve is lost and commitments with the valvar prosthesis are gained; one of the challenges here, maybe the most critical, is the daily balance between anti-thrombosis and anti-hemorrhage concerns.

Healing and postoperative clinical improvement mark the beginning of observance of commitments with the prosthesis-dependency made during the preoperative phase. That is when the burden for many misunderstandings about legitimity, representativeness, reproducibility, and validity of knowledge about valvar prostheses starts to weigh. That is when the preoperative information content contributes to eliminating a feeling of being surprised by reality.

The commitment with the prosthesis-dependency needs to be as ample as possible, which is why it includes good life habits; one of them, abstaining from smoking, increases in importance as it shows to be a risk factor for new operations for the bioprosthesis and thromboembolic phenomena along the prosthesis-dependency[3]. Knowledge about one's own valve disease contributes to the patient's giving up smoking; 48% of 215 patients with valve disease who became former smokers associated the change of habit with their heart disease, either because "those who have heart problems should not smoe" (36%) or because they "had had an operation" (12%) (data from InCor).

VII. Emotionally variegated

Highlight: *"I have phases like the moon..."* (Cecília Meirelles - 1901-1964).

One of the first lessons in clinical medicine is the difference between a symptom and a sign. The subjective aspect of dyspnea is felt a lot more by the patient with valve disease; the objective of the valvopathy murmur worsening that justified the symptom is sensed a lot better by the physician. In this context, it is simple. But simplicity disappears when a strabismus in focus occurs: the patient with a valve disease reinforces the apprehension of the moment as he/she is dominated by the anguish of not being able to breathe; the cardiologist considers the long-term benefit of prosthesis-dependency (in a new valve replacement operation, the experience gained enhances the patient's objectivity).

The environment is therefore subjected to the effects of an interpersonal dissociation meaning that does not mean more or less human warmth, since it results from a composite of emotions necessary for clinical resolve. In face of his discomfort, the patient is emotionally "hot", prone to the immediatism of impulsive decisions with an emotional state that blunts any precaution with the future; the cardiologist, on the other hand, who was trained to maintain his focus on the atemporal and stay alert to all angles around him, is professionally "cold" (hot-cold empathy gap)[18].

This bears a lot of weight in the decision-making process in which responsibility is the price to pay for the right to make one's own decisions. The "hot" emotional state provokes a false sense of stability because the anguish of the situation seems to freeze the future and the valvopathy patient reacts by overestimating the resolution of the worrisome moment and underestimating the vision of a valvar prosthesis as a long-term preference. This behavior can create impasses when the patient, who is now in a "cold" affective condition in a comfortable "day after" situation of the late postoperative period, has to experience the day-to-day reality of his prosthesis-dependency and finds himself faced with vital commitments.

Short- and long-term focus adjustments and zigzags in the perception of priorities justify the scenes where protagonists are patients with mechanical prostheses who abhor the quotidian of anticoagulation, a daily carrousel of pill ingestion, periodic laboratory controls, adaptation to dosages and drug-food interactions, and a temptation toward poor compliance. Similarly, patients with bioprostheses anguish over the inexpiable panorama of approaching expiration dates and feel they are moving "back to the future."

VIII - New custom: Access by the bridge

Highlight: *"Morals are the science of customs and change with them. They are different from one country to another and do not remain the same in one place for the space of ten years..."* (Anatole France, pseudonym for Jacques Anatole Thibault - 1844-1924).

William Bart Osler (1849-1919) was a skillful captor of bedside angst without technology and therapeutic resources. Today the lack of options is gone, but the anguish remains.

Paul Wood (1907-1962) expressed distress over the progressive incorporation of technology at the bedside that "shocked clinical traditions" and predicted paradigm changes, in the preface of the first edition of *Diseases of the Heart and Circulation* (1950). He said, "*I sought the balance between men and instruments, an expert opinion and statistics, traditional concepts and heterodoxy, bedside clinical practice and specialized tests, the practical and the academic, that is, to connect past and present...*"

In 1971, the concerns of the American oncologist van Rensselaer Potter (1911-2001) with the effects of technological progress that had brought efficiency to the bedside on human nature made him realize the need for creating a safety bridge to the future: bioethics.

Ethics control the traffic on the bridge with deontological lights that may be green for information on scientific databases, and red for the style of resolution. In this regard, we thought it would be helpful to set up Chart 1 with the articles from the Code of Ethics in Medicine in which the words "decision" and "decide" are used explicitly[19].

Those who value the connection between biology and humanism became enthusiastic passers-by of Potter's bridge; for example, cases where it is necessary to interconnect the force of cardiology, aspirations of the valvopathy patient, and precautions of the cardiologist. This is the same direction perceived by the Dutchman, Baruch Espinosa (1632-1677). He wrote (parentheses are ours): "*...it is by force that peace is produced* (therapeutic efficacy), *it is by desire that that which is right is born* (doctor-patient relationship), *and it is because of qualms that we run after safety* (professional defense)..."

IX. Maxillary temperature

Highlight: *"Words have the energy of sound, books are merely paper..."* (Paul Claudel -1868-1955).

When we acquire knowledge from scientific articles, such as they are today, we introject the writing style with a distance from the physician-patient relationship, with results reduced to tables and graphs and the conclusions iced up in the freezer of statistics. In our professional freezer, we preserve knowledge and skill, but it is advisable not to freeze attitude, that manner which those wistful *lessons in clinical medicine* taught us, the person of the patient of the author anticipating our patient.

Bedside words, anxious to symbolize a social conscience in the doctor-patient relationship, do not tolerate the same scientific knowledge formatting for the paper or the coldness of the original article as to structuring evidence.

Medicine as an applied discipline – the usefulness of knowledge – rejects the impersonal forms of science-medicine that we file as knowledge; cardiologist-cardiopathic patient communication differs from the cardiology-cardiologist communication, and requires an adaptation to the proximity of the bedside that values the warmth of humanization.

In this aspect, it seems useful to describe microwave oven technology at the bedside: its use defrosts stored knowledge and makes it palatable for verbal exposition.

X. The heart has the Law of Starling
The cardiologist has Law No. 10,241/99

Highlight: *"Things are not just because they are law, but should be law because they are just..."* (Charles-Louis de Secondat, Baron de La Brède et de Montesquieu - 1689-1755).

We are free doing everything that the laws allow, and the resulting right should not remain merely symbolical as the monumental, cold, and immobile statue of Liberty (1886. The Alsatian sculptor, Frédéric Auguste Bartholdi, 1834-1904, used his own mother as model).

In Sao Paulo, representativeness, warmth, and mobility in the free and informed doctor-patient communication are set forth in the State Law No. 10,241/99. This law intends to

It is the physician's right: Art. 24 – To suspend activities, whether individual or collective, when the public or private institution where he/she works does not offer minimal conditions necessary for exercising his profession or does not remunerate him as merited, except in situations of urgency and emergency, and his/her decision should be communicated immediately to the Regional Medical Council.
The physician is prohibited: Art. 35 – To omit care for patients in urgency and emergency sectors when it is his/her obligation to render care, therefore placing the patients' lives at risk, even with support of a majority decision of health professionals.
Art. 48 – To exercise his/her authority in a way that limits the right of the patient to decide freely about his/her own person or well-being.
Art. 56 – To disrespect the right of the patient to decide freely on the execution of diagnostic or therapeutic practices, except in the case of imminent life risk.
Art. 67 – To disrespect the right of the patient to decide freely on a contraceptive method, in which the physician should always clarify the indication, safety, reversibility, and risks of the method.
Art. 72 – To participate in the process of diagnosis of the death or in the decision of suspension of artificial life-prolonging methods of a possible donor, when the physician is a part of the transplant team.

Chart 1 *- Articles of the Code of Medical Ethics with the explicit use of the words decision or decide*[19]

provide a foundation for consents and refusals in a clear way: "*…the patient has the right to receive clear, objective, and comprehensible information, including on whatever he/she considers necessary beyond what is routine….*"

Therefore, navigation by the physician and piloting by the patient is legal in the State of Sao Paulo.

XI. Physician's word, patient's ear

Highlight: *"There must be two people in order to speak the truth, one to speak, and the other to listen..."* (Henry David Thoreau - 1817-1862).

Communication on valvar substitutes is a part of the ethical responsibility of cardiologists, a sign of respect for the dignity of whoever will find, in the prosthesis-dependency, a continuity of life. It stands out among the themes that provoke criticism and auto-criticism on sharing information in cardiology.

Each physician-patient relationship is a moral cell with its peculiarities. Since there are no two patients alike for a given type of valvar prosthesis, after the diagnosis of valvopathy is confirmed without much influence from individualizations, we supply the therapeutic message taking into consideration the cultural and religious plurality that concurs for the way in which each one interprets health, sickness, and moral obligations[20].

Since we understand the patient with valve disease as being a part both of the problem and of the solution, we put our "cars on the road" and fill up with high-octane moral fuel; in this way, we can get the ethical performance to construct a traffic rotary for a better distribution of information. The result is that the patient's world, which under the ironic point of view of Honoré de Balzac (1799-1850) begins at the headboard and ends at the foot of the bed, starts to have access to several directions of knowledge and distinct distances of repercussions.

A language of conveniences and inconveniences of valvar prosthesis is transported to the bedside, an orchestral space that harmonizes the complex of information and admits solos. It makes the valvopathy patient aware of the fact that the valve substitute will not be a "soul mate" of the birth valve; it discourages the patient's reveries by using cut and dried truth.

If we can be versatile within the limits allowed by scientific knowledge, cautious to not pass on arguments of "absolute truth" or being seen as prophets of the path, concerned with using language that facilitates comprehension and attentive to a final deadline for the decision, we will cover important steps for the quality of communication between navigator and pilot as to the roads of prosthesis-dependency.

It is valid to "write and rehearse the script," although whenever "the heart speaks," as the German philosopher Gotthold Ephraim Lessing (1729-1781) said, there is no need to prepare a speech. One should avoid the lack of clarification that behaves as if we were lying to the patient, since we would be feeding mistaken expectations. The verbal tour should not neglect to visit both significant places and emphases and pedagogical pauses to call our attention as to "how we are doing."

To do well is not to carry on a one-person dialogue; it means to analyzing how we are speaking and listening with each sentence spoken; it means making adjustments in face of the unforeseeable events of the journey.

In order to clarify and make things clear, the availability of time is contagious. Additionally, hearing us speak avoids verbal hyperflow or hypoflow, and hearing us hear protects us from other concerns of the mind during the dialogue with the patient.

It is worth pointing out, however, that the patient's pro-activity in sharing information is heterogeneous.

There are occasions when we feel like that professor before students with stimulating interactivity, awakened by the interest of the valvopathy patient in knowing his valvar prosthesis well, which makes him ask, research and opine.

There are other occasions when we feel like we are practicing a desolate archival obligation, nothing more than "notarizing a signature" of an acceptance, since what predominates in the patient is a reaction of passivity, denial, and distancing.

The navigator-pilot relationship admits heterogeneity in the aspect of interest that the valvopathy patient will favor in information about the type of valvar prosthesis[21,22] . For some, this is the assumed risk – for example, family members of elderly people make a distinction of it in order to express that the life expectancy does not justify the operation. For others, this is the awaited benefit – for example, a young disabled person understands that the perspective of being able to ransom his quality of life surpasses any dimension of risk. Consequently, it is prudent to avoid projecting onto the pilot-valvopathy patient the same plural reasoning about risk-benefit that we commit ourselves to as to the whys, wheres, hows, and whens. Each patient can see the issue according to the parable of the blind men and the elephant.

In brief, excellence of physician-patient communication implies taking into account the conjuncture in which problems and solutions present themselves, the reason why their stereotyped presentation is not enough, or, as some would have it, the written presentation of what will or may happen, that will not necessarily provoke discussion.

XII – A guideline is a pre-concept Experience is a post-concept

Highlight: "*The wise man does not have inflexible concepts, he adapts himself to those of others...*" (Lao-Tsé -570-490).

Should we transmit information to the patient as experience we have gathered, or as the best evidence reported in literature by structured clinical observation?

The bedside situation is too complex for us to limit ourselves to a simple copy-paste of a guideline that serves as our supervisor, since a recommendation for a disease may not guarantee the correct decision for all who are ill. Guidelines give us the map to the main road; they are, therefore, useful to the navigator, but they do not indicate the precious shortcuts of experience.

Conflicts between scientific knowledge about a guideline and attitudes of humanization generate reflections on the best adjustment that should be practiced between the objectives of medicine – of which we are agents – and the objectives of society – of which the valvopathy patient is a member. An ethically correct exposition does not allow room for dissimulations as to valve prostheses. There is definitely no

opportunity for half-truths, as in marketing that offers a product as being "semi-new", enhancing benefits and trying to hide the corresponding "semi-old." Many have certainly already had the following type of thought[23]: *"I spend a lot of time analyzing each guideline that is published, but none explains how to behave with my tougher patients..."* and *"I can not force this resolute woman to accept the latest guideline of the American Heart Association, but she wishes to commit as long as it is on her terms..."*

The recognition that the guideline indication may differ from the patient's preference and with individual heterogeneities has a great impact on bedside humanization. Guidelines are, undoubtedly, of great value in reducing our habitual intolerance to uncertainties and transforming them into reasonable certainties (benefits); but since individual uncertainties (that demand non-maleficence) cannot be eliminated by them in the same way, it is wise to recognize that the guideline is not a taskmaster of our reputation.

XIII. Sensibleness in one generation Foolishness in the next, or vice-versa

Highlight: *"Humanity that should have six thousand years of experience, falls back into infancy in each generation..."* (Tristan Bernard - 1866-1947).

Those who deal daily with specialization in cardiology cannot go without recognizing that there is a generation gap as to the vision of basing information given to the patient on evidence of cardiology or the cardiologist's life experience[24]. It is time that adjusts the scientific vision that accepts the double-blind and the clinical eye that demands that both eyes be kept wide open.

Cardiologists who are more experienced on the subject of prosthesis-dependency reach the patients carrying their hand luggage full of "meta-analyzes" from a single source – that of their work scenario. Those who are not so experienced tend to prioritize information from literature and reduce reliability to experience, describing it as "experiences of one single case." In this way, the communication style used with the patient moves more towards the side of human sciences or more towards the side of exact sciences.

The combination of the young and the not-so-young in health services is Hippocratic: *"the one who taught me this art... to consider his sons as my own brothers... teach them this art..."* For 25 centuries (one hundred generations), it has been a proficuous practice to bring together intellectual agitation and stabilization because their CRM [Regional Medical Council] numbers reciprocally correct their misunderstandings. The seesaw of efficiency is thus balanced.

XIV. Layman, *pero no mucho*

Highlight: *"Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it."* (Samuel Johnson - 1709-1784).

In spite of having given rise to the risk of deprofessionalization and a drop in the physician's authority, electronic libraries have been a strategic tool for those who seek health-related information.

For valve disease patients, there are special websites such as *ValveReplacement.com/Forums*, which allow participation of valvopathy patients on several levels of discussion about the theme:

"I am a 27-year-old woman... I have mitral insufficiency... I need to decide between a biological and a mechanical prosthesis... the doctor said that anticoagulants would be dangerous in a future pregnancy... on the other hand, who would like to go through another operation in a few years?... I am depressed, afraid of making the wrong choice, not only for myself, but also for planning my family...I need advice…If there is anyone who has been through the same situation... please and thank you!.."

University centers also have electronic contacts available with information and orientation for valve disease patients, such as the Harvard University[25]: *"I am about to receive an implant of an aortic valvar prosthesis. I appreciate the greater durability of the mechanical prosthesis over the bioprosthesis, but I am fearful about the need to use oral anticoagulants for preventing thrombi. I have heard that there are new options for mechanical prostheses that dispense the use of an anticoagulant where you only take aspirin. Is this true?..."*.

How many patients could use this resource? The answer is difficult, but we suppose that there would be a growing demand among us; the essential thing in this information reality is that the information be qualified, as much as possible, by renowned institutions experienced in prosthesis-dependency.

XV. Valvar filter

Highlight: *"Many times it's necessary to change one's opinion in order to remain in the same party..."* (Jean-François Paul, Cardinal de Retz - 1613-1679).

Medical literature is not exactly a law, but it is categorical. It so happens that what is academically respectable is not always consensual at the cardiology bedside.

Assuming we are experienced navigators as to the courses of valvar prosthesis, we funnel down the coordinates as much as possible while still maintaining acceptable levels of benefit/non-maleficence for the patient. An example of this is to discourage the implantation of the mechanical prosthesis in the mitral position for a young person with a high risk of hemorrhage, since it is xiphopagus with anticoagulants.

At the bedside, there is an ethical-scientific filter with pores adjusted for obtaining an ultrafiltrate of options that is clear for the circumstances.

This filtering of the available valvar prosthesis types should be done, theoretically, in an impartial manner free from party interests; nevertheless, we practice personal biases geminated with scientific analyses of literature and critical accruals at the side of the bed.

We sustain true ideologies that compel us, whether we want it or not, towards filiations with the BPP (Biological Prosthesis Party) or the MPP (Mechanical Prosthesis Party), with

a right to exchange sides when convinced by a new scientific communication. The BPP representatives seem to maintain majority in the national congress of Brazilian cardiology.

XVI. Open communication Closed type prosthesis

Highlight: *"The men we talk to are not those with whom we converse..."* (Jean-Jacques Rousseau - 1712-1778).

It seems a welcome idea to consider the communication between navigator-cardiologist and valvopathy patient-pilot through the Johari Window[26].This is a useful tool for amplifying visibility on personal aspects in the process of *inform-opine-decide-concur* and contributing towards perfecting the interaction (Chart 2).

We can accompany the pertinence of using the Johari Window by the case of STN, a tradesman of 42 years of age, the last 25 of which were spent living with a diagnosis of double mitral dysfunction. Four months ago, STN heard that his case would soon satisfy the criteria for surgical treatment of the mitral valve. In this period, STN shared a lot of information with his cardiologist. Currently, they are doing an immediate preoperative consultation; what each one of them already knows about the other corresponds to the open conjunction of the Johari Window. We could say that the "old friends" removed enclosure boards, but not all that ideally would be necessary to get rid of. STN and his cardiologist are emphasizing dialogue as to the type of valvar prosthesis to be implanted; new technical information is passed on to STN, increasing the dimension of this open conjunction. It is important to reduce the gray zone in order to attain a fullness of communication that depends on how many other boards can be removed by the expansion of open conjunction in the direction of secret and blind conjunctions. Because of the imminence of the operatory act, STN felt at home to reveal certain personal values that he considered free within himself for such a disclosure. These things could never be known by the physician any other way (secret conjunction) - STN's identity became better known by the cardiologist and a few more enclosures were brought down, increasing the open conjunction. The physician, on the other hand, perceived that STN showed body language expressions in conflict with the verbal language. It was only after the physician pointed them out that STN recognized them (blind conjunction) – the process of becoming aware of defense mechanisms can be useful in eliminating behaviors, feelings, and negative motivations; other boards fell in this way, widening the open conjunction. On the eve of the operation, the interpretation of a dream that STN had had revealed an important aspect for the transoperative phase of the doctor-patient relationship that had been ignored up until then by both of them (unknown conjunction).

Through this window of communication, the cardiologist-navigator came to know the patient-pilot better, and the patient, the physician; this dynamics contributed towards the quality of information in the decision-making process.

XVII. Decide, conjugating in the future

Highlight: *"We desire to learn how to swim and keep one foot on the ground at the same time..."* (Marcel Proust - 1871-1922).

"Welcome to the world of prosthesis!" When it is time to say this to the patient, will we proceed as a compass, feeling

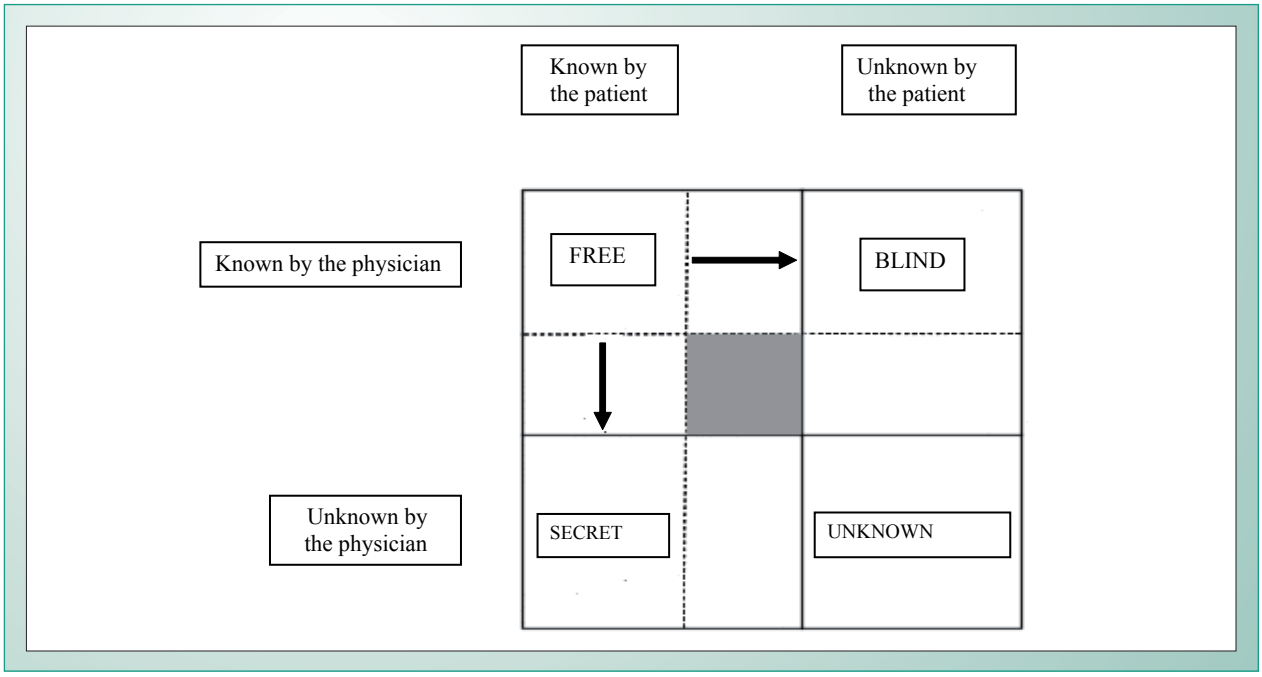

Chart 2 - *Adaptation of the Johari Window[26]. Excellence in communication on valvar prostheses is a function of reducing the gray area by dislocating the horizontal and vertical dotted lines towards secret and blind conjunctions.*
Open conjunction: information shared by the physician and patient in a given moment of communication. Secret conjunction: aspects unique to the patient that the physician may only come to know if the patient reveals them. Blind conjunction: aspects about oneself not perceived by the patient that the physician can perceive or concepts considered true by the patient that the physician does not perceive. Unknown conjunction: other knowledge that is ignored, not revealable or perceptible until then, that may come to be known during the communication process.

that we are the navigator and avoiding behaving like handcuffs on the patient-pilot?

It is important that the medical institutions make this assessment: how does one decide who decides on the type of valvar prosthesis to be used? Repetition is not merely reinforcement by semantics. Advantages and disadvantages are differences that can have a correct option on a multiple-choice test applied to the physician, but that can also admit *all of the above* or *none of the above* when the patient is giving the answers.

Indefinitions about the valve prosthesis to be implanted sound like preoperative omission, infidelity with professional responsibility, and a path towards divorcing ethics by the physician.

One starts with the principle that the cardiologist has the supremacy and the patient with valve disease, the preference. Supremacy is in the force of science supporting benefits, and preference represents the right to obtain the advantage. In associating force and justice in its own way, decision-making on valvar prosthesis is also a political actuation. It manages variables not directly related to the illness, ones we could call non-medical factors, that participate in the decision process; they include characteristics of the patient (social class, ethnic group, gender, age group, degree of optimism, emotional maturity), style of the medical institution, health system, and the environment of the sequence of facts[27].

I will decide

The heteronomic dialogue at the bedside usually is in harmony with the Esperanto of norms and guidelines; it is the language of assistance protocols that generally does not promote ample freedom of decision by the patient.

In Brazil, where rheumatic streptococcus remains and valvar aging grows, the green-yellow gavel that sentences which of the valvar prostheses will spend a number of years under "forced labor", incessant systoles and diastoles, for a multifactor array of reasons seems to be more in the hand of the cardiologist than in the hand of the valvopathy patient. The figure of the cardiologist, heteronomic as a tutor, would prevail over the autonomic figure as a counselor; after all, cardiology is written by cardiologists, according to what seems to be the best "temporary truth", just as history is written by the victor who does not seem to hesitate over what is proper and improper.

The medical institution that limits the decision-making process of the patient by means of an institutional routine is defining a stereotype between benefit and non-maleficence valid for valvopathy, regardless of who bears the ailment. It would be as if the navigator prefers the impersonal identity of the automatic pilot. Regional peculiarities justify a responsible reductionism; one common example is the deficient reliability of oral anticoagulation control in many regions of our country.

Uncertainty reinforces the concept that circumstances of crises increase the weight of the load felt in a choice and compel towards the safe harbor of fitting into routines pre-determined by a concept that is more collective than individual. In addition, habit passes on a positive view of conduct whose construction usually is seasoned by an egocentric bias synthesized as: physicians believe their own patients evolve better than those of their colleagues[28].

Bedside intimacy whispers to us that there is a certain relationship between the degree of confidence and the use of heteronomy. A high level of safety, according to the physician's opinion, including the extreme of the so-called blind confidence, the coziness that neutralizes discomfort, the patient's fear or phobia of the techno-scientific and moral posture of the physician, favors the heteronomic.

It is worth pointing out that in instances when the institution-illness relationship predominates over the physician-patient relationship, the patient tends to be inserted into the man-mass concept of the Spaniard José Ortega y Gasset (1883-1955): his clinical interests are more radically represented by a higher instance and there are fewer opportunities for options and choices.

You will decide
He will decide

To position ourselves in favor of autonomy is not to think that our opinion as a physician will be placed in the background because of the "respect for diversity." On the contrary, it is to fight to preserve the right to an opinion, except that both sides are appreciated, just as in the exercise of doubt (duality of one's own opinion), because it ponders the best treatment for the diagnosis and prognosis.

It is one thing to be sure of an opinion (private); it is another thing to respect an opinion (of another person). It is one thing to make a selection based on actuarial curves; another to renounce the rest of the actuarial curves. It is one thing to consider a decision "good"; it is another to witness the awaited good result.

In the role of navigator we reduce the asymmetry of information, compose the latent action, and await the decision of the patient responsible for piloting in the decision; this prerogative should be carried out in a free and informed manner, according to the guide that he/she feels is more beneficial than harmful (objective of medical ethics).

This form of thinking seems conceptually valid to us because the decision on the type of valvar prosthesis is habitually made in an elective way. Thus, there seems to be adequate time for the valvopathy patient to reflect on the lack of an ideal situation, within the concept that there will be no health benefit without a life risk and without paying a price – a new operation of the bioprosthesis or anti-thrombotic care.

The patient is the only one who can distribute information, according to how it sounds to him, toward the positive or negative side of his values[29]. This distribution demands the initiative and courage of decision responsibilities, according to the reflection of Englishman Bertrand Russell (1872-1970): *"Freedom is an indispensable requisite for obtaining many valuable things; but these valuable things have to spring up from the impulses, desires, and beliefs of those who enjoy this freedom...."*

Nevertheless, it is fact that reveals the habit; the patient may not be accustomed to going ahead amid many details, as the physician is, and gets caught up in minutiae. That is why many prefer to wash their hands and fully endorse so they

do not have to face the dilemma, and in doing this, they rob themselves of the pilot's license. We can agree that nothing is as exhausting in the doctor-patient relationship as indecision; for this reason, there are decisions that are mere formalities.

The following conclusion from a recent Canadian article reinforces the current tendency[30]: *"The type of bioprosthesis does not influence mid-range survival and prosthesis-dependent morbidity for ages 45 to 65 years; therefore the choice as to which bioprosthesis to use should be determined by patient/surgeon preference...."*

Chart 3 exhibits essential data for the decision-making process on valvar prosthesis by the patient-pilot, according to the proposal for ethical valuation in making a decision[31].

A pilot usually has a co-pilot, and a large percentage of patients, each in his own way and under cultural influence, literally give up the gavel handle when they place family members in an expressive status of decision-making power.

From this angle, it does not matter how much the family members are in tune among themselves; we should not neglect ascertaining the opinion of the patient himself, if he is indeed capable; however, if he is incapable of doing so, it is not always clear who should be considered the legal representative expressed in article 46 of the Code of Medical Ethics: *"The physician is prohibited to perform any medical procedure without previous information and consent of the patient or his legal representative, except in cases of imminent life risk."* What we have observed is that there usually is a leader that functions as a family spokesperson.

In exercising co-piloting, family members increase the open conjunction of the Johari Window in the direction of the secret conjunction of their own values. Who has not heard from a family member something like "Doctor, my husband has horrible veins, I wouldn't like him to have to keep drawing blood forever..;" or "I would not like to see my father having surgery again..;" or "…it doesn't matter, he will not lack anything..."

In this way, family members "exchange seats with the pilot" and can dominate the Manichaeism as to what is good and what is evil for the patient, thus directing the permission (passive acceptance) or choice (active).

This behavior occurs with a certain frequency in cases of elderly valvopathy patients, precisely the age group most sensitive to the physician's opinion[23,32]. Family members take the initiative and allege that this is necessary in light of the decline in decision-making capacity and emotional guarding in old age. This communication with the person who plays the part of *son-father* or *daughter-mother*[33] is ever more relevant in Brazil because of the increase in prosthesis-dependency during this so-called "third age" [senior citizens]. Over the last two years, this age segment has represented 29% of interventions for valvopathy correction, a universe with a growing distribution in the 65-69 years (34%) to 85-95 years (2.4%) age range (data from InCor).

XVIII. Epilogue

Highlight: "*The one who writes has the right to invent a fable, not the morality of this fable...*" (Rudyard Kipling, 1865-1936, an Englishman born in India, Nobel Peace Prize winner).

1. Clinical need
1.1. Valvulopathy that already has an indication for surgical treatment.
1.2. Chronic situation with potential for postoperative clinical involution.
1.3. Objective of correcting the hemodynamic disorder by valvar prosthesis implantation.
1.4. High probability of surgical success.
1.5. Clinical benefit subject to prosthesis-dependency.
1.6. There are no alternatives to prosthesis implantation.
2. Patient preferences
2.1. Patient is able to make decisions.
2.2. Patient gave permission for the operation.
2.3. Patient was informed and understood explanations on valvar prostheses.
2.4. Patient is collaborative in preoperative planning.
2.5. Patient is satisfied in his/her preferences.
3. Quality of life
3.1. Good perspective of resuming habitual activities.
3.2. Low perspective of complications that determine physical, mental, or social postoperative deficiencies.
3.3. Cardiologist is aware of life-qualifying bases for the patient.
4. Contextual aspects
4.1. Family aspects in harmony with the decision on valvar prosthesis.
4.2. Agreement between professional capacitation, institutional infrastructure, and health system.
4.3. Economic factors adjusted to the needs of the valvar prosthesis implantation.
4.4. Absence of religious hindrances.
4.5. Absence of precautions beyond what is usual regarding professional secrecy.
4.6. Absence of conflicts of interest on valvar prostheses.

***Chart 3** - Systematization of the database for information sharing on type of valvar prosthesis (adapted from Jonsen et al.[31])*

The patient may not accept the operation

Faith in the authority of cardiology guarantees us a way of seeing "the clinical case"; the expectation of benefit/non-maleficence hypnotizes Narcissism; and caution as to the limits of the patient's freedom are called to our attention by the Swiss Jean-Jacques Rousseau (1712-1778), who said "*Man is born free but is always in chains...*"

Zeal and prudence in the physician-patient relationship antecede and succeed the autonomic decision on valvar prosthesis; initially, because of the quality of information; posteriorly, because of the wisdom of agreement.

We respect the point of view of the patient who, except in a situation of imminent life risk, refuses the recommendation of surgical treatment for his valvopathy even though, in a way, it places bioethics as being anti-Hippocratic; Hippocrates gave

much emphasis to the patient's well-being and his oath carries certain impositions.

We avoid interpreting the anti-surgical attitude of the patient (who is the end) as disobedience to cardiology (that is the means); the conflict has more chances of having been with the form of good and not with our formulation itself. Going the wrong way on the road that we consider the most correct conduct does not give us the right to demerit the patient's choice; it stimulates us to go back to the source of information, even to encourage a second opinion.

If he accepts, he commits himself to prosthesis-dependency

When the virtual aspect of the surgical indication becomes a real preoperative preparation, in pertinent cases it is mandatory to select the type of valvar prosthesis, a definition that usually occurs on the eve of the operatory act as a fruit of our cultural aspects. Early planning, during consultations in which the valvar prosthesis is merely a perspective, is not one of our habits. As homework, we usually give the patient the immediate revelation of a clinical change, but not the reflection on prosthesis-dependency. Therefore, clarification to the patient at each office visit makes it easier to identify the ideal moment for the surgical indication, but customarily it does not provoke the choice of valvar prosthesis.

The honesty we transmit through information about the pros and cons of the various prosthesis possibilities heard as pleasant or unpleasant by the patient, is a preoperative variable of the postoperative quality of life. The success markers of the valve prosthesis decision are not merely those dependent on cardiological objectivity as to technical results, but include those of a subjective nature that measure the perception by which the patient resumes living physically, mentally, and socially in a way similar to when he was a functional class I. In this aspect, one positive side of prosthesis-dependency is that, apparently, the loss of the cardiac valve does not bring negative emotional impacts as happens with excisions of other body structures.

This is how we do it here

The ethical excellence of Brazilian cardiology involves ongoing perfecting of structured strategies in order to minimize the evils of prosthesis-dependency.

The common objective of the different medical institutions that multiply throughout the national territory should be the aplomb between hypertrophy of personal values recorded in the ethics-gram and the clinical remodeling available by benefit/non-maleficence.

Each green-yellow road that leads to a bioethical identity of prosthesis-dependency, in harmony with our cultural traditions, represents a fruit that ripens on the genealogical tree, richly ramified with so many pioneers of the cardiology family of our country.

Considering the highlight above, this question remains for each medical institution: do the clinical progress uncertainties reflecting on the professional responsibility recommend that the decision on prosthesis-dependency be a *previously prepared plate* or an *à la carte* choice?

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