



Presidenza del Consiglio dei Ministri
NATIONAL BIOETHICS COMMITTEE

BIOETHICS IN DENTISTRY

24th of June 2005

CONTENTS

Presentation	pag.3
Bioethics in Dentistry.....	pag.4
Bioethical Issues.....	pag4
Information and consent.....	pag.7
Informed consent and critical cases.....	pag.9
Research in Dentistry.....	pag.13
Conclusions	pag.15

PRESENTATION

Urged to examine the problems of bioethics in dentistry, the National Bioethics Committee hosted two experts in the plenary meeting of the 19th of September 2003, the dental surgeons Marco Lorenzo Scarpelli and Giorgio Berchicci. The wealth of issues and subjects arising during this meeting convinced the Committee to set up a specific working group on the subject, at which the two guests were invited to participate, bringing a positive spirit of collaboration and valuable friendship. The group, coordinated by Prof. Giancarlo Umani Ronchi, along with the participation of Profs. Adriano Bompiani and Cinzia Caporale, and the collaboration of Prof. Carlo Mario Miani, Full Professor of Dentistry at the Università Cattolica del S. Cuore – to whom I extend my thanks and gratitude on behalf of the Committee for his precious contribution – convened in nine sittings from November 2003 to February 2005. The draft of the document, drawn up and repeatedly edited by Prof. Umani Ronchi, was finally brought to the attention of the NBC in the plenary meeting, and definitively and unanimously approved on June 24 2005. In publishing this document I am pleased to highlight the Committee's satisfaction at having begun the examination of an area of bioethics of such subtle importance, and until now unduly neglected by scientific literature in general.

*President of the National Bioethics Committee
Prof. Francesco D'Agostino*

Bioethics in dentistry

The “specific educational objectives” of the specialist degree in Dentistry and dental prosthesis foresee that the graduate is ‘introduced to the knowledge of the basic notions of treatment and assistance according to the pedagogical principles of psychology, sociology and ethics’. In the relationship with patients, ethics represents a way of approach and primary aim in dentistry too. A similar programme, including cultural visions coming from different horizons, is also to be found in other European Countries, particularly in Spain and Latin America where the teaching of the principles of bioethics is an integral part of the student’s curriculum in dental school.

In Italy the exercise of the dental profession, Law No. 409 of the 24th of July 1985, is reserved also for graduates in medicine and surgery who enrolled in the degree course before the 28th of January 1980 and qualified to practise, and for doctors specialised in odontostomatology and dental prosthesis. If from the point of view of their general training the various figures present considerable differences giving graduates in medicine a wider professional practice than the one set down by Art. 2 of the institutive Law¹, all those practising the profession of dentistry are listed in one single Medical Association, that of medical and dental surgeons, and are subject to one single deontological code.

Bioethical issues

The exercise of medicine and surgery, along with that of dentistry, must refer to the same ethical principles in the defence of man and the protection of humanity.

The NBC does not consider that the issues, already dealt with in various documents and Opinions, can justify a peculiar branch of ethics applied to dentistry. The ‘Ethical Codes’ of the dental profession which were proposed at international level do not seem to present anything new with respect to what was already foreseen by the deontological codes for the medical profession. In particular the Ethical Code of the American Dental Association refers to the patient’s autonomy, good faith, the principles of charity, justice and truth².

¹ Law No.409 of the 24th of July 1985, Art. 2: ‘The dental profession deals with the activities referring to the diagnosis and treatment of illnesses and congenital and acquired abnormalities of the teeth, mouth, jaws and relative tissues, as well as dental prevention and rehabilitation. Dentists can prescribe the medicines necessary for the exercise of their profession’.

² We furthermore remember the Code of Professional Conduct is the set of binding rules for the members of the ADA and derives from the resolutions adopted by the Chamber of Representatives of the ADA. In many respects, except from its different layout and complexity, it is like the Italian Deontological Code. The EU Ethical Code (Dental Liaison Committee) approved in September 2000, sets out the guidelines based on the principles of subsidiarity of the EU, in the respect of the self-government of the national associations. The fundamental ethical principles to which the ethical codes of the national associations should refer concern the dentist-patient relationship, the dentist’s conduct towards the public, the dentist’s attitude towards colleagues and the exercise of the profession. Moreover, in 2002, the ‘ethical-behavioural code’ of the National Association of Italian Dentists (ANDI) was presented; this code develops the concepts expressed by the EU code and was the result of an interdisciplinary study carried out by the a committee made up of dentists, medical examiners and bioethicists. The code deals extensively with the ‘patient-dentist relationship’, the ‘conduct of the dentist towards the public’, the ‘attitude of the dentist towards his own colleagues’, the

Along general lines therefore, despite the specific and different operational techniques of the medical-surgery specialisations, it is not possible to imagine situations that do not come under the general ethical norms relative to the doctor-patient relationship³. The problems of ethical interest and moreover those of bioethical importance, even though in practice crossing the different specialisations of medicine and surgery and above all of biology, regard universal values and principles whose meaning can be revised and modified, but which go beyond the particular disciplines and specific fields of application.

The ethics applied involves the doctor just like any other practitioner, for example by means of the informed consent to surgery, even if in a less dramatic way, bearing in mind that the nature of the pathology does not usually produce great concern with regard to the life of the patient, even though it can undoubtedly cause concern about the person's health, negatively influencing their overall wellbeing. Some treatment in fact, even though being scientifically appropriate, could harm essential personal values, such as to represent a source of even serious malaise to the point of causing serious existential anxiety, above all in subjects who are prone to this. An example is the case in which the decrease in aesthetic efficiency may represent the price to pay in order to obtain a better masticatory function.

The dentist, like any other surgeon, can and sometimes must refuse to practise his profession (Art. 19 Code of Medicine)⁴ in cases where he is asked to perform surgery that goes against his conscience or his clinical conviction, nonetheless taking into consideration the overall state of the patient'. 'If the case is not urgent, in some particular cases a suitable psychological test could be advisable to support the therapeutic choice, which otherwise could be unjustified and the forerunner of possible judicial problems'.

Therefore, some situations typical of dentistry, especially in aesthetic dental treatment, deserve particular bioethical examination, considering that the face and above all the mouth, as "a poly-functional instrument, source of eroticism and the physiological centre of the formation of words"⁵, represents a primary element of approach and exchange with the world of other people, but primarily the only image of ourselves – even if incomplete and unilateral – that we carry inside us as the symbol of our identity able to condition us in our relationship with others. The *verbum* and the *vultus*, both subject to direct or indirect treatment by the dentist by means of a clear explanation to the patient, constitute essential means of expression and the external projection of cultural identity, so much so that a slight problem of pronunciation can represent 'almost the inability to project oneself properly', like a changed physiognomy is "to a great extent manifest of what the general tone and degree of feelings or

'practice of the profession', 'the scientific and technological research and the relations with companies'. Another fundamental document is 'Medical Professionalism in the New Millennium: A Physician's Charter' (February 2002) which deals with the 'pre-eminence of the wellbeing and autonomy of the patient, social justice, collaboration of colleagues' and represents a point of reference and guideline of the professional ethical codes for doctors and dentists.

³ See the NBC documents: *Aims, limits and risks of medicine* (14 December 2001); Informed consent to medical treatment (20 June 1992).

⁴ Art. 19 – Refusal to treat a patient: 'The doctor who is asked to give treatment that is in contrast with his conscience or with his clinical conviction, can refuse that treatment, unless this conduct causes serious and immediate harm to the health of the patient'.

⁵ Th. Kleinspehn, "*Kein Mund weiß sich selbst zu küssen*". Über das Essen, Beißen, Saugen und Lutschen, in "Ästhetik und Kommunikation", 15, 1985, No. 57-58, pp. 141-148.

ideas is"⁶. Every possible change – even one of betterment – of our appearance or of its dynamism that does not correspond with the scheme of ourselves can be the source of great malaise. In fact, it is important to bear in mind that the psyche of some patients interprets and mediates on the perception of 'beautiful', living worse off every true or presumed sensation of change in the case in which this brings about concerns with the 'image of oneself' that represents one's individual and incontestable patrimony, at the cost – in subjects prone to this – of even serious imbalances. If one considers that one's image is made up of the facial expressions, tone of voice and the formation of words, the dentist's potential to enrich or to irreparably compromise the patient's appearance and therefore their identity becomes even more evident. "The dentist is at the same time therapist and custodian of this dimension of physicality, which is expressed symbolically in eating on the one hand and in smiling and kissing on the other"⁷. Therefore the biological part of the health of the mouth and teeth, but also the communicative and anthropological importance and its symbolic meaning justify a serious bioethical commitment in the resolution of a number of professional contingencies, by reason of the fact that the concept of human beauty cannot yet be tied down to a well-defined parameter and, as such, be univocally understood and unanimously accepted. It is in fact a question of an 'evanescent postulate that cannot be shown owing to its peculiar subjectivity and relatività'⁸. It was Croce who said "...just imagine that this relativity should not be true for the human body, which is the source of the most varied charms"⁹.

There is no doubt therefore how the relationship between dentistry and aesthetics is particularly delicate, so much so that any possible negative outcome of the treatment could create situations that do not correspond with the original body scheme experienced by the patient as 'abuse', as mentioned in Munchausen's Syndrome by proxy.

The idea of pain must not be neglected, which is a constant and intolerable presence for many people and often automatically associated with the figure of the dentist and the surgery itself, which could represent in particularly sensitive patients the cause of the temporary disintegration of the set of perceptions of the ego, notwithstanding more readily used anaesthetics and the use of better quality drills which, in recent years, have marked a definite advance in analgesia. It must be stressed that better pain management represents an ethical imperative for dentistry, though presenting intolerable shortcomings even nowadays.

One other aspect must be taken into consideration in the dentist-patient relationship: the fact that invariably from the examination of the mouth not only can past and present pathologies be seen, but also the patient's lifestyle and

⁶ M. Borri in A. Cevidalli, F. Leoncini, *Trattato di medicina legale*, Vallardi, Milan 1922.

⁷ Th. Kleinsphen, *idem*.

⁸ E. Hofmann, A. Kolisko, *Trattato di medicina legale*, S.E.I., Milan 1905. F. Antoniotti, G. De Petra, *Basi dottrinali del danno fisiognomico nei diversi aspetti giuridici*, Collana Monografica Zacchia, Rome 1973.

⁹ B. Croce, *Estetica*, Laterza, Bari, 1902. E. Croce added: "Certo, queste questioni sul bello di natura e sulla bellezza della geometria, come le altre analoghe sul bello storico e sul bello umano, appaiono meno assurde nell'estetica del simpatico, che con la parola bellezza estetica intende, in fondo, la rappresentazione del piacevole. Ma non è meno erroneo, anche nell'ambito di quella dottrina e poste quelle premesse, il pretendere di determinare scientificamente quali siano i contenuti simpatici e quali gli irrimediabilmente antipatici...A ciascuno il suo bello (=simpatico) come a ciascuno la sua bella...".

habits, almost a biographical reconstruction which owing to the dentist's intervention could undergo a change involving the patient's very lifestyle. By means of dental treatment, not only to cure but also to improve, there could be an authentic "transition from a dentistry of cure to a dentistry of care"¹⁰, which is to be bioethically hoped for. The dentist can thus carry out preventive tasks besides therapeutic ones having huge social importance, and therefore it is all the more vital for the dentist to remain faithful to the medical origins of dentistry. Nor must the fact be neglected that the dentist could come across lesions in the mouth and the teeth – particularly in children but also the elderly – which can be indicative of voluntary lesions in a domestic context. Considering that in the case of a private relationship, the practitioner is not obliged to make a medical report insofar as being a non-indictable offence, this does not mean that he must not speak to the family about it, with the due caution. When the dental treatment is carried out in a public structure, the dentist is instead obliged to give notification of cases of presumed abuse to the authorities. The duty to report the case also lies in the possibility of maltreatment of children and elderly within the family¹¹.

Information and consent

Some aspects of consent to medical treatment and preliminary information are of bioethical interest – apart from what has been fully dealt with by the NBC's document "Information and consent related to medical treatment" of the 20th of June 1992 – which can present particular connotations in dental practice owing to the essentially private and therefore contractual nature (in 96% of cases)¹² of the relationship, one of the few left in medicine. The fact that the dental appointments and relative treatment take place in the dentist's surgery, that they can go on for months or years and often cure various overlapping pathologies and require different treatment, that the treatment may take place in the same sitting and thus be limited to a single appointment, sometimes lengthy treatment can foster the establishing of a friendly relationship and even familiarity born from previous treatment, or sometimes from a custom that is handed down from relatives or friends being treated by the same dentist. In cases like this one goes to the dentist with the same trust and confidence with which one went to the family doctor, readily accepting treatment and advice, seeking and even expecting the solution to general ailments. In the dentist-patient relationship, often openly paternal aspects are to be found, perhaps in the form of 'weak paternalism' or of a 'paternal-fraternal' relationship, deeply linked to situations of particular trust in the practitioner treating the patient, in the belief that wisdom allows the dentist to make the best choice for the patients he knows well.

A relationship of this type often shuns detailed formal information, since it is possible that in previous meetings the possibility of a future corrective

¹⁰ F. Manti, *La cura e i principi per una bioetica dell'odontoiatria*, in G. Berchicci, F. D'Agostino, P. Giustiniani, F. Manti, *Verso una bioetica per l'odontoiatria?*, Edizioni Scientifiche Italiane, Napoli 2004. Vedi anche: L. Battaglia *La voce femminile in bioetica*, in: S. Rodotà, *Questioni di Bioetica Laterza*, Rome-Bari 1993.

¹¹ Art.572 c.p. "Child abuse and maltreatment in family".

¹² *Gli Italiani promuovono i dentisti, ma il rischio-infezioni è in agguato*, Doxa survey, in "Il Sole 24 Ore Sanità", 7, 2004, No. 15, p. 24.

operation had been mentioned, but not completely, and which can now no longer be put off, that the length and difficulty of the treatment were discussed together with the cost, rather than the possible complications and the likely outcome which the patient often considers taken for granted at a friendly level. Thus at the right moment when the treatment can no longer be postponed, it is wrongly taken for granted that the patient has been informed of the details of the treatment and has given his “valid” consent.

Instead, in the relationship of trust between dentist and patient, the formal nature of the contract for treatment cannot be disregarded following the giving of adequate information on the diagnosis, the prognosis, the prospects of the treatment, the likely consequences of the therapy or lack of therapy, on possible alternative treatment – as set down in the Code of Medical Deontology, Art. 30-34. This information must be given to the patient together with an estimate of the costs and method of payment as this is also the patient’s right, considering that economic problems can often result in court cases. The consent form is of primary importance, and indispensable in non-routine treatment with a certain amount of risk. In the case of routine dental cure with little risk of adverse effects, the dentist is reasonably exonerated from getting written consent, as this is implicit in the request for that specific treatment. On the other hand, the most frequent complications must be carefully explained and specified in writing on the form. As these are usually planned operations and therefore not urgent, the form could be given to the patient to be read or to be examined by a trusted person so that, before signing for and starting the treatment, the patient can ask for further explanations. It would be furthermore opportune that the patient does not just sign at the bottom of the page but declares in writing that he has understood the type, the aims and the risks of the treatment and his commitments following the treatment like check-ups, hygiene, the need for further operations etc. The ‘patient’s duties’ can assume particular importance in implantology and orthodontics, insofar as the success is greatly linked – perhaps more so than in other branches of medicine - to the scrupulous observance of well-defined rules.

It is furthermore necessary that the dentist regularly fills in the individual medical record to which all the patient’s clinical, photographic documentation and x-rays must be attached¹³. Over the years, during which various kinds of treatment by different practitioners overlap, the lack of a reliable records can make it difficult for the patient to reconstruct his own medical history and jeopardise future treatment. Moreover, such practice could contribute to the proper defence of the dentist who may be accused of malpractice in a court case¹⁴.

¹³ No norm explicitly foresees the obligation for the dentist to keep a card or medical record for each patient. However the Ministerial Decree - Health of 14.9.1994, No. 669, Ruling concerning the identification of the figure and relative professional profile of the dental hygienist, foresees - Art. 1. point 2.: ‘The dental hygienist: b) shall collaborate in the filling in of the odontostomatological medical record and shall see to the gathering of technical-statistical data’.

¹⁴ According to a survey by the National Association of Italian Dentists, the processing of the data obtained from samples taken in Italy, even though partial, showed that: 1. The annual incidence of judicial and extra-judicial court cases in dentistry is equal to 7% of the cases treated, higher than that recorded in medicine, with a proportion of about 7:1; 2. in most of the cases the contentious procedure is formulated as tort, the possibility of criminal proceedings instead (<1%) represents the exception if compared with other medical specialisations even if with a recent tendency to increase; 3. the majority of cases of professional liability ascertained

Informed consent and critical cases

The case of the adult patient must be examined who presents a condition of natural incapacity in relation to contingent, permanent or transitory situations making him incapable of taking care of his own interests. In this case the dentist cannot consider a relative's or the spouse's consent valid with regard to a potentially dangerous operation. He could however intervene should the treatment not present particular problems or foreseeable negative consequences and should it be necessary to alleviate the suffering of the patient and anyway in cases of non-deferrable treatment (in situations of contingent or transitory incapacity). In more complex cases the preventive authorisation of the tutelary judge is always obligatory. The recent law relative to the trustee¹⁵ should greatly simplify the problem, considering the 'aim of safeguarding, with the least limitation possible of the ability to act, persons completely or partly lacking autonomy in the carrying out of the functions of daily life, by means of temporary or permanent support interventions'.

The frequent refusal by the dentist to carry out the treatment on psychopathic and in particular autistic subjects must be highlighted, as this is not always justifiable except in particular environmental conditions and in the absence of proper collaboration by the surgery personnel able to guarantee the safety of the operation.

Analogously, according to the NBC the preconceived refusal is unacceptable on the part of the dentist to treat patients with known infectious diseases such as HIV or hepatitis C, whose prophylactic measures have been established by precise provisions of law making the therapy compatible with ordinary routine dentistry, with the adoption of special precautions.

In the case of children, the Opinion already expressed on various occasions by the NBC must be remembered concerning the peculiar nature of the minor's consent¹⁶. In these cases it is a question of assessing their 'competence' – and therefore the ability to decide, to reason and to foresee the consequences of their own choice – the equilibrium of which is established progressively over the years¹⁷. Therefore, even though a conduct is considered

in contentious procedure is high (about 90% of cases): in most of the judicial procedures the negative outcome for the practitioner was foreseeable at the beginning of the case; 4. the average economic value of the contentious procedure, as regards the medical-legal assessment, is considerably lower with respect to other specialist branches, often limited to the repayment of the fee paid by the patient for unnecessary treatment (resolution of the contract by default, art. 1453 c.c.); 5. the reasons for the contestation are represented by treatment characterised by a greater request for results and considerable economic obligation by the patients (50% prosthesis, 20% implantology) (G. Di Rosa, ANDI, 2002).

¹⁵ Law No. 6/2004, Official Gazette No. 14 of 2004. Art.1: "This act shall have the aim of safeguarding, with the least possible limitation of the ability to act, persons completely or partly without autonomy in the carrying out of the functions of daily life, by means of temporary or permanent support interventions". Art. 404 Civil Code: "The person who, as the result of infirmity or physical or psychic disability, is in the impossibility, even partial or temporary, of taking care of their own interests, can be assisted by a trustee, appointed by the tutelary judge of the place in which he/she resides or is domiciled". Art. 405 Civil Code "... should the need arise, the tutelary judge can adopt urgent measures for the care of the person in question and for the conservation and administration of his patrimony. He can proceed to the nomination of a provisional trustee setting down the actions he is authorised to carry out..."

¹⁶ See in particular the Document *Bioethics with childhood*, (22nd of January 1994).

¹⁷ National Bioethics Committee: *Informed consent to medical treatment*, in: Riv. It. Med. Leg., 15, 171, 1993. Furthermore: 'it seems logical to infer... the impossibility of an autonomous consent before the age of 6-7. Consent is to some extent conceivable between the age of 7

prudent and advisable that requires the full capacity to act for the formulation of consent (or dissent) to medical treatment, established at the completion of the age of eighteen, the principle of informed consent must be considered and the expression of the will of the minor who must take part in decisions regarding treatment that concern him, even though still not in a decisive way¹⁸. It must be considered that jurisprudence foresees the abuse of authority for operations on seventeen-year olds of a sound mind. The positions of the *European Convention on Human Rights and Biomedicine* are similar¹⁹, along with those of the Code of Medical Deontology²⁰ and the World Medical Association²¹.

In prosthetic operations too the information must be as detailed as possible above all in relation to the aesthetic aims. The Court of Cassation²² ruled with regard to this that on the one hand “the context of the information must cover all the necessary area so as to avoid the essential basic error, the one that is constituting *condicio sine qua non* of the giving of consent”, stating furthermore that – in the case of the lack of consent – “the psychological element of the offence must be characterised in a wilful sense, also possible and generic but always with *animus laedendi*...”, on the other hand to not consider valid the justification whereby the impairment of the body or the mind is wilfully caused for scientific aims or research, and above all in the case of impairment for exclusively aesthetic purposes. That is to say that in operations for purely aesthetic purposes the lack of consent – which alone is a very serious issue at a bioethical level – represents the grounds for wilful lesion and possibly manslaughter. The problem is particularly important, considering also the data gathered from market surveys according to which in dental care today the sectors with greatest development are those of preventive treatment and cosmetic surgery.

With regard to implantology, the information given to dentists seems to be rather insufficient and often based on an excessive kind of optimism. On the contrary, even though advances in this technique have eliminated numerous possible complications linked to the integration of the implant, the information must be detailed in all its complexity and concern numerous local, general and psychological factors which can interfere with the outcome of the treatment.

and 10-12, but still not completely autonomous and to be considered together with that of the parents. Only entering adolescence can one consider that consent becomes progressively autonomous’.

¹⁸ M. Barni, *Diritti-doveri, responsabilità del medico. Dalla bioetica al biodiritto*, Giuffrè, Milan 1999; V. Fineschi, *Il rapporto medico-paziente: consenso, informazione e segreto*, in G. Giusti, *Trattato di medicina legale e scienze affini*, CEDAM, Padua 1998, Vol. I, p. 494; A. Fiori, La G. Monaca, *L’informazione al paziente ai fini del consenso: senza più limiti*, in “Riv. It. Med. Leg.”, 22:1302, 2000; G. Iadecola, *Potestà di curare e consenso del paziente*, CEDAM, Padua 1998; A. Santosuosso, *Il rapporto medico paziente nel diritto e nella giurisprudenza*, in AA.VV., *Guida all’esercizio professionale per i Medici Chirurghi e gli Odontoiatri*, Edizioni Medico Scientifiche, Turin 1994; G. Umani Ronchi, *Il consenso all’operazione deve essere esplicito e non filtrato dalla mediazione dei familiari*, in “Guida al diritto-Il Sole 24 Ore”, 8.2.97, 4, 67, No. 5.

¹⁹ Art. 6, point 2.

²⁰ Art.34: “It is the doctor’s duty to give information to the minor and to consider his will, compatibly with his age and the ability to understand, the respect of the rights of the legal representative being understood...”.

²¹ World Medical Association, *I Diritti del paziente*, Bali, 22 September 1995, in “Riv. It. Med. Leg.”, No.19, p.443, 1997: ‘If the patient has not yet come of age or if legally incapable, it is necessary that there is, in the cases foreseen by the law, the consent of the legal representative. The patient must however take part, within possible limits, in the decisions ...’.

²² Cass., Crim. Sez. IV, 12.7.2001.

Periodontitis for example, represents an often uncontrollable risk so much so that proposals have been made for a genetic test able to define the patient's susceptibility to periodontal disease²³ which can be influenced by oral hygiene, stress, the taking of medicines, nutritional deficiencies. These are all elements that the patient must be aware of and responsible for. Smoking abuse, particularly if associated with alcohol consumption, represents a contraindication which patients often underestimate and about which dentists do not always give adequate information. Cigarette smoke can cause serious periodontal harm so much so that in the United States dentists refuse treatment if the patient does not attempt to stop smoking. Drug abuse and in particular heroin addiction is often associated with an extremely bad oral condition which absolutely contraindicates implants; the same is true for some systemic pathologies such as diabetes, immunodeficiency, but also endocarditis, hepatitis and above all cirrhosis which can be responsible for changes in tissues and the immune system. Assessment must furthermore be made of the presence of dental plaque, occlusions, endodontal problems, dental caries and above all the state of the bone which must be carefully examined by x-ray. An evaluation of the patient's motivations is also essential when dealing with clinically unnecessary interventions subject to complications, and of his psychological profile which could have a negative effect on the outcome of the operation or be responsible for the non-observance of the maintenance protocol or indispensable rules of hygiene. The psychological selection of the patient can take on great interest, also owing to the difficulty in diagnosing some possible disturbances: some psychiatric pathologies like psychotic syndromes, behavioural problems, dismorphobia, brain damage including senile cerebropathy, are considered potential contraindications for the use of implants. It must be considered that the success of implantology is related to motivation and therapeutic needs. If the information given by the dentist is essential, it is just as important that the patient in turn informs the dentist without reticence of any problems regarding his health. Sure aesthetic success can be invalidated by the patient's psychological refusal to the outcome of the implant that he feels and considers incompatible with his own 'bodily scheme' and therefore with the image he has of himself, so much so as to be unable to accept the different facial expression and smile. The dentist therefore, like the cosmetic surgeon, must be capable of refusing certain treatment in the cases of "particular" patients and before requests for unrealistic operations.

It must be stressed however that in the resolution of problems of a functional type, the dentist has certain obligations with regard to his conduct to which, in cases of cosmetic treatment, guarantees of result could be added should the information be inadequate and not take into consideration all the possible complications in relation to individual reactions independent of the culpable conduct of the dentist. The problem was recently clarified by the Court of Cassation²⁴: "It is from the will of the doctor that his obligation derives and the agreement between the parties is the source of his obligation and the limit of his responsibility". Hence the importance that the commitment which the

²³ Kornam et al. demonstrated that specific genetic markers associated with the increase in the production of interleuchina-1 are indicators of the susceptibility to serious peridontitis in adults. The genetic test can complete the information obtained until now by means of microbiological and immunological tests.

²⁴ Cass. Pen. Sez IV, 12th of July 2001.

dentist, like the cosmetic surgeon, intends to take on in a contractual relationship be perfectly clear.

There is therefore an absolute need to describe the former state of the patient in detail (also with orthopantomography of the dental arches, plaster models, photos of the mouth and teeth, recording of tooth colour etc.), to specify the possible treatment (also alternative ones), the results that can be really achieved, the clear reference to possible drawbacks and relative risks, bearing in mind for the positive outcome of the proposed solution not only the 'objective beauty' but also and above all the "subjective beauty", so as to avoid upsetting that absolutely personal bodily scheme that the patient must be able to keep (in this sense the choice must be left to the patient as he/she alone must decide how he/she wants to appear). Quite often these considerations lead the dentist to just correct the "natural" look and, duly, to renounce any attempt to objectively improve that look.

Similar assessments are valid for orthodontics, given the coexistence of functional and aesthetic goals. The correct orthodontic dynamic-functional diagnosis must be associated with the complete medical history of the patient, if necessary with the help of a psychologist too especially for children, considering the enormous impact that the application of a brace can have in their relationship with others. It is therefore indispensable to propose the treatment plan, discussing aesthetic and psychic motivations. The information must concern, as for the implant prosthesis, also the patient's and parents' duties with regard to the use of the brace, its maintenance and oral hygiene, considering also the complete dependence of the minor on the parent for the consent to treatment. The NBC considers that, should the minor not collaborate in the treatment, the parents' coercive intervention cannot be permitted, considering that this is usually preventive treatment, not required by ongoing pathologies and often difficult to make the minor to accept.

The exasperated technicality of some practitioners, less consideration for techniques of clinical and instrumental assessment and the prevalence of mechanistic principles over organicist ones is the source of great criticism, as a proof of the presumed tendency of dentistry to distance itself from the medical background at least as far as concerns the reduced consideration of the general causes of mouth pathologies. Dentistry is accused of this above all when the dentist frequently uses the same technique independently of the patient's local and general situations with the risk of incongruous results under an aesthetic and functional profile, rather than following specific differentiated criteria even in the same case avoiding the correction of a particular defect and position of the teeth altering their facial identity.

It must be stressed furthermore that disabilities and particularly serious dimorphisms with dysfunctions of the mouth need greater attention, considering that the necessary surgical and rehabilitative operations come under reparative orthodontics not subject to the limitations of treatment for aesthetic reasons.

Neither the elderly nor children, except for a few exceptions, are sufficiently considered in industrialised societies. Elderly people need special attention that goes beyond a benevolent 'taking care', as they often suffer from pathologies of the mouth that are sometimes the expression of much more serious systemic diseases having significant repercussions on daily life. Minors, especially those with a disability, deserve to have more attention paid to prevention which in some Countries is even absent. It must be remembered that 'the best way to identify a human society, which is different from the animal

one, is by means of its enabling work, or one which enables people to survive who, otherwise would not manage to stay alive²⁵. Negative situations of this type not only exist in the developing countries but even in some of the recent new entries to the European Community.

In dentistry there is often a similar process of marginalisation to be found due to the absence of a real public dental service, able to satisfy the needs of the weaker members of society. It suffices to think that in the “Essential Levels of Healthcare” in Italy, dental care is practically non-existent, which furthermore is not supplied by the local health authorities, while in open competitions the state requires, among the elements for qualification, a minimum dental formula as a proof of the importance that is given to correct mastication.

Research in dentistry

It is well known that the diseases affecting the teeth and their support apparatus (periodontium) are essentially caries and periodontopathies, and that the same pathogens are involved in both, streptococcus mutans and lactobacillus casei. These greatly widespread pathologies are caused by the so-called *dental plaque* where such bacteria proliferate, decalcifying the crystals of apatite that make up the enamel (caries) or by irritating the marginal gum that facilitates the formation of tartar which goes into the periodontium until it mobilises the dental element (periodontopathy).

For decades now the scientific community has had a scheme for the prevention for these diseases which is set out in different strategies: from the fluoridation of water, to oral hygiene, a diet rich in fibres and poor in sugar, to the use of tablets that show up dental plaque, to the use of drinks like black tea which would hinder the appearance of caries. Even though prevention has worked remarkably in the Western world, thanks also to the huge press campaigns which have for years made society aware of the importance of dental protection, the same does not happen in the developing Countries where water, essential for oral hygiene, is often such a precious good that it cannot be used for the brushing of teeth. Scientific research aimed at the discovery of an effective therapy for these pathologies has not had any definite success until now. The so-called anti-caries vaccines, the sale of which has been announced on various occasions, have not yet completed the experimental phase. Stem cells could also be used in the therapy of periodontopathies but research on this is still in its first stages. It is furthermore probable that any possible benefits of the experimentation will hardly reach poorer Countries in the near future.

Experiments on animals is regulated by the Legislative. Decree No. 116 of the 27th of January 1992, which puts into effect Directive 86/609/EEC on the subject of ‘Protection of animals used for experimental and scientific purposes’, and sets down the contexts of use of experiments and the bioethical and scientific recommendations. Dentists complain of the lack of graduates in dentistry among the professional figures qualified to carry out experiments on animals. It must be noted however that the experiments using instruments and technologies are often carried out on rodents whose buccal apparatus works completely differently from the human one, as it has no movements of retrusion, protrusion or laterality. These experiments are for the most part

²⁵ Z. Bauman, *La solitudine del cittadino globale*, Feltrinelli, Milan 2004.

useless and inopportune from a bioethical point of view, if one considers that even rabbits are used for the study of the osteointegration of implants.

Conclusions

1) The NBC considers that a medical ethics exists in which dentistry can be recognised too, even with the composite features of its specialisations, ranging from the more technologically advanced ones like implantology, to traditional surgery and ad hoc dental surgery that is aimed mostly at cosmetic dentistry or at the correction of serious functional defects (orthodontics, prosthesis, preventive dentistry) which all find their natural place in the field of medicine.

2) Nonetheless, dentistry deserves a special bioethical reflection by reason of the peculiar nature of the doctor-patient relationship, owing to the prevalent free-lance activity (much higher with respect to other branches of medicine and surgery), the autonomous university course introduced in the 80s with a degree course which is now (until the differences cease to exist) the cause of the mixture of operators of different scientific and technical extraction who all flow into one single professional Medical Association, and are subject to the same deontological code. If, therefore, it is not possible to hypothesise, despite the different specific operational techniques of the surgeon with respect to those of the dentist, situations that do not come under the general ethical laws of medicine, it is opportune to draw the attention to the problem of informed consent which can be affected by the often friendly relationship between dentist and patient and which, by virtue of this, risks being involuntarily neglected.

Strict observance of the duty to obtain the patient's informed consent is recommended; outside routine dental care it is opportune that the consent be given in writing, in detail, and written by the patient himself; the documents presented must also fully inform the patient of the cost of the course of treatment in advance.

3) Other situations relative to dentistry must be carefully considered by reason of the fact that the face and above all the mouth represent the first element of approach and appearance to the world of others, and especially of the image we have of ourselves, even though incomplete and unilateral. The care of 'human beauty' is increasingly the subject of the dentist's work, which must wisely mediate between "objective beauty" and 'subjective beauty' in the choice of particular treatment which could sacrifice the functional or aesthetic aspect. In the extreme hypothesis the careful examination of the patient's motivations must also take into consideration the involvement of other specialists (for example a psychologist) in order to have the right approach to real problems. It is therefore necessary to stress once again that the work of the dentist should give priority to the therapeutic approach.

4) The NBC points out that the exasperated technicality (often caused by the prevalence of mechanistic principles over organicist ones) can alter the ethical balance of the doctor-patient relationship, neglecting that sense of existential well-being and that sense of subjective and/or objective beautiful,

which define the actual success of the treatment and constitute the constant objective of the professionalism of the dentist.

5) The NBC brings the attention to the low interest shown by governments with regard to the pathologies of the teeth and the periodontum, particularly concerning the elderly, and to the inadequacy of preventive measures which are reflected above all on the frail and children. The absence of research is cause for concern also owing to the lack of drinking water in some regions of Italy and organisational and structural problems that continue to be unresolved. Such problems are particularly felt in some of the EU Countries where the quality standards in the rural communities are great cause for concern.

6) The NBC also highlights the lack of dental experimentation (often inadequate owing to the choice of animals that cannot be compared to man, and also concerning the physiology of the mouth). If on the one hand it is to be hoped that the professional figure of the dentist will be included among those qualified to carry out experiments on animals, on the other a more limited use of such practice is recommended due to the poor evidence of its benefits in dentistry, the effectiveness of Law No. 413 of the 12th of October 1993 being understood, which recognises the right to conscientious objection. It is necessary however to distinguish between the experimentation of merely aesthetic practices, the prohibition of which must be shared, and practices having therapeutic aims and which could have an ethical justification, in compliance with the laws in force and with the right precautions set down today in animal experimentation.