When patient's care meets ethics

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Meetings Clinico-Scientifici del giovedi
Scuola di Specializzazione in Neurologica

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Occidental Ethics

Western ethical thinking, "Christian Ethics"

Founders:

- Socrates, Plato, Aristoteles
  Greek philosophy: moral virtue
  natural values rather than conventional
  ethics as science

Development:

- Saint Augustinus, Thomas Aquinas
  Incorporation of Christian thinking in Greek ethical laws
  Attainment of happiness
  God given natural order

Guiding value:

The individual has to act in a way, that this action can be regarded as general law

- Immanuel Kant: Categorical Imperative

Definition of Ethics

- **Ethics:** Part of philosophy dealing with morality
- **Moral** is search for an inner standard
- **Kant' s Categorical Imperative:**
  The individual has to act in a way that this action can be regarded as general law

Non Western Ethics
partly religious fixed

- Ethical rules in Buddhism
  end of being rebirth, Nirvana
- Ethical rules in Confucianism
  appreciation of well being of the community above the well being of the individual
- Ethical rules in Mosaic religion
- Ethical rules in Islamic religion
- Ethical rules of Maasai religion
- Ethical rules of natural religions
  African religious communities,
  Schamanism, etc.

Ethics

- Altruism
- Sense of Honour
- Justness
- Respect for others
- Solidarity
- Ability to forgive

Bioethical principles

Medical conduct, physicians obligations

(Belmont Criteria, 1979)

- Autonomy of the patient
- Beneficience
- Non-maleficiency
- Justice
- Trust

Hippocratic oath

Obligation to heal
Not do anything to harm the patient
No continuation of therapy in untreatable disease
No therapy in advanced physical and mental destruction
No continuation of life or its prolongation for hours or days
No prolongation of suffering during dying
No admitting of lethal poison, even as advice
Not to tell anyone the details of patients

Will to respect the teacher like own parents, sharing one's life support with successors of the teacher, treated like own brothers
Medical teaching to own sons and the sons of the teacher or to pupils bound on physicians rules and oath

UNESCO Declaration on Bioethics and Human Rights

Paris, September 2005

- Basis of Human Rights
- Based on principal ethical rules
- Following the Helsinki Declaration
- Including Hippocratic principles
- Extending to personal identity

World Medical Association, Helsinki Declaration, 1964 Medical Research Involving Human Subjects Ethical Principles Several amendments (Edinburgh, 2002)

- Medical progress is based on research which ultimately must rest in part on experimentation involving human subjects
- In medical research on human subject, considerations related to the well-being of the human subject should take precedence over the interest of science and society
- International Code of Medical Ethics : A physician shall act only in patient interest when providing medical care which might have the effect of weakening the physical and mental condition of the patient
- Ethical Principles to provide guidance for physicians and other participants in medical research involving human subjects including identifiable material or identifiable data

UNESCO Bioethics Declaration on Human Rights

Paris, September 2005

Person's identity includes
- biological
- psychological
- social
- cultural and
- spiritual dimensions

Declaration on Bioethics and Human Rights

Universal draft, June 2005

Ratification September 2005

Informed consent

(Declaration of Paris, 2005 - Article 6a)

"Any preventive, diagnostic and therapeutic medical intervention is only to be carried out with the prior, free and informed consent of the person concerned, based on adequate information.

The consent should, where appropriate, be express and may be withdrawn by the person concerned at any time and for any reason without disadvantage or prejudice."

Informed consent

Necessary for each human being
(patients and healthy volunteers)

in case of any preventive, diagnostic
and/or therapeutic medical intervention

Informed consent in daily practice (2)
patient able to consent
(Declaration of Paris, 2005)

- Consent must be documented by either the subject's dated signature or by the signature of an independent witness
- The signature confirms that the consent is based on information, that has been understood and that the subject has voluntary chosen to participate the diagnostic and treatment program

Informed consent in daily practice

Based on:

- Declaration of Helsinki, 1964 (with amendments)
- Declaration on Bioethics and Human Rights, Paris, 2005
- Domestic and international law in confirmity with human rights law

Patients unable to consent

Neurology, Psychiatry
(temporary or permanently)

Basic legal prerequisite for every medical intervention

Informed consent in daily practice (1)
patient able to consent
(Declaration of Paris, 2005)

- Content of written information on diagnostic, therapeutic measures
  - Aims
  - Expected benefits for the subjects and/or others
  - References treatment/placebo
  - Risks and inconveniences
  - If applicable, an explanation of alternative standard medical therapy

Unable to consent in routine medical practice
Protection of vulnerable persons

(Specific laws, rules and regulations)

- Children (parents and guardians as proxy depending on maturity of minors
- Patients with cognitive impairments (aphasia, frontal lobe syndrome, etc.)
- Apallic Syndrome/Vegetative State
- Patients with severe progressive disease (terminal state)
- Patients in intensive care units

Patients unable to consent

Responsibility in clinical practice

The responsible physician for

treatment and diagnostic program

is often the true protector of the

incapacitated patient

Basic principles in daily practice treatment, diagnosis, rehabilitation (1)

Declaration of Human Rights, 10.12.1948

- Every human being has the right to live.
- Every human being has the right to most modern medical treatment.
- Every patient has to be cared according the basic human rights and medical principles.
- Every human being has the right to best nursing care.

Patients unable to consent

Decision making on behalf of patients

- Presumed consent in emergency situations
- Proxy consent by an authorised person (legal representative)
- Living will
  - Advanced directives
  - Previously expressed wishes (recent date)

Basic principles in daily practice treatment, diagnosis, rehabilitation (2)

- Economic consideration are not acceptable (Hippocratic principles; Universal Declaration on Human Rights, December 10th, 1948).
- Hippocratic principles: every patient has to be treated in dignity but not to be "over-treated" by all modern possibilities.

Persons without the capacity to consent

(Declaration of Paris, 2005 - Article 7)

In accordance with domestic law, special protections is to be given to persons who do not have the capacity to consent:

authorization for **research and medical practice** should be obtained in accordance with the best interest of the person concerned and in accordance with domestic law. However, the person concerned should be involved to the greatest extent possible in the decision-making process of consent, as well as that of withdrawing consent.

Patient-Doctor Relationship

- Expectation of personal attention
- Trust
- Individualized treatment
- Best available and best care
- Best benefit to risk/ratio

Rights and responsibilities (1)
Physician and patient

- The treating physician has the individual responsibility for his patient.
- Highest level of physician's education and training is essential and necessary.
- The treating physician is guided by ethical principles, medical guidelines, declaration, domestic and international law and human rights law.
- The personal responsibility of the physician to his patient can't be replaced.

Best available medical care (2)

Providing the best possible medical care of an individual patient depends on the doctor´s ability and willingness to:

- Integrate individual clinical expertise
- Integrate the best external evidence
- The true evidence based medicine (EBM)
- Critical resonance to EBM, including the different libraries

Rights and responsibilities (2)
Physician and patient

- Patient's right is to accept or to refuse the recommendation of a treatment program.
- Patient's right is to interrupt a running treatment program
- The physician's obligation is to inform the patient about the danger for his health to refuse or to interrupt a treatment program.

Best available medical care (3)

Sound scientific evidence is the basis for modern medicine in

- **prevention**
- **diagnosis**
- **treatment**
- **rehabilitation**
- **regulatory approval**

Best available medical care (1)

Three factors will determine the quality of medical care:

- individual clinical expertise
- Individual clinical experience
- scientific evidence

Best available medical care (4)

Scientific evidence

- never static
- subject to constant change
- adjustment (new facts)
- can be flawed in many different ways
- can never be perfect

Best available medical care (5)

Depends

1. On the personal responsibility of the treating physician
2. On his individual training, experience and expertise
3. On high ethical quality of the responsible physician
4. On the quality of scientific evidence

Symptoms of AS/VS

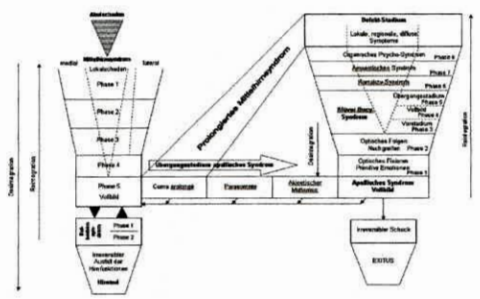
- Coma vigil
- No recognition of the surrounding
- No contact to the surrounding
- No reaction to external stimuli
- Sleep-wake-rhythm fatigue regulated
- Optomotoric disturbances
- Flexed-stretched position of the extremities and trunk
- Rigido-spasticity
- Primitive motor patterns (oral, grasping, etc.)
- Dysregulation of the autonomous system

Decision Making in treatment and care of highly sensitive neurological conditions

- Apallic syndrome/vegetative state (AS/VS)
  - Minimally conscious state (MCS)
- Locked-in syndrome (L.I.S.)
- Dementia after progressive brain damage
- Brain death

The course of apallic syndrome after acute brain damage

F. Gerstenbrand, 1967, 1977, F. Gerstenbrand, E. Rumpl, 1983



Apallic syndrome/vegetative state

Development in three different ways

- Acute brain damage
  - traumatic, hypoxic, post-encephalitic, acute intoxication, etc.
    - remission principally possible
- Progressive brain process
  - CJD, Alzheimer Disease, Huntington disease, etc.
    - final stage, no remission possible
- Chronic intoxications
  - Exogen (Minamata disease, etc.)
  - Endogen (hepatic, renal, etc.)
    - partial remission possible

Epidemiology of AS/VS

Prevalence of 200 new patients/year in Austria

Prevalence of 2.500-3.000 new patients/year in Germany

Prognosis of AS/VS

- Impossible to make in the first 6 weeks after an acute brain damage
- A decision to interrupt ongoing active treatment program not possible within the first 6 months
- 80% of the patients with a traumatic and post-encephalitic apallic syndrome develop remission
- 60% of the patients with a hypoxic apallic syndrome develop remission, mostly with severe defects

Regulations for patients with AS/VS without prospect of remission, care and treatment in special nursing home

- Continuation of basic medication
- Continuation of basic physio-therapy program
- Home care with same basic program possible

Minimally Conscious States (MCS)

(Giacino et al, 1997)

- Crude consciousness: alertness
- Phenomenal consciousness: registration of external and internal phenomena
- Access consciousness: directed attention, cognitive awareness, decision making
- Critics in MCS:
  - No detailed neurological symptomatology
  - Only phenomenological description
  - In some cases to compare with a remission phase AS/VS
  - Etiology generally open

Decisions in treatment course of patients with AS/VS

- Decision to continue the active rehabilitation program in special center
- Decision to transfer AS/VS-patients with hopeless prognosis to a nursing home with long term activating program
- Control examination by upcoming signs of improvement, continuation of special rehabilitation program
- Decision to minimize special medical treatment during the active rehabilitation
- Decision to renunciate a MAXIMAL THERAPY in complications during the stay in the nursing home
- „End of life decision", realization in Austria and in most European countries not possible (active euthanasia)

Treatment of AS/VS

Special centers

Remission with modern rehabilitation program for 60 – 80% patients with AS/VS possible

- As fast as possible treatment in special intensive care centers for patients with AS/VS
- Special centers for acute treatment of apallic patients
- Transfer in special rehabilitation centers for AS/VS
  In Austria: 5 (44 beds)
- Special nursing centers for patients with AS/VS with activating long term treatment
  In Austria: 2 (28 beds)
- No acceptance to care patients with AS/VS in general nursing home

Maximal Therapy

- "Maximal Therapy" can be renunciated in states of severe complication occurring in patients without hope of remission (hopeless prognosis).
- The renunciation of maximal therapy is a directive following the Hippocratic principles.

Decision to withhold „Maximal Therapy"

- Treating physician responsible alone considering certain facts:
  - Objective criterias: diagnosis and prognosis
  - Living will of patient
  - How the patient himself would decide in actual situation
  - Information of solicitor and family

Apallic syndrome, pat. E.S., 19ª

traumatic brain injury, 1992

Modern treatment program in special center for apallic syndrome patients

No tertiary lesions, minimal complications

Remission after 5 months to minimal defect state

End of life decision

- According to medical rules even a decision for end of life by legal institutions (Supreme court, etc.) is not acceptable.
- End of life decision can not to be realized by a physician (active euthanasia).

Terri Schiavo (USA)

Apallic syndrome/vegetative state, remission state II-III, contact with the surrounding

- Emotional reaction
- Optic fixation to her mother
- Turn towards
- Contact reaction
- Well-balanced body state
- Vegetative system regulated
- No artificial respiration
- Nutrition by PEG

End of life decision by court, withdrawal of liquid and nutrition.

Project: TV production. Book of „widower" as basis of script

Apallic syndrome, pat. G.B., 36ª

traumatic brain injury, 1975

No modern treatment

Irreversible tertiary lesions, complications

Exitus after 14 months

Maria Korp, 50ª (AUS)

Parallels to „T. Schiavo Case", AS/VS

"Vegetative state" after hypoxia due to strangulation February 13rd 2005

Her husband's lover tried to kill her, allegedly under instruction from him.

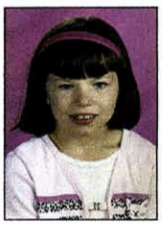
Public Advocate took the responsibility to withdrawal the feeding tube on July 27th. Family was devastated about this decision.

Patient died in The Alfred Hospital in Melbourne, August, 5th 2005.

Source:
Sydney Morning Herald, Online News

Haleigh Poutre, 11ª (USA)

Apallic syndrome/vegetative state, full stage



Hospitalized in September 2005 after the stepfather allegedly burned her and beat her nearly to death with a baseball bat.

Deeded by tube – the diagnosis was "persistent vegetative state".

Stepfather didn't agree to end of life decision – in the case of patient's death accusation as murder.

Decision by state's Supreme Court on 20th January 2006 to withdraw life support, one day later remission signs were observed with spontaneous breathing, etc.

Second dimension: "brain dead" as wrong diagnosis, discussion of termination of life support.

Symptoms of Locked-in syndrome

- No possibility to communicate with surrounding
- Consciousness and perception fully maintained
- Total paralysis of all extremities, trunk, neck and motor brain nerves
- Eye opening and vertical eye movements possible
- Impairment of swallowing
- Spontaneous respiration possible
- Alpha-EEG

Apallic syndrome – sindrome apallico (traumatic), Salvatore C., 38ª (Italy)

- Traumatic brain injury, August 2003
- Late onset of remission
- Defect state with neurological and orthopedic deficits.

During remission noises of the surrounding could be heard. Pains and physical contact were registrated, patient felt deep desperation.

Profound differences between apallic syndrome and locked-in syndrome

- Apallic syndrome
  Loss of all brain functions, reduction to the midbrain-level (coma vigile, no voluntary motor action, primitive motor patterns)

  temporary or permanent

- Locked in syndrome
  Loss of all motoric abilities, except rest in optomotor functions, undisturbed vigilance, full contact to the surrounding, normal body sensation

  temporary or permanent

Successful rehabilitation after AS/VS, traumatic, Fred A., 40ª (A)

- Car accident 1995, 30 years
- Apallic syndrome, full stage, treatment in special center over 6 months
- Treatment in special neuro-rehabilitation center for apallic patients, 2 years
- Continued rehabilitation as outpatient, stepwise improvement
- Full integration in family, father of a 3 years old girl
- Only partially handicapped
- Strict aim to be integrated in a normal professional life

Patient L.I.S , 45ª, female

Post traumatic etiology

Defect state

Dementia
Different origin and course

- Progressive form of dementia
  - Dementia of Alzheimer type (DAT), PICK's dementia
  - Vascular dementia, progressive form
  - Mixed dementia (A. Korczyn)
  - Dementia caused by progressive brain disease (CJD, etc.)

  } Final stage

- Dementia following acute diffuse or mulitlocular brain damage
  - Post-traumatic dementia
  - Post-hypoxic dementia
  - Post-encephalitic dementia
  - Post-circulatory dementia, etc.
- Dementia after intoxication
  - exogenic
  - endogen

  } Improvement possible, Defect stage

Euthanasia
Active, assisted, passive

- Euthanasia bioethically not accepted in each form
- Euthanasia not conform to Helsinki Declaration (1964), UNESCO Declaration of Paris (2005)
- Regulated by criminal law (civilized countries)
- Forced euthanasia (Zwangseuthanasie) unacceptable at all

Ethical background in therapy of dementia (1)

- Progressive dementia, differential diagnosis of primary brain degeneration
- Mixed and vascular dementia
- Differentiation to dementia after acute brain damage
- Differential diagnoses to diffuse organic psycho-syndrome (E.M. Bleuler)
- All forms of dementia are accompanied by neurological deficits, more or less localisable
- Progredient dementia shows a clinical course with the diminution of brain functions to lower level, passing Klüver-Bucy-symptoms, ending with apallic symptomatology
- Dementia as defect state after acute brain damage static form

Active euthanasia:
Willful neglect of medical care

- Withdrawal of medical treatment
- Withdrawal of artificial nutrition and hydration (ANH)
- Withdrawal of technical equipment for survival
- Continuation of nursing care
- Continuation of analgetics
- Application of overdosed drugs
- Application of toxic substances
- Active euthanasia avanged by criminal law!

Ethical background in therapy of dementia (2)

- In all forms of dementia a treatment has to be undergone, even with the knowledge of its limitation
- Careful information to the patient of his diagnoses (inclination to suicide)
- Full information to the relatives
- Hospital care as short as possible, for initiation and control of treatment program
- Home care treatment program is preferable
- Transfer in a nursing home in progredient state should be avoided as long as possible
- Special nursing centres are necessary
- Amelioration of quality of life
- Discussion of end of life is not tolerable in civilised countries

Active euthanasia = homicide
§ 75 StGB (Austrian criminal law)

assisted suicide, killing on request:
§ 77 and § 78 StGB

assessment of penalty:
§ 75: 10 years till life-long
§ 77, § 78: 6 months till 5 years

World Medical Association, Helsinki Declaration, 1964
Medical Research Involving Human Subjects
Ethical Principles
Several amendments (Edinburgh, 2002)

- Medical progress is based on research which ultimately must rest in part on experimentation involving human subjects
- In medical research on human subject, considerations related to the well-being of the human subject should take precedence over the interest of science and society
- International Code of Medical Ethics : A physician shall act only in patient interest when providing medical care which might have the effect of weakening the physical and mental condition of the patient
- Ethical Principles to provide guidance for physicians and other participants in medical research involving human subjects

Including identifiable material or identifiable data

Informed consent in clinical trials II
patient able to consent
(Declaration of Paris, 2005 - Article 6b)

The consent may be withdrawn by the person concerned at any time and for any reason without any disadvantage or prejudice.

Exceptions to this principle should be made only in accordance with ethical and legal standards, States adopted by, consistent with the principles and provisions set out in this Declaration.

Human research and subject protection
(Basic rules of NIH, FDA, EMEA, UNESCO)

- Informed consent to the patient
- Education and training of investigator
- Appropriate training for investigator in bioethics and other issues related to research involving human subject
- Improved monitoring
- Clinical Trials according to ICH-GCP guidelines
- Conflicts of interests

Persons without the capacity
to consent
(Declaration of Paris, 2005 - Article 7)

Research should only be carried out for his or her direct health benefit, subject to the authorization and the protective conditions prescribed by law, and if there is no research alternative of comparable effectiveness with research participants able to consent.

Informed consent in clinical trials I
patient able to consent
(Declaration of Paris, 2005 - Article 6b)

Scientific research should only be carried out with the prior, free, express and informed consent of the person concerned.

The information should be adequate, provided in a comprehensible form and should include the modalities for withdrawal of consent.

Persons without the capacity
to consent
(Declaration of Paris, 2005 - Article 7)

Research which does not have potential direct health benefit should only be undertaken by way of exception, with the utmost restraint, exposing the person only to a minimal risk and minimal burden and, if the research is expected to contribute to the health benefit of other persons in the same category, subject to the conditions prescribed by law and compatible with the protection of the individual's human rights. Refusal of such persons to take part in research should be respected.

Informed consent

patient incapable included in a clinical trial
according to Declaration of Paris, 2005

- If the subject is incapable of giving personal consent (e.g. unconsciousness, etc.), the inclusion of such patients may be acceptable if
  - The Independent Ethics Committee (IEC) is principally agreeing
  - Participation will promote the welfare and interest of the subject
  - written consent of a legally valid representative, if possible.
- Consent in a non-therapeutic study: the legal representative always has to be informed
- Any information becoming available during the trial which might be of relevance for the subject must be made known to the legal representative

Good clinical practice (GCP)
for trials on medical products
International Conference of Harmonization (ICH-GCP)

- Protection of trial subject
  - Ethics Committee (IEC)
  - Informed consent (voluntary, detailed information)
  - Insurance
- Responsibility of the
  - Sponsor
  - Investigator
  - Monitor
- Data handling
  - Investigator
  - Sponsor/monitor
    Safety reporting of serious adverse events (SAE)
  - Archive of data
- Statistics (experimental design, randomisation, statistical analyse)
- Quality assurance
- Registration of each clinical study (EU: EudraCT, global: WHO?)

Patients unable to consent

Responsible physician in research

Conflict of interest of the responsible physician in clinical trial with his treatment obligation

- Protecting the research subject
- Advancing medical knowledge

Bad Clinical Practice (1)

- Malevolence
  Sabotage of research program, theft of data
- Fraud
  „Improvement" of data/results
  „Arbitrary", correction to meet inclusion criteria
  Totally or partially "fabricated cases"
- Violation of ethical principles
  Inadequate consequence
  Selection of subjects
  (inadequate, exclusion of „high risk group")
  Dangerous or disturbing invasive procedures
  Distress by contact of study (patients and co-worker)
  Dangerous treatment (inadequate safety information, withdrawal of the proved substance)
  Insufficient confidentiality
  Low insurance coverage

Principles of ICH-GCP for Clinical Trials

- In accordance with ethical principles
- Only if benefits justify the risks
- Rights, safety and well-being of trial subjects guiding principle
- Support by adequate clinical and non-clinical information
- Scientifically sound with clear detailed protocol
- Study protocol approval by Independent Ethics Committee (IEC)
- Compliance with study protocol
- Acting physician responsible for medical care of subjects
- Acting physician responsible for medical decisions

Bad Clinical Practice (2)

- Protocol violations
  Insufficient knowledge/understanding
  Omissions (tests left out)
  Errors involving
    patient selection
    evaluation
    dates
    treatment (dose, concomitant medication, allocation)
    blindness
- Erroneous Values
  Work overload
  negligence
  incompetence

Clinical Trials in Medicine
Basic Principles and Problems

- Protocol of the trial, prepared in an exact form
- Protocol submission to the Independent Ethics Committee (IEC)
- Sponsor: industry, academic
- Investigator with exact training

- Procedure according to the principles of ICH – GCP
- Exact monitoring during the trial
- Audits and inspections procedure
- Strict anonymity of the trial results
- Careful archive of the results
- Registration of each clinical trial (WHO, in discussion)

- Patient changes to an examination object
  Physician changes to investigator

Summarizing I

- Every human being has the right to live (every other creature, too).
- Every human being has the right to most modern medical treatment and best nursing care.
- A patient in AS/VS, L.I.S., progressive stage of dementia, etc. has to be cared according to the "base right" and the medical principles.

Future outlook for clinical trials

- ICH-GCP provides widely accepted and scientific standard for clinical trials
- ICH-GCP guidelines facilitates acceptance of foreign data
- Compliance with GCP, protocol and regulatory requirements
  - Assurance that the results are credible and accurate
  - Rights and integrity of trial subjects are protected
  - More efficient clinical development
  - Reduced number of "necessary" clinical trials
- Sponsors will increase their research activities outside of high-industrialized countries (USA, EU, etc.)
- Attention to transfer of risk trials to low resource countries
- Facilitated use of global dossier for regulatory submissions in EU, USA, Japan, etc.
- Registration of each clinical trial (EudraCT, WHO in discussion)

- Reduction in animal trials (basic studies)

Summarizing II

- Economic consideration not acceptable following the Hippocratic principles and Universal Declaration on Human Rights (December 10th, 1948).
- According to Hippocratic principles patients in end stage of severe neurological conditions (AS/VS, final stage of dementia, ALS, etc.) have to be treated in dignity but not to be "over-treated" to utilize all modern possibilities.
- "Maximal Therapy" can be renunciated in states of severe complication occurring in patients without hope of remission (hopeless prognosis).

Declaration on Great Apes

Initiation of „Human Rights" for apes.

Induced by the Spanish parliament

- The Right to Life
- The Protection of Individual Liberty
  (no capture in zoos)
- The Prohibition of Torture
  (no subjects for laboratory tests)

http://www.greatapeproject.org

Summarizing III

- According to medical rules a decision for end of life even by legal institutions is not acceptable for a physician.
- Decisions by Supreme court, etc. can not to be realized by a physician (accusation for active euthanasia).

End of life decision

Errare humanum est

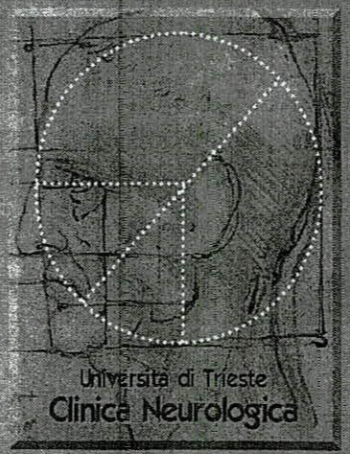
To err is human

Judges are human, too (and can err) !

Greetings from Vienna!

Stephansdom by night

Wolfgang Amadeus Mozart
1756 – 1791
„Eine kleine Nachtmusik"



PROGRAMMA

30 marzo 2006		
	Le demenze: dalla neuropatologia alla neurochimica clinica	***Prof. Leontino Battistin*** *PADOVA*
13 aprile 2006		
	La riabilitazione dell'afasia: dai modelli empirici ad una attività clinica razionalmente fondata	***Prof. Sergio Carlomagno*** *TRIESTE*
11 maggio 2006		
	Neurogenic lower urynary tract dysfunction	***Prof. David B. Vodusek*** *LUBIANA*
25 maggio 2006		
	Malattia di Parkinson: update clinico-terapeutico	***Dott. Maurizio Roncolato*** *VERONA*
8 giugno 2006		
	Le neuropatie disimmuni	***Dott.ssa Chiara Briani*** *PADOVA*
22 giugno 2006		
	Botulinum toxin treatment in dystonia and pain	***Prof.ssa Maja Relja*** *ZAGRABIA*
29 giugno 2006		
	When patient's care meets ethics	***Prof.Franz Gerstenbrand*** *VIENNA*

UNIVERSITA' DEGLI STUDI DI TRIESTE
Facoltà di Medicina e Chirurgia
Dipartimento di Medicina Clinica e Neurologia
SCUOLA DI
SPECIALIZZAZIONE
IN NEUROLOGIA

MEETINGS CLINICO–SCIENTIFICI

del giovedì

29 giugno 2006
Ore 16.00

SALA DEGLI ATTI ACCADEMICI
Ospedale di Cattinara

When patient's care meets ethics

Prof. Franz Gerstenbrand

Ludwig Boltzmann Institute
für Restaurative Neurologie
WIEN