

From the Perspective of Spine 3d Navigation Surgery to See the Medical Law Issues Arising from Smart Medical Care

Shiu-Jau Chen^{1,2}

¹Mackay Medical College, Taiwan

²Mackay Memorial Hospital, Taiwan

Purpose: Smart health system includes products with artificial intelligence, individualized treatment plans based on genes, and the usage of high-tech equipment. The popularization of smart medical care will lead to new legal issues. In this study, with the aid of questionnaire about 3D spine navigation system, we try to evaluation surgeons' concept about medical ethics and law in smart medical care.

Materials and Methods: There are 6 questions about smart medical care in the google form. The first three questions asking about responders' demography are single or multiple-choice. Question 4 to 6 ask their opinion about the impact of smart health care on healthcare quality, health custom and medical level. These are open essay questions. Fifty neurosurgeons from different hospital were selected to reply the questions.

Results: Forty two of the fifty neurosurgeons reply their answers. 62% doctors report their hospitals have 3D spine navigation equipment and 74% report to have experience. In patients' criteria selection, high cervical location, cervical pedicle screws, and deformity surgery were most favored. Factors that affect smart medical care as a medical custom include the penetration rate of equipment, whether it is covered by health insurance, whether there is sufficient empirical medical evidence, and whether it is routinely used by most physicians.

Conclusion: Nowadays, the judgment of medical malpractice changed from medical customs to medical level. The usage of smart medical care equipment in daily practice increases both medical level and patients' cost. Their requirements for good results also increase, which promotes the probability of medical disputes. It is worthy for clinic physicians to know that smart medical care, not only improves medical quality, but also increases the doctor's duty of care.

Bioethics and Medical Ethics in Medical Education

José Antonio Cordero da Silva, Layla Abou El Hosn Cordero da Silva, Márcia Bitar Portella, Deusa Merian Silva Brito
Unifamaz - Centro universitário Metropolitano da Amazônia, Brazil

The teaching of bioethics, medical ethics, and human rights are essential for good professional practice, knowledge of medical humanities has been of great relevance and included in medical education in Brazil.

The national curriculum guidelines for medical courses included ethical and humanistic dimensions in order to develop in the undergraduate sense humanitarian, multi-professional, multidisciplinary and multicultural responsibilities. The medicine course at the Amazonian metropolitan university center in Belem do Para uses the teaching axis of the humanities in medical education, articulated with the interaction with the axes-interaction-teaching-service-community and management (lescg) and scientific initiation.

The module aims to recognize the history of medicine, being a doctor and medical practice, human diversity, and professional ethics, the health problems of the individual, family, and community. Reflects on the main challenges of bioethics in contemporary society; identifies and applies the fundamental principles of bioethics: beneficence, nonmaleficence, autonomy, and justice; guides the professional practice of medicine through knowledge and reflection of national and international guidelines, codes, laws, declarations, and recommendations regarding the practice of medicine and health.

Crispr-Cas9 and Gene Editing: Is the Loss of Genetic Identity the Price for Perfection?

Fabrizio Cordasco, Carmen Scalise, Matteo Antonio Sacco, Martino Maesani, Umberto Rosini, Angelica Zibetti, Pietrantonio Ricci, Isabella Aquila
"Magna Graecia" University of Catanzaro, Italy

"Gene editing" identifies the genetic engineering procedures through which it is possible to modify gene sequences in order to eliminate, correct or replace specific DNA fragments. Since the 1960s, with the discovery of recombinant DNA, bioethicists have studied the risks deriving from the possibility of manipulating DNA molecules. The necessity to regulate DNA modification research led to the 1975 Asilomar Conference on Recombinant DNA, during which guidelines on biomedical research were developed. CRISPR-Cas9 (Clustered Regularly Interspaced Short Palindromic Repeats) identifies a short RNA sequence designed in the laboratory able to identify a precise genomic region, which can then be removed with other sequences through enzymatic processes (endonuclease enzyme Cas9). Currently, the main doubts of the bioethical community concern the application of the CRISPR technique on gametes and embryos, due to possible long-term effects. This study highlights the risks associated with the application of the CRISPR-Cas9 technique to germ cells, including the possibility of introducing unknown mutations in the repaired sequences, and the worrying possibility of dangerous drifts towards the "designer babies" or rather children genetically carved to have certain characteristics considered desirable from parents.

Post-Mortem Insemination and Embryo Transfer: Analysis of Portuguese Law and Public Policies

Eva Costa
Universidade Portucalense Infante D. Henrique, Portugal

The Portuguese law of medically assisted reproduction prohibits post-mortem insemination. Post-mortem transfer of ex uterus embryos is also prohibited, with one exception: a previous written parental project. Nevertheless, if a child is born in violation of the rules, she is still considered the legal child of the donor. Grassroots movements have been successful in convincing some Portuguese lawmakers to make some changes, and there is currently a project under discussion. This project intends to allow post-mortem insemination. We believe that there is an oversimplification of the problem and that adequate changes to the Portuguese Civil Code need to be made to allow the child born in such circumstances the same protection afforded to others. We propose to analyze these problems in light of the Constitution and of international law. We also touch on the broader questions of the future child's best interests and the States' justification for regulating reproduction.