



VII Congreso de la Sociedad Cubana de Otorrinolaringología
Reunión Especial Societas ORL Latina
I Encuentro de Especialistas ORL Extranjeros Graduados en Cuba



The Practice of Otorhinolaryngology in XXI Century

M. Pais Clemente M.D., Ph.D.

Department of Otorhinolaryngology

Porto University School of Medicine / Hospital de São João

Porto /Portugal



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The Practice of Otorhinolaryngology in XXI Century

This Presentation is Dedicated to



Prof. Desidério Passàli

For his passion, his dedication and his enthusiasm for a better, updated and progress of a Modern Otorhinolaryngology around the world

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INTRODUCTION

- Generally speaking any practice changes over time depending on scientific progress, social development, economical growth and cultural traditions**
- Medical practice follows exactly the same principles**
- What today is considered fiction it becomes the reality of tomorrow**
- Society has to be prepared for this evolution and we health professionals must be the actors for these changes preparing for the future**
- All of us citizens of the world should play a role in this global strategy**
- This is why we are here for and in another places too – passing the testimony for the young generations of physicians with knowledge, experience and dedication**

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INTRODUCTION II

- **Medical practice has been changing for the last centuries**
- **However, only during the XX century many progresses were registered in our speciality:**
 - **The use of surgical microscope**
 - **Better equipments and new surgical techniques and prosthesis**
 - **Improvement of general anaesthesia and use of antibiotics**
 - **Introduction of CO2 laser microsurgery**
 - **Microscopic and endoscopic techniques for the nose and paranasal sinuses**
 - **Voice rehabilitation using different voice prosthesis**
 - **Use of microvascular grafts in reconstructive surgery**
 - **Laryngeal transplantation**
- **Consequently new opportunities will show up in the XXI century**

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FUTURE TRENDS ON MEDICAL PRACTICE

- **Medical information for the patients (newspapers, brochures, tv, radio, etc)**
- **Identification of genetic predisposition for diseases**
- **Modern health technologies for a more precise diagnosis and therapeutic interventions (biomarkers, nanotechnology, etc)**
- **Focus on preventive, predictive and personalized medicine for the future**
- **Tailor interventions for each patient**
- **Establishment of international clinical guidelines**
- **Appropriate management of the decision process**
- **Identification of comorbidity conditions**
- **Quality of life as a priority in patient evaluation**

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FUTURE TRENDS ON MEDICAL PRACTICE



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FUTURE TRENDS ON MEDICAL PRACTICE

Predictive Medicine as the New Philosophy in Healthcare

Vincenzo Costigliola^{1,2}, Pais Clemente³

1. "The European Medical Association, Brussels, Belgium"; 2. "The European Association for Predictive, Preventive & Personalised Medicine", Brussels, Belgium; 3. Portuguese Department of "The European Medical Association", Lissabon

Predictive medicine is a new philosophy in healthcare and an attractive subject for research activities aimed at a potential application of innovative biotechnologies in the prediction of human pathologies, a development of well-timed prevention and individual therapy-planning. Current healthcare practices essentially rely on emergence of signs and symptoms of human pathologies prior to initiation of interventional modalities as illustrated in Figure 1A. A major limitation of this approach relates to the fact that often the disease process has already taken its toll through manifestation of its complications (e.g. diabetes-associated complications). As a result, despite high costs associated with care of these individuals, long-term prognosis usually remains poor due to inadequate control of disease manifestations, treatment failure, disease-recurrence and the appearance of severe secondary complications, among others, thereby contributing to relatively low life-quality of the treated persons, high morbidity and mortality.

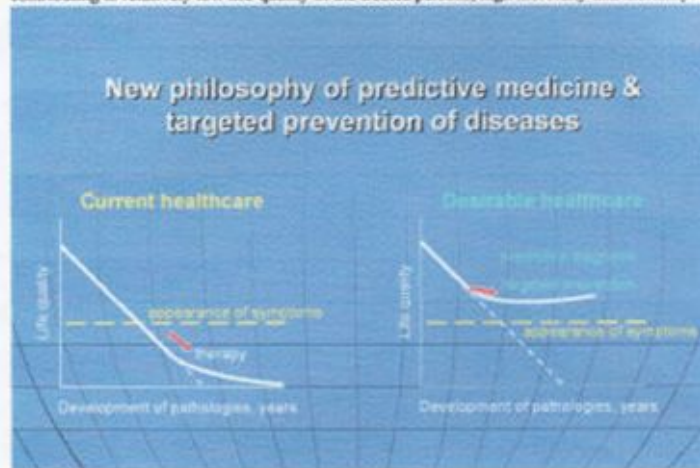


Figure 1. Strategies in the current healthcare approach (A) and those in predictive diagnostics (B) followed by the personalized patient treatment in favor of targeted prevention and optimized therapy planning taken from "Predictive Diagnostics & Personalised Treatment: Dream or Reality?", O. Golubeitschaja (Ed.), "Nova Science Publishers", New York, USA, 2009.

2ND INTERNATIONAL SYMPOSIUM

September 18-20, 2009
Lisbon, Portugal

CONTRIBUTION OF LABORATORY MEDICINE TO PREVENTIVE AND PREDICTIVE MEDICINE

SYMPOSIUM PRESIDENTS:
Prof. M. Jupp (Germany, President)
Prof. Leona Burch (Portugal)

KEYNOTE SPEAKERS:
- Primary Prevention
- Precision Diagnosis
- Molecular
- Hospital Medicine
- Personalized Care

ORGANIZING SOCIETIES:
LABEO - Lab Medicine Division of
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The Prof. M. Jupp, 23 Ave. Eng.
KEMO - 300 Paris, PORTUGAL
Tel: (351) 217 246 761
www.labmed2009.eu

SYMPOSIUM VENUE:
Congress Hotel
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Tel: (351) 217 246 761
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For additional information and registration, please check the website:
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PROGRAM

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FUTURE TRENDS ON MEDICAL PRACTICE II

- **Development of a clinical-severity index for prognosis**
- **Establishment of treatment outcomes including health status, quality of life, patients satisfaction, health systems and medical costs**
- **Creation of a network of Centers of Excellence worldwide**
- **Establishment of Centers of Rare Diseases around the world**
- **Improve and prepare new academic curriculum in the Medical Schools including programs of public health, genetics and pharmacogenetic, bioinformatics, personalized care, health economics and health politics**
- **The XXI century is the one for patients mobility at global level**
- **Encourage medical tourism if necessary including wellness being worldwide**
- **Medical tourism is the industry of the XXI century**

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FUTURE TRENDS ON MEDICAL PRACTICE II



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FUTURE TRENDS ON MEDICAL PRACTICE II



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OTOLOGY

- **Reduction of infectious diseases**
- **Reduction of chronic middle ear surgery**
- **Otosclerosis: new medical approaches**
- **Genetics of deafness**
- **Pharmacogenetics and genetic manipulation**
- **New approaches for surgical treatment of profound deafness**
- **Hearing loss rehabilitation**
 - **New hearing aids (smaller, more power, longer duration)**
 - **Middle ear Vs Cochlear implantation**
 - **New approaches for hearing aids rehabilitation**
 - **Stem cells applications**

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OTOLOGY

PREVENTIVE, PREDICTIVE and PERSONNALIZED MEDICINE

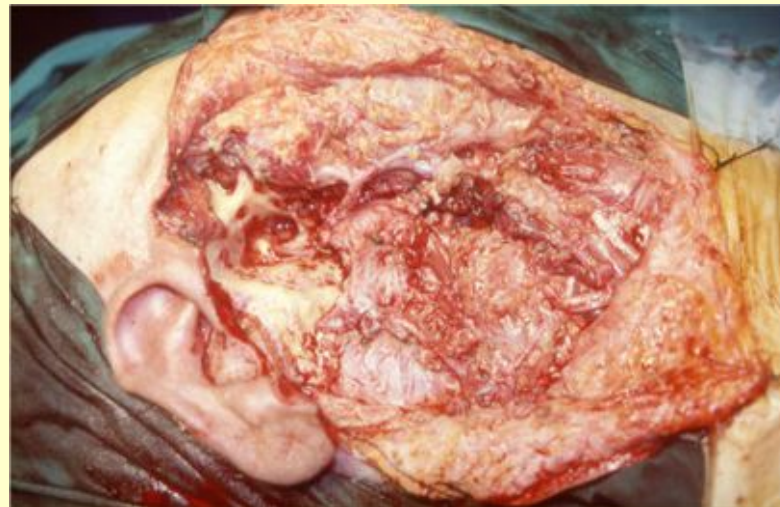
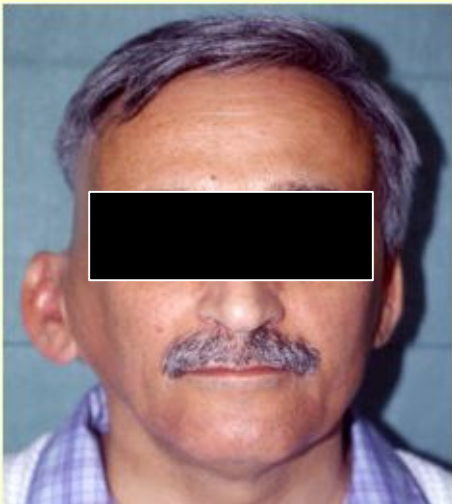
- **Early diagnosis**
- **Treatment of malfunction eustachian tube**
- **Increasing youth deafness (MP3, mobile phones)**
- **Increasing presbycusis due to ageing**
- **Increasing balance disorders due to ageing**

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OTOLOGY

NEOPLASTIC DISORDERS

- **Noninvasive techniques for early diagnosis**
- **Blood immunogenetic screening tests**
- **Nanotechnology**
- **Noninvasive techniques for tumor treatment (Gama knife) as opposed to current management:**



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RINOLOGY

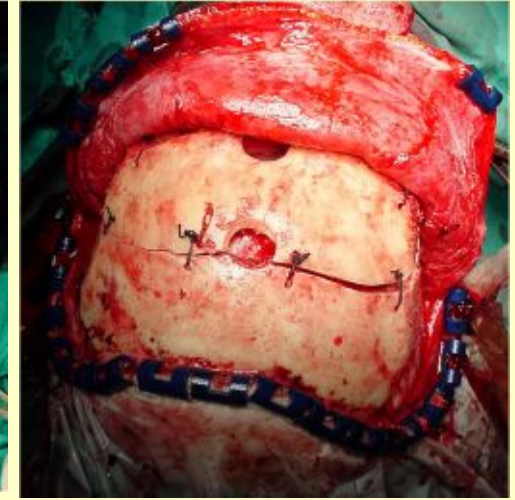
- **Better control of infectious disorders based on preventive, predictive and personalized treatment**
- **Improvement of surgical approaches/ techniques using new computers, light sources and cameras for the microscopes, endoscopes, combined surgery and image-guided surgery**
- **Immunogenetics (genes linked to sinusitis)**
- **Better control of environment pollution for decreased allergies**
- **New forms of immunotherapy and possible genetic manipulation of allergic patients**

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RINOLOGY

NEOPLASTIC DISORDER

- Better functional approaches
- Endoscopic surgery of skull base: Cranioendoscopic technique and selar and paraselar approaches
- Limited combined anterior craniofacial resection as opposed to current management:



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AESTHETIC FACIAL SURGERY

- Increased skin malignancies due to ageing treated with flaps and grafts
- Increased aesthetic facial surgery due to growing demands of modern societies
- Facial transplants
- Minilifts
- Endoscopic lifts
- Lipostructure®
- Implants
- Chemical peels
- Dermabrasion
- Laser skin resurfacing
- Injectable fillers and implants
- Botulinum toxin A



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MOUTH and FARYNX

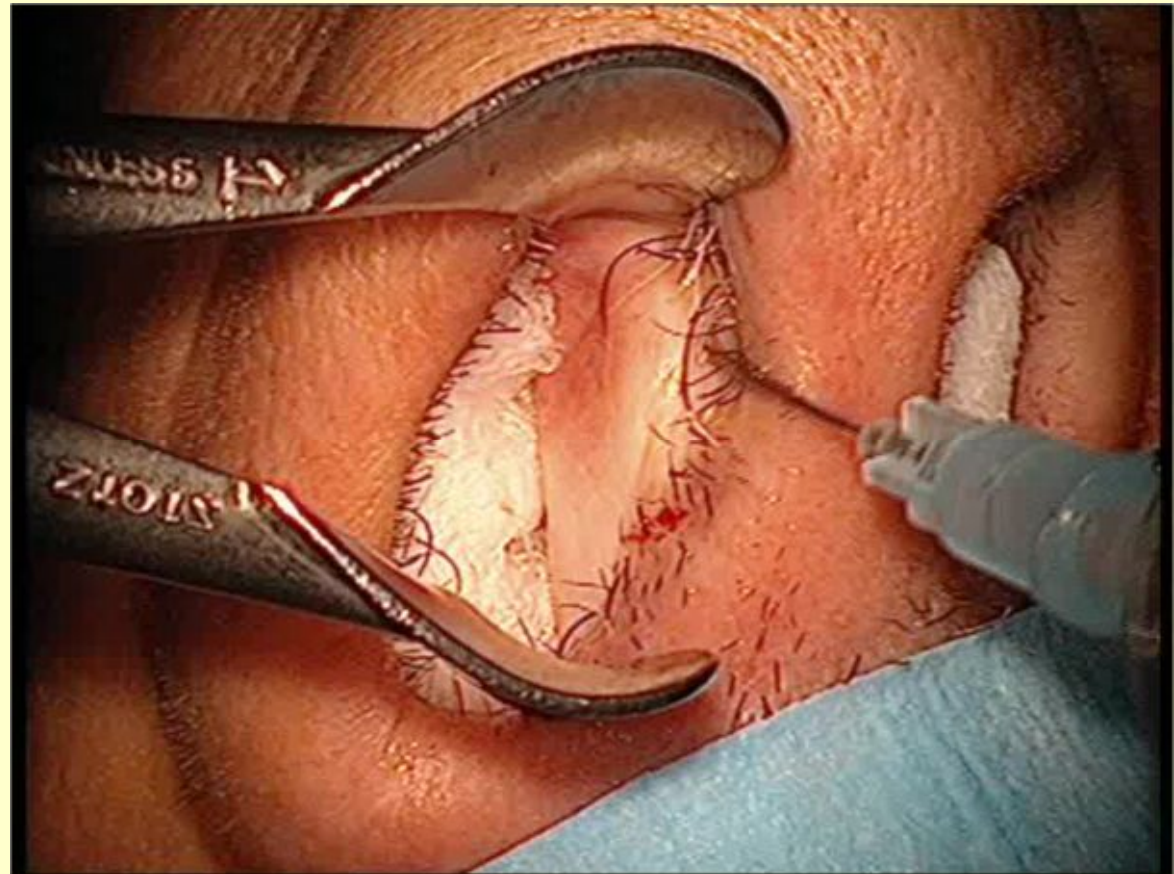
- Better diagnosis of compromised upper airway areas (noninvasive virtual rhinopharyngoscopy with a C300 EBT Scanner)



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MOUTH and FARYNX

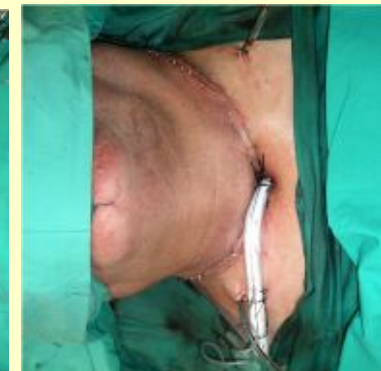
- Snoring and OSA treatment
 - Microrhinoseptoplasty
 - Bilateral turbinate reduction
 - Pillar implant technique
 - Uvuloplasty with CO2 laser microsurgery
-
- Robotic surgery



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LARYNGOLOGY

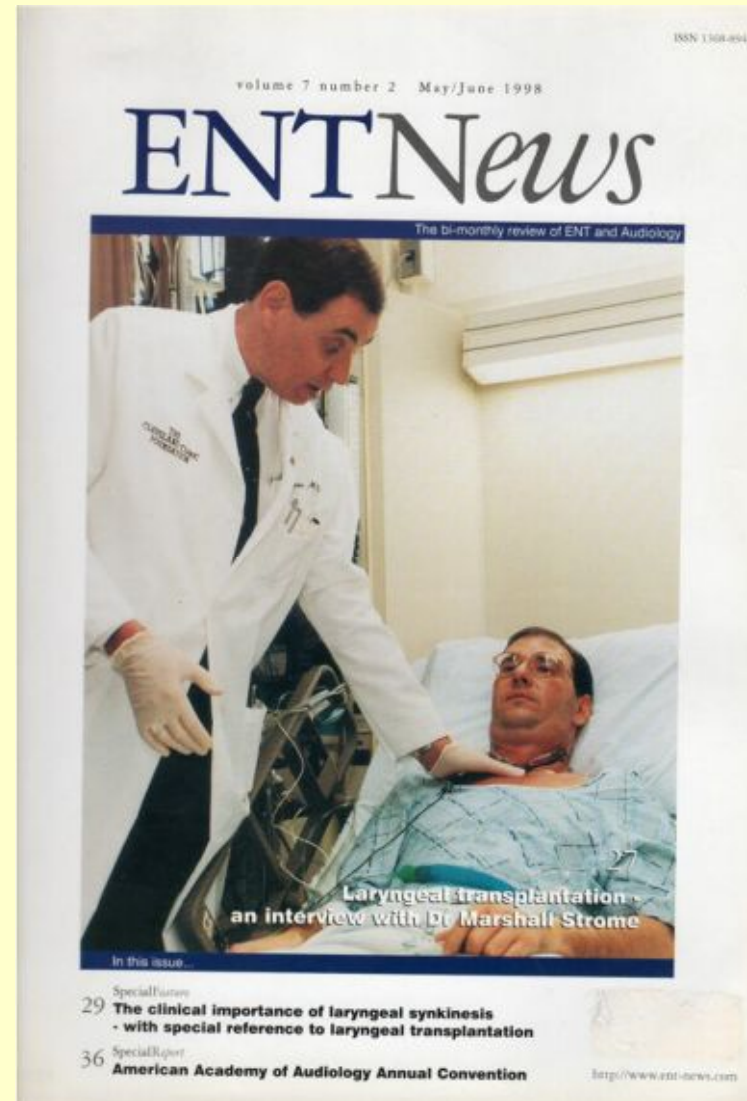
- Development of photodiagnosis, photosurgery and phototherapy using light sources and photosensitizers
- Organ preservation protocols
- Improvement of neolarynx surgical techniques



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LARYNGOLOGY

- In the future laryngeal transplantation will become more frequent



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HEAD and NECK SURGERY

- **Minimal invasive thyroid surgery**
- **Minimal invasive neck dissections**
- **Sialoendoscopy with new endoscopes**
- **Nanotechnology**
- **Hyperbaric medicine**
- **Regenerative medicine and tissue engineering**

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CONCLUSIONS

- Practice of Otorhinolaryngology in XXI century will change according the support of new technologies, computer science, new challenges pushed by the society evolution**
- Health promotion and medical education will have a great impact on preventive, predictive and personalized medicine**
- Telemedicine will play an important role in this practice reducing time of waiting lists and improving the quality of medical care**
- Patients mobility is the new paradigm at the XXI century**
- Medical tourism will be the industry of the XXI century**

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Health promotion – May 31, World Non-Smoking Day

