INTERDISCIPLINARY APPROACH OF POLIO AND POST-POLIO SYNDROME IN A REHABILITATION CENTER IN CATALONIA (SPAIN)

Enric Portell, MD
Institut Guttmann, Badalona
Catalonia: what’s that?
Differences between Spain and Catalonia

- Catalonia is an autonomous territory in the northeast of Spain
- In Spain public Public Health Care System is offered in public hospitals
- In Catalonia, public health is covered by public centers and private hospitals.
- Guttmann Institut is a private center, but treat also public patients.
- We can offer “special” products for minorities, like attention to Post-polio patients
Differences between Spain and Europe

• In the European countries, campaigns of vaccination began in 1955
• In Spain, vaccination campaigns did not begin until 1963
• Great epidemics were between 1958 and 1962
• Our polio patients are younger than in USA or Europe
POLIOMYELITIS in Spain

Differences between Spain and Europe

• The lack of resources and the short number of “Iron lungs” in Spain made that many children with severe acute poliomyelitis with bulbar affectation died in the acute phase

• Catalonia (Barcelona) with 3,800,000 people had 3 iron lungs

• The survivors are less affected than in other countries in Europe
Where were the children treated?

- Children were treated in the acute phase at home or in general hospitals (H. Clinic and H. of infectious diseases).

- After acute phase in Childrens hospitals:
  - Sant Juan de Dios and Sant Rafael
  - Operated several times...until 16 years old.
SE SUPERIOR
Comunidad y enfermos del
Asilo Hospital
de
San Juan de Dios

Dedican a su
bienhechor y familia
cordialidades y hellos
Pasadas de Noviembre y Año Nuevo,
y piden al Niño Jesús les colme de sus gracias y bendiciones

Antes del tratamiento

Después de operado

Avenida Generalísimo Franco, 635
BARCELONA
Teléfono 32132

NOTA: Se puede visitar el pesebre del 2 de Diciembre al 2 de Febrero.

Hay consulta gratuita de Cirugía y Medicina para niños pobres, los lunes y miércoles de 10 a 12

TRABAJOS DE POLICLÍNICA

| Consultas | 4.221 |
| Inyecciones | 1.402 |
| Úlceras | 43 |
| Curas | 903 |
| Radios | 79 |

Haciendo una cura

Condiciones de ingreso

1. Pedir enfermedad que pueda ser curada o aliviada, que esté dentro del Reglamento.
2. Certificados de pobreza, Bautismo y Confirmación.

LOS NIÑOS INVITAN A LOS BIENHECHORES A VISITAR EL BÉLEN ARTÍSTICO, DE 10 A 1 MAÑANA Y 4 A 6 TARDE

La sala de espera del Asilo Hospital San Juan de Dios.
• After that, no follow up until 2002, when a new law was created to promote the attention to polio and post-polio patients.
• In Spain:
  • In General Hospitals
  • these patients are treated by PM&R Physicians or neurologist but not in specific Units

• In Catalonia, in the city of Barcelona mainly.
  • Dr. Gamez in Hospital Vall Hebrón (neurologist)
  • Dra. Illa Hospital Sant Pau (neurologist)
  • Institut Guttmann (multidisciplinary team)
Institut Guttmann

Mr. G. González Gilbey
Traffic accident 1958

Stoke Mandeville H. (1944)

1948

Sir Ludwig Guttmann
• It was founded on 1965, and was the first hospital in Spain dedicated to the treatment of spinal cord injury (and brain damage).

• Non-governmental organization (foundation)
Institut Guttmann

- New center opened in 2002
- 152 beds
- SCI and Brain damage

- Rehabilitation area
  - 80 places day hospital
  - 80 places for children
- Surgical area
- Central Services
Institut Guttmann

- Affiliated with the Universitat Autonoma de Barcelona
- Provides specialized care to:
  - Public Health Care System
  - Work Injury Insurances
  - Private Healthcare Organizations

- Accredited by JCI (2006)
- Fellowship:
  - Spinal cord injury
  - Brain damage
  - Neuro-Urology
• In 2007 the unit of polio and post-polio was created, and since then we control more than 600 people.

• We work as a multidisciplinary team, simillarly to the treatment of spinal cord injury patients or with Brain Injury.
multidisciplinary team

• Physician (PM&R)
• Psychologist
• Occupational therapist
• Physiotherapist
• Social Worker
• with the support of neurology, neurophysiologist, psychiatry, orthopedic surgeon, and orthopedic technician
What do we offer

- evaluation / treatment «Outpatients» during 1-2 months
  - Most of them from Catalonia
- Who pay?
  - Public Health Care System «Inpatients» unfortunately only 1 week.
  - A few patients from the rest of Spain arrive to Institut Guttmann.
Physician

• 4 physicians (PM&R)
• During first visit, after history and physical exam, we decide what he/she needs: Complementary tests (laboratory, EMG, RX, Spirometry) and rehabilitation treatment or not.
• Pharmacological treatment, fatigue, pain, depression,...
Physiotherapist and occupational therapist:

- Advise on physical exercises and assessment of orthosis and technical aids.
- Training in the handling of wheelchairs and adaptations or reforms at home.
Orthopaedic Technician:
Assessment for braces if needed for walking.

- New orthosis in light material, new models
- (SCKAFO) Stance-Control Knee-Ankle-Foot Orthosis like
- FreeWalk (OttoBock ®) or Becker orthopedics®.
- Knee orthosis Rehabilitator® for Genu Varo
walking

- 62.4% can walk
- But 67% with orthosis devices:
  - 58% KAFO (Large orthosis)
  - 19% AFO (Short orthosis)
Wheelchair

- 51% use wheelchair.
  - 62.7% manual
  - 36.3% electric
Psychologist /Neuropsychologist

• If there is a maladaptation to the change in functional status, there are “individual” or “group therapy” specifically designed for them.

• If memory problems arise, a neuropsychology team is available. We observe more Deficit of attention than memory problems.
Disphagia

• It is known that this symptom has been reported in the medical literature, but in our center we have seen disphagia only in 8 patients of more than 600.

• A videofluoroscopy was done for evaluation.
Osteoporosis

- 27.6% of our patients suffer a fracture during his live.
- It is really necessary to treat and prevent osteoporosis (Alendronate + hidroferol + Ca)
Respiratory evaluation

• If they explain headache, sleepiness,...
• We make respiratory functional test, arterial blood gasometry and polysomnography and if its abnormal we recommend:
  • Weight reduction
  • Non Invasive Ventilation through nasal or an oronasal mask. (IPPV or BIPAP)
Social worker

• Revise issues related to their work, including retirement options.

• Since 2009, according to a new law:
  – patients with “post-polio syndrome”
  – severe disabilty in the last 15 years
  – >56 years old,

• can apply for early retirement.
• Provide the appropriate contact with the different affected associations (APPCAT in Catalonia).
But the daily problems are this.
And the solution is not easy
Only an interdisciplinary approach is the solution
Thank you very much
Institut Guttmann, located in Barcelona, is a private center that also provides care of patients from the National Health Service. This is a leading hospital for medical treatment, surgery and comprehensive rehabilitation of patients with spinal cord injury, acquired brain damage or any other serious neurological disability. It was founded in 1965, and was the first hospital in Spain for the treatment of spinal cord injury and brain damage. With the years it has extended its facilities, and we started to take care also of patients with polio or post-polio syndrome. In 2007 the unit of polio and post-polio was created, and since then we have followed more than 600 people.

There is a multidisciplinary team, including physician, nurse, psychologist, occupational therapist, physiotherapist and social worker with the support of neurology, psychiatry, orthopedic surgeon, orthopedic technician and neurophysiologist. In Spain there are no other centers or specific units dedicated to the care of polio/post-polio patients. We serve patients from all Spain, but mainly from Catalonia. We basically offer an initial assessment of functional, neurological and respiratory status. If it is necessary we realize complementary studies like EMG, sleep study, spirometry and radiology. The main objective are to establish the proper diagnosis of post-polio syndrome if this is the case, and to design the appropriate treatment and follow-up. We offer the following evaluation/treatment:

- Physiotherapist and occupational therapist: Advise on physical exercises and assessment of orthosis and technical aids. Training in the handling of wheelchairs and adaptations or reforms at home.
- Orthopaedic technician: Assessment for braces if needed for walking.
- Psychologist: If there is a maladaptation to the change in functional status, there are individual or group therapy specifically designed for them. If memory problems arise, a neuropsychology team is available.
- Social worker: Revise issues related to their work, including retirement options. Provide the appropriate contact with the different affected associations (APPCAT in Catalonia).