The activities of the anesthesiologists in the Central Hospital of Aichi Prefectural Colony – Welfare Center for Persons with Developmental Disabilities –
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The name of the hospital: Aichi Prefectural Colony Central Hospital

University/Medical School Affiliation: Nagoya University and Kyoto Prefectural University of Medicine

A brief history of “Aichi Prefectural Colony –Welfare Center for Persons with Developmental Disabilities –”:

- 1968 Residential Facility for Children with Mental and Physical Disabilities.
- 1969 Residence and Rehabilitation Facility for Person with Severe Intellectual Disabilities.
- 1969 Vocational Training School.
- 1969 Lodging for Visitors.
- 1970 Central Hospital. (Beds: 200, Staff: 218 (Doctors: 30, Anesthesiologists: 2, OP nurses: 10))
- 1971 Residence and Workshop Facility for Person with Moderate Intellectual Disabilities.
- 1972 Institute for Developmental Research.
- 1974 Nurse’s School.
- 2000 Volunteer Activity Supports Center.

The number and types of pediatric cases in 2002: Total: 950

The topics of our research:

1. Acute pain control of the children:
   - Three kinds of IVPCA (Intravenously administrative Patient-Controlled Analgesia) devices (Baxter, Arrow, ATOM) are used with fentanyl (0.3 – 0.5 microg/kg/h and 0.5 microg/kg/one-shot/15 min) for acute pain control of the children after surgical operations. Ketamine and midazolam are tried to add for analgesia and sedation. Push bottom is used not only by the child but also by the parents and nurses when the patients are not old enough to recognize the PCA system.

2. Perioperative management of the people with autism and/or mental retardation.
   - The people with whom we cannot communicate by the ordinary methods need special menu of premedication, induction of general anesthesia, acute pain control and sedation for some days after surgical procedure. Some people with autism and/or mental retardation seem to have problems about the development of their minds. We need the procedure to manage the human mind at any stage of the evolution and development.

3. Motor nerve blockade for involuntary and/or spastic movement of neck and extremities with cerebral palsy.
   - “Motor points” are identified using an electric stimulator and 70% phenol is used for inactivating the nerves supplied to the target muscles.

4. New device to monitor the effect of neuromuscular blocking agents for the people with extraordinary postures.
   - The microphone specially made by the co-worker in Aichi Pref. Colony Institute for Developmental Research is placed on the target muscle such as adductor pollicis. The sensor detects the muscle sound activated by the electric stimulator whose electrodes are placed on the nerve distributed to the target muscle.

5. Sedation for the children having MRI.
   - Propofol and classic laryngeal mask are used for sedating the children and the people with autism and/or mental retardation.