

Educational Principles of Gerodontology

〈Outline of Gerodontology〉

I Introduction of Gerodontology	1. Category of Gerodontology	
	2. Oral Health and Health Promotion	1) oral health and health promotion 2) Health Japan 21 3) oral and systemic health
	3. Characteristics of the Elderly	1) geriatric syndrome (including the characteristics of cognitive functions) 2) pharmacokinetics of the elderly
	4. Psychology of the Elderly	1) cognitive functions ※ outline of geriatric psychology 2) personality and adaptation 3) psychology of the acquired impairment 4) acceptance of death and dying
	5. Behavioral Science of the Elderly	1) characteristics of behavioral science, definition and activator/inhibitor 2) developing communication, activator/inhibitor 3) social participation and community organization 4) pattern of receiving medical care (description dividing medical and dental)
	6. Nutritional Control of the Elderly	1) dietary habits, nutriture and health status of the elderly 2) masticatory function and nutrition 3) nutrient intake and its problems (outline of the assessment)
	7. Epidemiology of the Elderly	1) systemic diseases of the elderly 2) cause of death and bed ridden status 3) senile diseases
	8. Medical Ethics of the Elderly	1) patient's rights 2) occupational ethics of doctors 3) ethics of medical researches 4) protection of personal informations 5) living will 6) palliative care 7) terminal care (end of life care)
	9. Medical Economics of the Elderly	1) national health expenditure 2) dental care expenditure
	10. Population Statistics	1) ratio of elderly population 2) population composition 3) elderly population 4) aging index 5) healthy life expectancy and life expectancy
II Social Security and Medical Care/Health/Welfare	1. Aged People and Legal Systems	1) social security 2) legal systems related to medical care/health/welfare act on social welfare for the elderly, act on assurance of medical care for elderly people, long-term care insurance act, health promotion act, act concerning promotion of dental and oral health (historic background and summary)

	2. Act on Social Welfare for the Elderly	1) system of social welfare for the elderly 2) home welfare 3) institutional welfare 4) community facility for the elderly
	3. Act on Assurance of Medical Care for Elderly People	1) geriatric medicine 2) act on assurance of medical care for elderly people
	4. Long-term Care Insurance Act	1) long-term care systems (1) certification of care needs (2) long-term care benefits and prevention benefits (3) long-term care needs (4) long-term support needs (5) not applicable (prevention of long-term care of community support projects) 2) long-term care benefits (1) home care service <1> included home care management and guidance (2) institutional service <1> special nursing home for the elderly <2> nursing health care facility for the elderly <3> medical institution for long-term care (3) community based care service 3) prevention benefits (1) home care service (2) community based care service 4) community support projects (1) measures for the high-risk elderly (2) policy for general elderly
	5. Relevant Laws	1) health promotion act 2) act concerning promotion of dental and oral health 3) basic act on food education 4) others
	6. Occupations Involved Medical Care, Health, Welfare	1) form of cooperation 2) medical occupations (dentists, physicians, etc.) (1) dentist (2) dental hygienist (3) dental technician (4) physician (5) pharmacist (6) nurse etc. (7) radiation technician (8) clinical laboratory technician (9) physical therapist : PT (10) occupational therapist : OT (11) speech therapist : ST (12) registered dietitian (13) other medical staff 3) care and welfare occupations (1) social worker (2) care worker (3) psychiatric social worker (4) home helper (5) care manager (6) others
	5. Relevant Laws	1) health promotion act 2) act concerning promotion of dental and oral health 3) basic act on food education 4) others
III Aging and Senescence	1. Biological Age-related Changes	1) aging and senescence (definition) 2) hypothesis of aging 3) aging at the cellular level 4) aging at an individual level ※describe decline in homeostasis in each items
	2. Systemic Age-related Changes	1) cranial nerve system 2) muscle system

		3) skeletal system 4) circulatory system 5) respiratory system 6) urinary system 7) digestive system 8) endocrine system 9) reproductive system 10) immune system
	3 . Aging of Intellectual Function	1) intellectual function 2) psychological factors
IV Aging and Senescence Related to Oral Cavity ※differentiate between pathological aging and physiological aging	1 . Tooth	1) enamel 2) dentin 3) dental pulp
	2 . Periodontal Tissue	1) cementum 2) periodontal membrane 3) alveolar bone
	3 . Oral Mucosa	
	4 . Salivary Gland	1) salivary gland 2) saliva
	5 . Jawbone, Muscle and Temporomandibular Joint	1) jawbone 2) muscle 3) temporomandibular joint
	6 . Tongue	
	7 . Pharynx, Larynx	
	8 . Sense	1) somatic sensation 2) special sensation (including gustation)
	9 . Function	1) swallowing function 2) masticatory function 3) speech function

⟨Items of Gerodontology⟩

I Clinical Examination and Treatment Decision for Elderly Patients	1 . Dental Treatment for Elderly Patients	1) process of diagnosis and treatment 2) medical interview 3) problem oriented system (including SOAP)
	2 . Collection of Medical Information	1) letter of inquiry 2) systemic diseases 3) clinical laboratory examinations ※ (vital signs, blood test, urine test, electrocardiogram) 4) activity of daily living : ADL 5) quality of life : QOL
	3 . Assessment of Whole Body	1) systemic conditions 2) nutritional assessment 3) cognitive function 4) prescription 5) other problems
	4 . Assessment of the Oral Cavity	1) eating, chewing, swallowing and tongue movement 2) pronunciation and articulation 3) aesthetic 4) taste
	5 . Analysis of Medical Information and Extraction of Question Points	1) problem list 2) dental problems 3) general condition 4) other conditions

	6. Planning of Medical Care Plan	1) treatment policy 2) informed consent 3) determination of medical treatment plan 4) cooperation of multidisciplinary team (team medical care)
II Clinical Geriatric Dentistry	1. Diseases of Teeth and Periodontal Tissue	1) dental caries (include root caries) 2) fracture of tooth and dental abrasion, attrition 3) pulp and periapical disease 4) periodontal disease
	2. Treatment for Missing Teeth	1) prosthetic restoration (denture) 2) crown and fixed partial denture (bridge) 3) implant and others
	3. Diseases Related to Soft Tissue	1) inflammation 2) tumor and tumor-like diseases (1) denture fibrosis (2) precancerous lesion (3) benign tumor (4) oral cancer (5) leukemia and malignant lymphoma 3) oral mucosa and skin diseases (1) oral candidiasis (2) oral lichen planus (3) denture stomatitis, angular stomatitis, angular ulcer (4) herpes labialis (or mouth blister), herpes zoster (5) aphthous stomatitis, decubitus ulcer (6) glossitis
	4. Diseases Associated with Hard Tissue	1) bone fracture 2) luxation of the temporomandibular joint 3) bisphosphonate-related osteonecrosis of the jaw (BRONJ), osteomyelitis of the jaw
	5. Neurological Disorder	1) trigeminal neuralgia 2) facial palsy 3) oral dyskinesia
	6. Diseases of Oral Mucosa and Salivary Gland	1) oral mucosa disease 2) salivary gland disease 3) xerostomia (dry mouth) 4) taste disorder 5) speech disorder
	7. Perioperative Dental Treatment	1) perioperative oral functional management 2) perioperative professional oral hygiene care 3) dental treatment (include periodontal treatment) and management
	8. Drug	1) action/side effect of drug administration 2) drug to be administered to the elderly chronic disease (including oriental medicine) (1) drug to systemic disease (2) drug to oral disease
	9. Rehabilitation	1) speech and articulation 2) other
	10. Preventive of Dental Diseases and Maintenance	1) caries prevention 2) prevention of periodontal diseases 3) prevention of other dental diseases

		4) maintenance after the treatment
III Systemic Management of Dental Treatment	1 . Quality and Ensure Safety of the Dentistry	1) medical safety 2) infection prevention
	2 . Safety Management in Dentistry	1) prevention of systemic complications in the elderly 2) vital signs 3) monitoring 4) medical emergencies and risk management
	3 . Care Technique	1) transfer and wheelchair 2) care during dental treatment
	4 . Systemic Disease	1) circulatory disease 2) nervous disease 3) metabolic and nutritional disease 4) liver, bile, pancreatic disease 5) renal and urinary disease 6) blood and hematopoietic disease 7) respiratory disease 8) rheumatism, allergic disease, immunodeficiency 9) endocrine disease 10) psychiatric disease 11) gastrointestinal disease 12) other disease
IV Homebound Dentistry, Palliative Care	1 . System for Homebound Dentistry	1) institutional bases of homebound dentistry 2) hospital and clinic cooperation 3) medical and dental cooperation 4) cooperation with multidisciplinaries
	2 . Home-Visit Dental Treatment	1) purpose and significance of home-visit dental treatment 2) actual clinical practice of home-visit dental treatment 3) equipment and device for home-visit dental treatment
	3 . Home-Visit Dental Health Instruction	1) home-visit dental health instruction as treatment 2) home care guidance and home-visit dental health instruction
	4 . Oral Health Care	1) oral hygiene care 2) oral functional care 3) comprehensive oral care
	5 . Palliative Care	1) dental treatment 2) oral health care
V Dysphagia Rehabilitation	1 . General Remarks of Dysphagia Rehabilitation	1) introduction of dysphagia 2) social backgrounds (i.e. social concern about gastrostomy) 3) development and aging effect on swallowing function 4) dysphagia rehabilitation for adults 5) dysphagia rehabilitation and habilitation for children
	2 . Anatomy and Physiology of Deglutition	1) anatomy (1) brain and nerves (2) oral cavity, nasal cavity, pharynx, larynx, and esophagus (3) muscle and nerves related to deglutition 2) physiology

	<ul style="list-style-type: none"> (1) five stage model (2) process model (3) mechanisms and central nervous system of swallowing (4) coordinated movement of mastication, swallowing and respiration
3. Causes and Pathophysiology of Dysphagia	<ul style="list-style-type: none"> 1) potential factors that affect deglutition <ul style="list-style-type: none"> (·) saliva, nutrition, respiration, posture, voice and articulation 2) causes of dysphagia <ul style="list-style-type: none"> (1) functional diseases (2) organic diseases (3) psychological diseases (4) drug side effects 3) pathophysiology of dysphagia <ul style="list-style-type: none"> (1) penetration and aspiration (2) silent aspiration (3) oral residue and pharyngeal residue (4) severity scale (5) complications of dysphagia
4. Evaluation and Diagnosis of Dysphagia	<ul style="list-style-type: none"> 1) screening tests <ul style="list-style-type: none"> (1) questionnaire (2) repetitive saliva swallowing test, modified water swallowing test, food test, cough test and cervical auscultation (3) other evaluations 2) videoendoscopic evaluation of swallowing <ul style="list-style-type: none"> (1) outline, requisities (2) examination method, countermeasure to complications (3) normal finding and abnormal finding (4) videoendoscopic evaluation of swallowing for pediatric patients 3) videofluoroscopic examination of swallowing <ul style="list-style-type: none"> (1) outline, requisities (2) examination method, countermeasure to complications (3) normal finding and abnormal finding (4) videofluoroscopic examination of swallowing for pediatric patients (5) comparison between videoendoscopic evaluation of swallowing and videofluoroscopic examination of swallowing
5. Prevention of Dysphagia	<ul style="list-style-type: none"> 1) oral health care <ul style="list-style-type: none"> (1) oral hygiene care (2) oral rehabilitation and functional care (3) oral health care 2) indirect training <ul style="list-style-type: none"> (·) procedure and therapy 3) direct training <ul style="list-style-type: none"> (1) procedure and therapy (2) postural regulation 4) eating assistance <ul style="list-style-type: none"> (1) meal round (2) food modification (3) postural regulation, assistance, self-help device, tableware 5) therapeutic approach

		(1) palatal augmentation prosthesis, palatal lift prosthesis (2) other prosthesis (3) operative treatment (4) drug treatment 6) risk management (1) prevent aspiration (2) avoid suffocation, prevention of vomiting
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