

Educational Principles of Gerodontology

Since Educational Principles of Gerodontology was published by Japanese Society of Gerodontology in May, 2020, its English version will be published for international distribution.

〈Outline of Gerodontology〉

I Introduction of Gerontology	1. Gerontology and Gerodontology	
	2. Population Statistics	<ul style="list-style-type: none"> 1) population structure 2) ageing population 3) proportion of population aged 65 years and older 4) old-age dependency ratio 5) ageing index 6) ageing society and aged society 7) the young-old (aged 65 to 74) and the old (aged 75 and older) 8) healthy life expectancy & life expectancy
	3. Epidemiology of the Elderly	<ul style="list-style-type: none"> 1) cause of death and bedridden 2) systemic diseases 3) oral diseases
	4. Characteristics of the Elderly	<ul style="list-style-type: none"> 1) geriatric syndrome (including the characteristics of cognitive functions) 2) long-term care needs and frailty 3) pharmacokinetics of the elderly
	5. Psychology of the Elderly	<ul style="list-style-type: none"> 1) cognitive functions ※ outline of geriatric psychology 2) personality and adaptation 3) psychology of people with acquired impairments 4) acceptance of death and dying
	6. Behavioral Science of the Elderly	<ul style="list-style-type: none"> 1) behavioral science and barriers of human behavior 2) communication development and barriers of communication 3) social participation and community organization 4) patterns of healthcare seeking behavior (both medical and dental care)
	7. Oral Health and Health Promotion	<ul style="list-style-type: none"> 1) oral health and health promotion 2) Health Japan 21 3) oral and systemic health
	8. Medical Ethics of the Elderly	<ul style="list-style-type: none"> 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) 8) characteristics and approach to elder abuse
	9. Medical Economics of the Elderly	<ul style="list-style-type: none"> 1) national healthcare expenditure 2) dental care expenditure

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 act on the prevention of elder abuse, support for caregivers of elderly persons and other related matters, health promotion act, act concerning the promotion of dental and oral health
	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 social welfare for the elderly
	4. Long-term Care Insurance Act	1) long-term care systems (1) certification of long-term care needs (2) subsidy for long-term care and prevention service (3) long-term care needs (4) long-term support needs (5) community based long-term care prevention programs
		2) subsidy for long-term care (1) home care service <1>home care management and guidance, home-based care facilities, etc. (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) subsidy for preventive service (1) care prevention service (2) community-based care prevention service
4) community support projects (1) care prevention & daily life support project (2) comprehensive support project		
5. Relevant Laws	1) health promotion act 2) the Dental and Oral Health Promotion Law 3) basic act on shokuiku (food and nutrition education) 4) others	
6. Occupations Involved Medical, Health, Welfare	1) cooperating form 2) medical occupations (dentists, physicians, etc.) (1) dentist (2) dental hygienist (3) dental technician (4) physician (5) pharmacist (6) nurse, licensed practical nurse, public health nurse, midwife	

		(7) medical radiation technician (8) clinical laboratory technician (9) physical therapist (10) occupational therapist (11) speech therapist (12) registered dietitian, dietitian (13) other medical staff 3) care and welfare occupations (1) social worker (2) care worker (3) psychiatric social workers (4) formal home caregiver (5) long-term care support specialist (care manager) (6) certified psychologist 4) others
III Ageing and Senescence	1. Biological Age-related Changes	1) ageing and senescence 2) hypothesis of senescence 3) level of senescence (molecular level, cell level, organ level, individual level)
	2. Systemic Age-related Changes	1) body composition 2) skin 3) sensory organ 4) circulatory organ 5) respiratory organ 6) digestive organ 7) kidney, uropoietic organ, genital organ 8) central nerves, peripheral nerves 9) locomotorium 10) endocrine and metabolism 11) immunity
	3. Age-related Changes in Intellectual Capacity	1) intellectual functioning 2) emotion, volition, personality 3) behavior
IV Age-related Changes in Jaws and Oral Cavity	1. Tooth	1) enamel 2) dentin 3) dental pulp
	2. Periodontal Tissue	1) cementum 2) periodontal membrane 3) gingiva 4) alveolar bone
	3. Dentition	
	4. Oral Mucosa	
	5. Salivary Gland	1) salivary gland 2) saliva
	6. Jawbone, Temporomandibular Joint and Muscles in the Oral Cavity	1) jawbone 2) temporomandibular joint 3) muscles in the oral cavity
	7. Tongue	
	8. Facial Appearance	
	9. Pharynx, Larynx	
	10. Sense	1) somatic sensation 2) special sensation (including gustatory sense)
	11. Function	1) eating and swallowing function

		2) masticatory function 3) speech function (articulation and phonation)
V Clinical Examination and Treatment Decision Making for Elderly Patients	1. Dental Treatment for Elderly Patients	1) process of diagnosis and treatment 2) medical interview 3) POS problem oriented system (including SOAP)
	2. Collection of Patient Information	1) inquiry of clinical history 2) physical examination 3) consultation
	3. Assessment of General Health	1) systemic conditions 2) nutritional condition 3) cognitive function 4) medication 5) other problems
	4. Assessment of the Oral Cavity	1) eating, chewing, swallowing and tongue movement 2) phonation and articulation 3) salivation 4) aesthetic 5) sensation (including taste)
	5. Analysis of Medical Information and Problem Extraction	1) dental problems 2) general health problems 3) other problems
	6. Medical Care Planning	1) medical treatment planning 2) informed consent 3) decision making of medical treatment 4) transdisciplinary approach (team medical care)

⟨Items of Gerodontology⟩

I Oral Diseases of Elderly Persons	1. Diseases of Teeth and Periodontal Tissue	1) dental caries (including root caries) 2) fracture of tooth and dental abrasion, attrition 3) dental pulp and periapical diseases 4) periodontal disease
	2. Missing Teeth	
	3. Soft Tissues Disease	1) inflammation 2) tumor and tumor-like diseases (1) denture fibrosis (2) precancerous lesion (3) benign tumor (4) malignant tumor 3) mucosa and skin diseases (1) oral candidiasis (2) oral lichen planus (3) angular cheilitis (4) herpes labialis (or mouth blister), herpes zoster (5) stomatitis (aphthae, denture stomatitis, etc.) (6) glossitis (7) salivary gland disease (8) denture ulcer (9) others

	4. Hard Tissue Disease	<ul style="list-style-type: none"> 1) fracture 2) dislocation of temporomandibular joint 3) osteomyelitis of jaw 4) benign tumor 5) malignant tumor 6) medication-related osteonecrosis of the jaw (MRONJ) 7) others 	
	5. Xerostomia (Dry Mouth)		
	6. Halitosis		
	7. Neurological Disorders of Maxillofacial	<ul style="list-style-type: none"> 1) trigeminal neuralgia 2) facial nerve palsy 3) glossodynia 4) oral dyskinesia 5) others 	
	8. Disease of Oral Function	1) oral frailty, oral hypofunction	
	9. Dysphagia		
	10. Other	<ul style="list-style-type: none"> 1) dysphasia (dysphonia, articulatory disorder) 2) esthetic dissatisfaction 3) disorder of sensation 	
II	Holistic Approach During Dental Treatment	1. Medical Safety and Infection Control	<ul style="list-style-type: none"> 1) medical safety 2) infection control
		2. Risk Management Strategy	<ul style="list-style-type: none"> 1) systemic complication and risk management 2) vital signs 3) patient monitoring
		3. Medical Care	<ul style="list-style-type: none"> 1) wheelchair transfer and handling 2) assistance during dental treatment
		4. Nutrition	<ul style="list-style-type: none"> 1) evaluation of nutritional status 2) nutritional management <ul style="list-style-type: none"> administration route of nutrition (enteral alimentation, intravenous alimentation) volume of nutrition (energy, fluid, nutrient factors) 3) guidance on nutrition intake by clinical condition <ul style="list-style-type: none"> modified-texture foods nutrition support team
		5. Systemic Disease	<ul style="list-style-type: none"> 1) cardiovascular disease (hypertension, ischemic heart disease, arrhythmia, valvular heart disease, heart failure, etc.) 2) neurologic disorders (cerebrovascular disease, Alzheimer's disease, dementia with Lewy bodies, frontotemporal dementia, Parkinson's disease, amyotrophic lateral sclerosis, etc.) 3) endocrinology and metabolism (diabetes mellitus, dyslipidemia, osteoporosis, thyroid disease, etc.) 4) liver, biliary tract and pancreatic disease (hepatitis, liver cancer, liver cirrhosis, pancreatitis, pancreas cancer, etc.) 5) disorders of the kidney and urinary tract (chronic kidney disease, renal failure, dialysis, etc.) 6) blood and hematopoietic disease (idiopathic

		<p>thrombocytopenic purpura, myelodysplastic syndrome, leukemia)</p> <p>7) respiratory disease (pneumonia, bronchial asthma, pulmonary tuberculosis, chronic obstructive pulmonary disease, etc.)</p> <p>8) immune-mediated, inflammatory, and rheumatologic disorders (rheumatoid arthritis, systemic sclerosis, polymyalgia rheumatica, etc.)</p> <p>9) gastrointestinal disease (gastroesophageal reflux disease, ulcerative colitis, etc.)</p> <p>10) mental disorders (depression, schizophrenia, bipolar disorder, etc.)</p>
	6. Drugs	<p>1) precautions in drug administration</p> <p>2) effect of drugs</p> <p>(1) effect on systemic condition</p> <p>(2) effect on oral health condition</p>
	7. Perioperative Period	<p>1) perioperative oral functional management</p> <p>2) perioperative professional oral hygienic management</p> <p>3) others</p>
III Domiciliary and Palliative Dental Care	1. Domiciliary Dental Care System	<p>1) home visiting dental care system</p> <p>2) hospital-dental clinic cooperation</p> <p>3) medical-dental cooperation</p> <p>4) multidisciplinary cooperation</p>
	2. Domiciliary Dental Care	<p>1) significance and purpose of domiciliary dental care</p> <p>2) circumstance of domiciliary dental care</p> <p>3) dental equipment for domiciliary dental care</p> <p>4) risk management in domiciliary dental care</p> <p>5) emergency action at domiciliary dental care</p>
	3. Domiciliary Dental Care Guidance	<p>1) dental hygiene guidance in domiciliary medical care</p> <p>2) guidance of domiciliary nursing care dental hygiene control</p>
	4. Oral Health Management	<p>1) oral hygiene control</p> <p>2) oral functional management</p> <p>3) oral care for the elderly (oral hygiene control and functional rehabilitation)</p>
	5. Palliative Care	<p>1) palliative care</p> <p>2) total pain</p> <p>3) palliative care team</p> <p>4) hospice</p> <p>5) dental treatment</p> <p>6) oral health management</p>
IV Rehabilitation	1. Concept of Rehabilitation	<p>1) principle</p> <p>2) rehabilitation (multidisciplinary) team</p> <p>3) support for independent living and social participation</p>
	2. Dysphagia Rehabilitation	<p>1) overview of dysphagia rehabilitation</p> <ul style="list-style-type: none"> • definition of dysphagia • social background <p>2) causes and pathophysiology of dysphagia</p> <ul style="list-style-type: none"> • deglutition (※ including anatomy and physiology) • dysphagia

		<ul style="list-style-type: none"> • causes of dysphagia • pathophysiology of dysphagia <p>3) evaluation and diagnosis of dysphagia</p> <ul style="list-style-type: none"> • screening tests (protocols) • videoendoscopic evaluation of swallowing • videofluoroscopic examination of swallowing <p>4) treatment of dysphagia</p> <ul style="list-style-type: none"> • oral health management • therapeutic approach a) indirect therapy, b) direct therapy • compensatory approach • environmental approach • psychological approach • nutritional management • feeding assistance • risk management <p>5) transdisciplinary approach</p>
	3. Dysarthria Rehabilitation	<p>1) causes and pathophysiology of dysarthria</p> <p>2) evaluation and diagnosis of dysarthria</p> <p>3) treatment of dysarthria</p> <p>4) transdisciplinary approach</p>

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