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Prevalence of dyspepsia symptoms among the elderly and senile population of Yakutsk

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Summery: A high spread of dyspepsia symptoms have been revealed among elderly population in Yakusk. Reliable differences of dyspepsia symptoms have been noted according to sexual and ethnic indications.

Keywords: dyspepsia, elderly and senile age, indigenous and non-indigenous population, town inhabitants.

Introduction: According to epidemiological studies dyspepsia symptoms widely spread among a population and 20-40% of them suffer of it. Half of adult population have gastroenterological symptoms, major part of these symptoms are functional, without morphological substratum (Agreus L et al). Sickness of digestion organs inflict significant economic damage to a society (Grigoriev P.Y, V.I.Ivashkin, V.A.Isakov, V.M.Nechev).

Some disturbance of dyspepsia is equally wide-spread among young and elderly population (Talley N.J, Locke G.R, Hague M et al), however geographical and ethnic differences exist. The problem of gastrointestinal disorder of elderly population in the conditions of the North is actual because it is not investigated enough.

Aim and objectives of the research: to investigate spread, gender and ethnic indications of gastrointestinal symptoms among elderly, more elderly and the most elderly population of Yakutsk.

Materials and methods: the research has been carried according to scientific programme “Epidemiology of some chronic non-infectious diseases and risks of elderly population in Yakutsk”. The object of investigation was the population of Yakutsk at the age of 60 and senior. The sample of patients has been developed on the base of the list of Yakutsk inhabitants for organizing this research. The sample was done by method of casual numbers with the help of a computer programme. The sample consists of 1394 respondents (200 – masculine, 200 – female in each age group of 60-89 years old and 194 people of the most elderly population). So the sample included 7,6% from the whole number of elderly population in Yakutsk.

775 people were investigated (response 71,6%). 290 people were included into the database for analysis of dyspepsia. Patients were divided into age groups (60-69, 70-79, 80-89 and more than 90 years old). Also according to gender indication they were divided into masculine, female. Two

race-ethnic groups were indicated: indigenous and non-indigenous.

The research has been held in Republican hospital and Geriatric center of the Republican hospital 3 in Yakutsk. People of 80 and senior, some patients of 60 and senior who could not be transported were examined by visiting them at their permanent houses. The most elderly population (90 and senior) was examined in Geriatric center of Republican hospital 3. The research was approved by Ethical Committee of Yakutsk scientific center of the Siberian Branch of the Russian Academy of Medical Sciences (protocol 2, November 2006). All respondents signed the informational agreement of participation in the research. 556 respondents were selected for diagnosing gastrointestinal symptoms by standard questionnaire (57 questions).

According to the Rome III process, 2006 dyspepsia is diagnosed as "dyspepsia symptoms caused by food (meal-induced dyspeptic symptoms (DS) or postprandial distress – syndrome (PDS) or epigastric pain syndrome (EPS) – syndrome of epigastric pain or epigastric pain syndrome (SEP). The symptoms of the disease should be more than 3 months from the beginning and not less than 6 months before diagnosing".

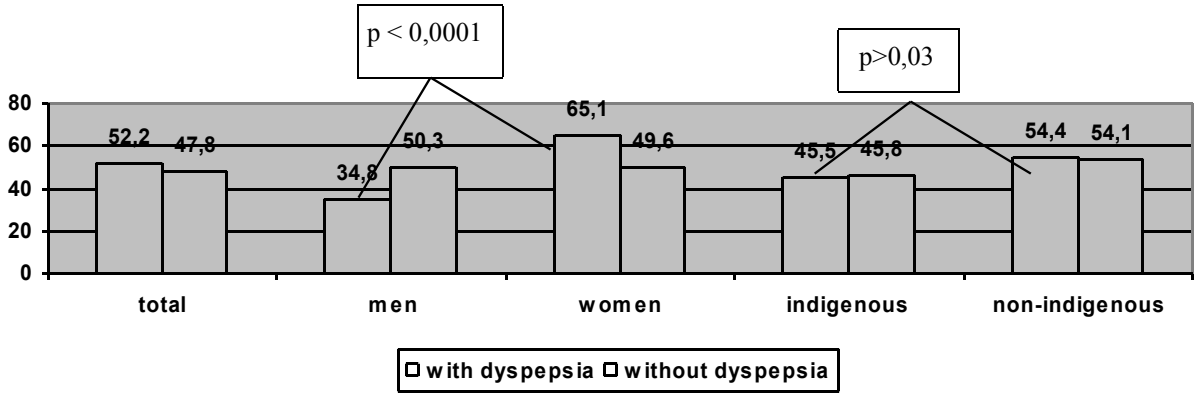
Table 1. Characteristic of examined respondents by sexual, age and ethnic indications

Age	n	%	masculine		female		indigenous		Non-indigenous	
			n	%	n	%	n	%	n	%
60-69 years	182	32,7	81	34,4	101	31,4	66	25,9	116	38,4
70-79 years	184	33,1	83	35,3	101	31,4	90	35,4	94	31,1
80-89 years	129	23,2	56	23,8	73	22,7	69	27,1	60	19,8
90 < years	61	11,0	15	6,3	46	14,3	29	11,4	32	10,5
n	556	100	235	42,2	321	57,7	254	45,7	302	54,3

Characteristic of examined respondents by sexual, age and ethnic indications is given in Table 1. Women and non-indigenous people dominate in the group of respondents ($p<0,0001$), men and indigenous are the less number, but this is not connected with special selection. It corresponds to general trend of population. Non-indigenous group formed 54,3% of indigenous one, who have been 45,7% ($p=0,004$). Two age groups have dominated among female: 60-69 and 70-79 years (31,4%). The age group of 70-79 males was the most in number among masculine (35,3%). Women dominated in the group of the most elderly group (14,3%) against males (6,3%, $p=0,0001$). The group of the most elderly of 90 years and senior was less in number against the other age groups. So everyone from the most elderly population was included in the research (61 people).

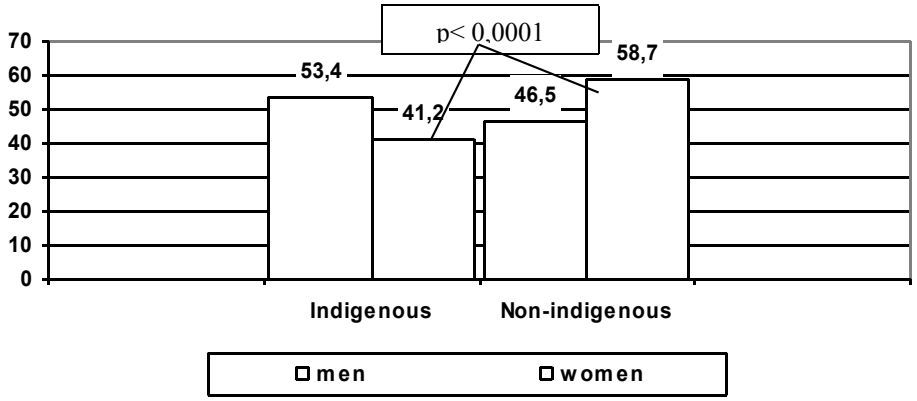
Results of investigation: 52,2% (290 people) of all examined respondents were diagnosed of dyspepsia symptoms.

Picture 1. Spread of dyspepsia according to sexual and ethnic groups



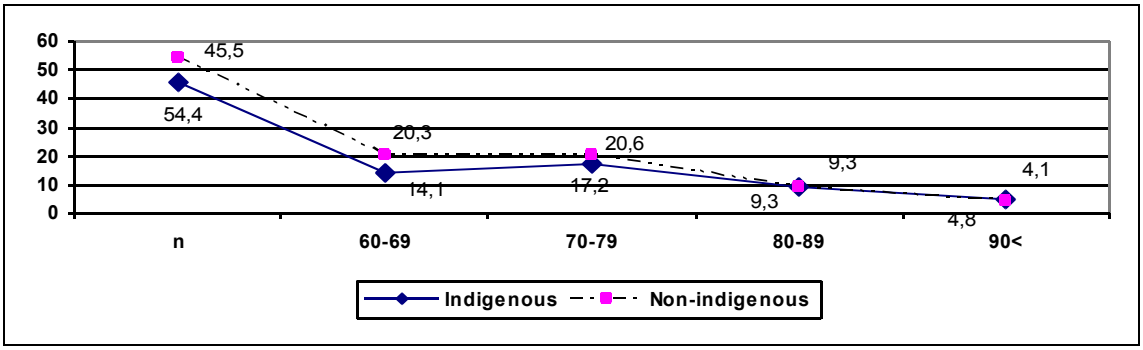
Statistically significant results according to gender are revealed among population of 60 and senior: women – 65,1% (189 people) and men – 34,8% (101 people) (p<0,0001). Statistically significant results according to ethnic indication are revealed: non-indigenous – 54,4% (158 people) and indigenous – 45,5% (132 people) (p>0,03), (pic.1).

Picture 2. Frequency of dyspepsia according to ethnic group including gender



As it is shown in Picture 2, dyspepsia is more often revealed for certain among non-indigenous women (111 people) than indigenous female (78 people) (41,2% and 58,7%, p<0,0001). The clean data were not received among males, indigenous – 53,4% (54 people) and non-indigenous – 46,5% (47 people).

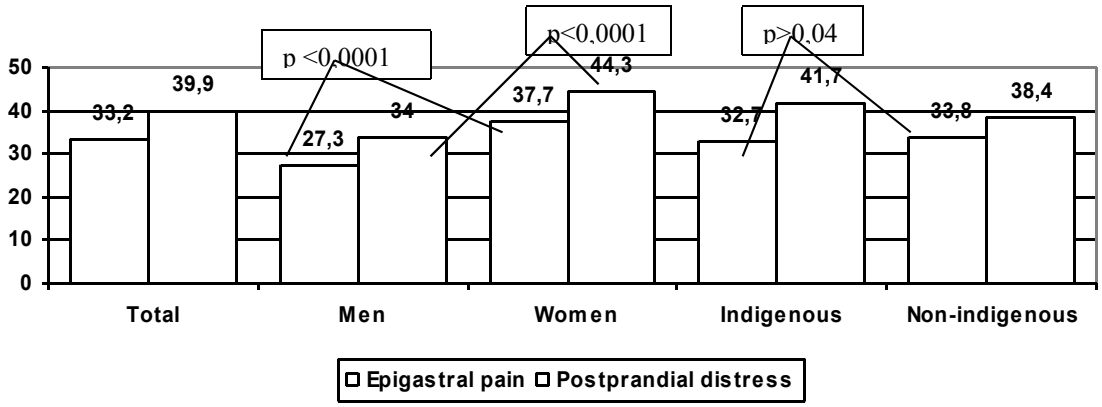
Picture 3. Frequency of dyspepsia according to ethnic group including age



As it is shown in Pic.3 the reduction of frequency of dyspepsia symptoms is revealed in age

group of 60-90 years among non-indigenous from 20,3% to 4,1%, p<0,0001 and among indigenous from 14,1% to 4,8%, p<0,03.

Picture 4. Frequency of epigastric pains and postprandial disorder among Yakusk population aged 60 and senior



As it is shown in Pic.4, frequency of epigastric pains forms 33,2% (185 people). It was noticed that epigasticl pains statistically significant for women – 37,7%, for men – 27,3%, p<0,0001, for indigenous – 32,7%, non-indigenous – 33,0%, p<0,04.

There are statistically significant results according to ethnic indication, non-indigenous women – 36,5% to 28,7% males, p<0,0001, indigenous women – 39,3% to 26,0% of males, p=0,03.

Postprandial disorder was noted for 39,9% (222 people) respondents. Statistically significant results were revealed according to gender: women 44,3%, males – 34,0%, p<0,0001, Statistically significant results were not noted according to ethnic indication: indigenous – 47,7%, non-indigenous – 52,3%.

Statistically significant differences were revealed according to non-indigenous women – 41,7% and non-indigenous men – 32,4%, p<0,0001, indigenous women – 48,0% and indigenous men – 35,4%, p=0,02.

Table 2. Frequency of dyspepsia symptoms according to age groups

Age	*Number*		*Men*		*Women*		*Indigenous*		*Non-indigenous*	
	ЕР	РД	ЕР	РД	ЕР	РД	ЕР	РД	ЕР	РД
60-69 years	76	85	39,0	35,0	42,1	40,1	32,5	34,9	48,0	41,3
70-79 years	61	89	35,9	45,0	31,4	37,3	43,3	38,6	24,5	41,3
80-89 years	29	34	18,7	15,0	14,0	15,5	13,2	18,8	17,6	12,0
90 < years	19	14	6,2	5,0	12,4	7,0	10,8	7,5	9,8	5,1
n	185	222	27,3	34,0	37,7	34,0	32,7	41,7	33,8	38,4

As it is shown in Tab.2 the frequency of epigastric pains are decreasing according to age 60-90 years: women from 42,1% to 12,4% and men from 39,0% to 6,2%. Decreasing of epigastric

pains according to age is observed with indigenous elderly population from 43,3% to 10,8% and non-indigenous population from 48,0% to 9,8%.

Postprandial disorders are decreasing from age of 60 to 90 with women from 45,0% to 5,0%, with men from 40,1% to 7,0%. Also postprandial disorder is decreasing according to age with indigenous elderly population from 38,6% to 7,5% and non-indigenous population from 41,3% to 5,1%/

It is seen from Tab.3 and Tab.4 that decreasing of epigastric pains are observed according to age. Statistically significant differences has been revealed with women suffering of strong, night, famine, and frequent, impulsive, pains after meal and after 2 hours. Epigastric pains decreases after taking a meal, belching (eructation), and acceptance of antiacid. Strong, periodical, famine, pains just after meal are experimentally proved with non-indigenous population in compare with indigenous one.

Table 3. Characteristic of upper abdominal pains on ethnic and gender groups

symphtome	n=185		Indigenous (n= 83)		Non-indigenous (n=102)		Men (n=64)		Women (n=121)		P i-n	Pм-w
	n	%	n	%	n	%	n	%	n	%		
Strong pains	44	19,2	17	7,4	27	11,7	7	3,0	37	16,1	0,03	0,0001
Night pains	66	28,8	29	12,6	37	16,1	15	6,5	51	22,2	0,1	0,0001
Periodical pains	45	19,6	14	6,1	31	13,5	15	6,5	30	13,1	0,0001	0,002
Famine pains	60	26,6	24	10,4	36	15,7	20	8,7	40	17,4	0,03	0,0001
Pains just after meal (within 30 min)	55	24,0	22	9,6	33	14,4	19	8,2	36	15,7	0,03	0,001
Pains after 30 min-2 hours after meal	79	34,4	39	17,0	40	17,4	24	10,4	55	24,0	0,8	0,0001
Pains are over after meal	55	24,0	24	10,4	31	13,5	21	9,1	34	14,8	0,1	0,01
Pains are relieved	26	11,3	8	3,4	18	7,8	7	3,0	19	8,2	0,007	0,001

after accepting antiacids												
Pains are relieved by belching (eructation)	44	19,2	24	10,4	20	8,7	11	4,8	33	14,4	0,3	0,0001
Pains become stronger after meal	54	23,5	30	13,1	24	10,4	20	8,7	34	14,8	0,2	0,008
Pains increase after alcohol	22	9,6	14	6,1	8	3,4	10	4,3	12	5,2	0,07	0,5
Impulsive pains	64	27,9	29	12,6	35	15,2	20	8,7	44	19,2	0,2	0

Table 4. Characteristic of upper abdominal pains on age

symphtome	n=185		60-69 years		70-79 years		80-89 years		90 years <	
	n	%	n	%	n	%	n	%	n	%
Strong pains	44	19,2	20	8,7	16	6,9	3	1,3	5	2,1
Night pains	66	28,8	28	12,2	21	9,1	11	4,8	6	2,6
Periodical pains	45	19,6	26	11,3	12	5,2	3	1,3	4	1,7
Famine pains	60	26,6	29	12,6	20	8,7	7	3,0	4	1,7
Pains just after meal (within 30 min)	55	24,0	22	9,6	21	9,1	5	2,1	7	3,0
Pains after 30 min-2 hours after meal	79	34,4	30	13,1	26	11,3	14	6,1	9	3,9
Pains are over after meal	55	24,0	22	9,6	22	9,6	6	2,6	5	2,1
Pains are relieved after accepting antiacids	26	11,3	16	6,9	7	3,0	1	0,4	2	0,8
Pains are relieved by belching (eructation)	44	19,2	14	6,1	20	8,7	6	2,6	4	1,7
Pains become stronger after meal	54	23,5	19	8,2	21	9,1	8	3,4	6	2,6
Pains increase after alcohol	22	9,6	8	3,4	8	3,4	4	1,7	2	0,8
Impulsive pains	64	27,9	25	10,9	25	10,9	13	5,6	1	0,4

Conclusion:

According to investigation data high spreading of dyspepsia symptoms is indicated among

elderly, more elderly population (52,2%), and also among indigenous (45,5%) and non-indigenous (54,4%) population of Yakutsk. Epigastric pain, postprandial distress experimentally approves to be more frequently with women (37,7% and 44,3%), epigastric pain is noted with non-indigenous people of Yakutia (33,8%). Dyspepsia is decreasing according to age.

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