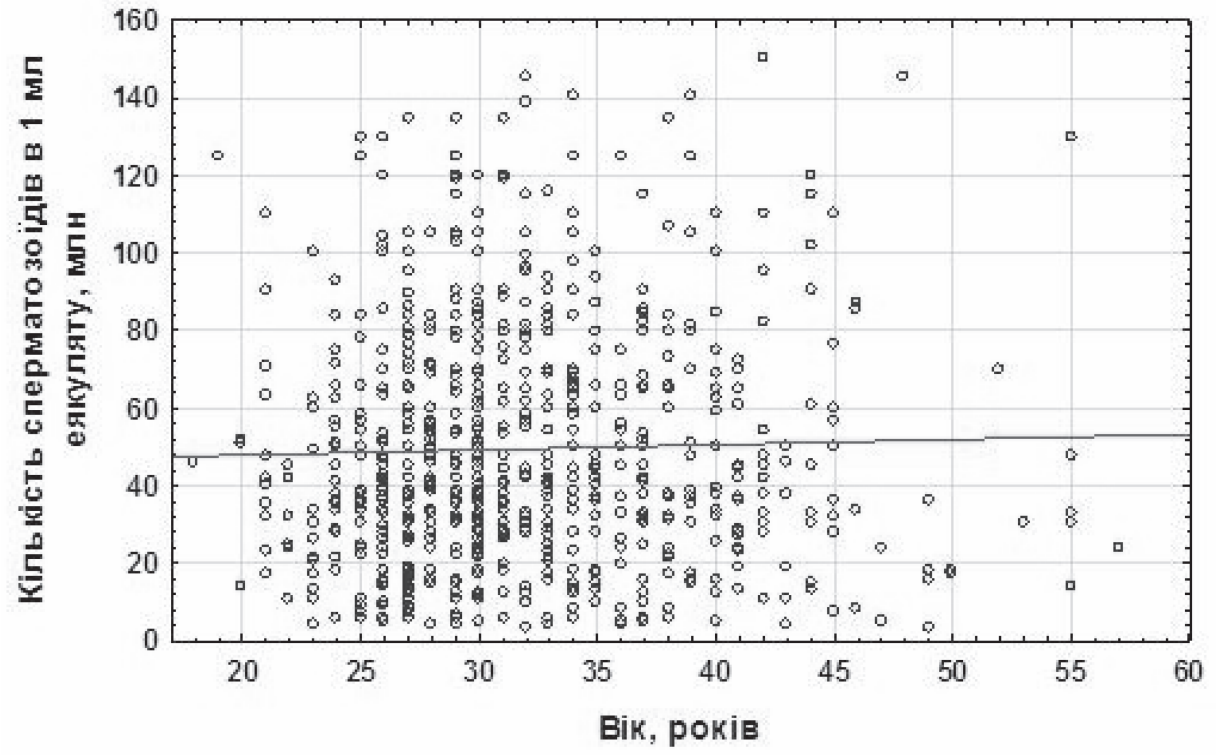
ознаками та визначення статевої конституції удосконалить діагностику та допоможе прогнозувати результативність патогенетичної терапії.

Таблиця

Аналіз даних спермограм пацієнтів за 2010-2014 рр. (x ± Sx)

Показники	за 2010 рік, n=534	за 2011 рік, n=722	за 2012 рік, n=679	за 2013 рік, n=668	за 2014 рік, n=728
Вік, роки	31,84±11,80	31,70±6,62	31,69±6,20	31,72±6,24	31,96±6,74
Час розрідження, хв	29,16±12,17	25,69±9,11	25,62±9,77	37,86±14,23	45,08±12,66
В'язкість, см	0,16±0,14	0,16±0,81	0,13±0,10	0,25±0,19	0,19±0,24
Об'єм, мл	3,33±1,26	3,38±1,59	3,37±1,54	3,11±1,26	3,07±1,19
Кількість сперматозоїдів в 1 мл, млн	36,63±29,17	44,99±33,28	42,81±29,38	50,33±34,04	49,24±30,82
Кількість сперматозоїдів в еякуляті, млн	123,74±121,18	145,54±122,69	136,74±105,67	153,70±121,31	149,47±110,89
Категорія A, %	29,62±14,86	33,69±15,63	30,69±15,12	22,93±15,24	24,69±16,02
Категорія B, %	15,40±9,28	12,81±8,64	13,13±7,92	8,19±7,04	9,47±6,84
Категорія C, %	14,61±8,73	16,33±8,67	15,27±8,86	25,02±11,94	24,22±11,36
Категорія D, %	42,20±19,00	38,26±17,61	40,91±17,24	43,87±18,29	41,61±18,06
Сперматозоїди з нормальною будовою, %	33,26±14,58	36,63±13,76	33,65±12,45	29,12±10,33	28,22±10,86
Патологічні сперматозоїди, %	66,98±14,80	63,34±13,77	66,34±12,45	70,88±10,42	71,82±10,91

Примітка: n – число спостережень.



Мал. Кореляційний аналіз між віком та кількістю сперматозоїдів в 1 мл еякуляту обстежених пацієнтів

Dudko O.G., Njeh Bertrand

LIFE QUALITY OF PATIENTS AFTER INTERNAL FIXATION OF FRACTURES WITH POLYMERIC MATERIALS

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Surgical treatment of limb fractures with metal fixation devices is commonly used in orthopedic clinics around the world. Despite its advantages it has some complications with the rate from 3.6 to 17.2 %. The necessity to perform another surgery for implant removal should be considered.

Objective of the research: to analyze patients' quality of life and functions of the limbs after *internal* fracture fixation of the upper and lower extremities with biodegradable and not biodegradable polymeric devices.

157 patients were followed-up within 10-44 years after internal fixation of limb fractures with fixation devices of the same design made of different materials. Fixation devices made of polyglycolide were used in 37 cases, polyamide-12 – in 62 cases, metal – 58 cases. The investigations of upper and lower extremities functional results, quality of life were performed by means of clinical methods, DASH (Disability of the arm, shoulder and hand outcome measure and LEFS (Lower extremity functional scale) functional scales. DASH outcome measure functional test was developed by the American Academy of Orthopedic Surgeons (AAOS) and USA Institute of Work&Health. This test was designed to determine function and signs related to injuries and diseases of the upper extremity. It helps to estimate the results of treatment as well. LEFS test was introduced by M. Binkley in 1999. It reveals any difficulties in patients related with function of the lower extremity.

Two types of polymeric materials were used for internal fracture fixation. They were: polyamide-12 (P-12), biologically inert material that can be present in the soft tissues and bone for many years without any complications and biodegradable material polyglycolide (PG) – a polymer of glycolic acid. The results of treatment were compared with internal fixation of patients treated with stainless steel metal devices. Patients with fractures of the upper extremity were tested with DASH outcome measure scale. Function for PG group was 12.98 less, in P-12 group – 19.27 less, in metal group – 19.86 less. Patients ability to perform work on specialty, go in for sport, play music were15.05 less in the group when PG was used, 20.58 less when PG was used, and 21.54 less when metal fixing devices were used. Functional results for the lower extremity of patients examined with LEFS reveals average values for PG group – 68.78, P-12 group – 47.1, after metal osteosynthesis – 52.4. The results obtained correlate significantly with the results of clinical examination of patients in long term outcome.

The use of Dash outcome measure and LEFS scales enables estimating clearly how patients feel themselves after underwent surgical treatment. Quality of life score according to DASH scale in patients with injuries of the upper extremities after polymeric osteosynthesis was 6.88 points higher than that in the control group. In patients with injuries of the lower extremities results were better on 7.94 points according to LEFS as compared to metal fixation device group.

Ivashchuk S.I.

INFLUENCE OFGENES IL-4 (C-590T), TNF-α (G-308A), PRSS1 (R122H), SPINK1 (N34S) AND CFTR (delF508C) POLYMORPHISM ON SYSTEMIC INFLAMMATORY RESPONS EINDICATORS INPATIENTS WITH EDEMATOUS PANCREATITIS

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The aim of the research was to study the systemic inflammatory response indicators in patients with edematous pancreatitis with genes IL-4 (C-590T), TNF-α (G-308A), PRSS1 (R122H), SPINK1 (N34S) and CFTR (delF508C) polymorphism.

Genetic studies were carried on 123 patients, among them were 23 (18,7%) women and 100 (81,3%) men. The control group was made up of 40 healthy individuals matched for age and sex. The quantitative determination of the gene polymorphism structure was as follows: gene PRSS1 (R122H) was investigated in 123 patients; CFTR (delF508) and IL-4 (C-590T) – in 101, SPINK1 (N34S) – in 63, TNF-α (G-308A) – in 11. Molecular genetic studies included the determination of polymorphic variants of genes IL-4 (C-590T), TNF-α (G-308A), PRSS1 (R122H), SPINK1 (N34S) and CFTR (delF508). The polymorphic variants of analyzed genes were studied by polymerase chain reaction. The level of interleukin-1β (IL-1β), -4 (IL-4) and tumor necrosis factor alpha (TNF-α) were determined in plasma by ELISA and chemiluminescence analysis. C-reactive protein (CRP) was determined by photometric analysis.

The distribution of genotypes among the patients and healthy people was as follows: gene SPINK1 (N34S) – GG-genotype was found in all groups (100 %); gene PRSS1 (R122H) – GG-genotype was found in 117 patients (95,12 %), in 6 (4,88 %) – GA-genotype, in the group of healthy people only carrier state GG-genotype occurred; gene CFTR (delF508) – NN-genotype was in 98 patients (97,03 %), NM-genotype – in 3 persons (2,97 %), in the healthy people group only carrier state NN-genotype occurred; gene TNF-α (G-308A) – GG-genotype was identified in 9 patients (81,19 %), GA-genotype – in 2 (18,81%); 58 patients (57,43 %) had gene IL-4 (C-590T) – CC-genotype, CT genotype – 34 (33,66%) patients, mutation TT-genotype – 9 (8,91 %), among the healthy – 26 (65 %), 11 (27,5 %) and 3 (7,5 %), respectively (χ^2<1,0, p>0,05).

In the C-allele carriers of the gene IL-4 (CC- and CT-genotype) the content of the above-mentioned indicators is significantly higher than such of the owners of TT-genotype: the IL-4 – 8.44 (p=0,001) and 5,11 times (p=0,008), the IL-1β 1,64 (p=0,003) and 1,28 times (p=0,049), the TNF-α 2,34 (p<0,001) and 2,19 times (p=0,002), the CRP to 1,26 (p=0,008) and 1,06 times, respectively. Where in the levels of CRP and IL-1β in patients with CC genotype of the gene IL-4 were higher than those with intermediate CT-genotype by 19,05 % (p=0,049) and 28,50 % (p=0,051).

The differences in cytokine and CRP production taking into consideration the G-308A polymorphism of the gene TNF-α showed significant dysregulatory changes of function Th1 and Th2 immunity links on the background of the inflammatory process of pancreas: despite significantly higher levels of CRP and IL-4 in homozygous carriers of wild G-allele than in patients with GA-genotype – 7,95 (p_{GG}=0,001) and 43,68 times (in patients with GA-genotype IL-