

Attitude towards one's illness vs. attitude towards a surgical operation, displayed by patients diagnosed with asymptomatic abdominal aortic aneurysm and asymptomatic internal carotid artery stenosis

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Aim. Two most frequent asymptomatic diseases qualifying for vascular surgery are abdominal aortic aneurysm (AAA) and internal carotid artery stenosis (ICAS). Emotions experienced by the patient activate processes of dealing with the cognitive dissonance of asymptomatic disease. The aim of this paper was to compare the reasons involved in decision making on surgery in two asymptomatic vascular pathologies.

Methods. Fifty patients were divided into two groups: the ICAS group-27 (CAS or CEA) and the AAA group-23 (EVAR or open surgical operation (OSR)). Specific questionnaire regarding: 1) self-image; 2) attitude to one's illness; 3) reasons for decision on surgery was applied for the study. The χ^2 test was used to for the analysis.

Results. The AAA patients reacted emotionally (88.2%) comparing to ICAS patients reacting „rationally” (59.3%) ($\alpha=0.05$). In AAA patients attitude towards themselves had worsened ($\alpha=0.001$) AAA patients were less likely to seek support in decision on surgery ($\alpha=0.01$). ICAS patients are internally motivated (78.7%), whereas AAA patients are externally motivated (63.9%) ($\alpha=0.001$). Reasons underlying the decision on surgery, were predominantly rational (55.8%).

Conclusion. In the process of decision-making on surgery by asymptomatic patients, evolutionary transformation takes place - the emotional attitude to one's illness leads to rationally evaluated decision. Regardless of the causes the process of making a decision on surgical operation tended to run more smoothly in ICAS patients. The ICAS patients tended to display a rational attitude to their illness. AAA patients displayed a distinctly emotional attitude towards their illness.

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Due to the increasingly advanced surgical techniques, as well as to reliable clinical studies, it is now possible to determine indications for surgical treatment based on rules of evidence

based medicine (EBM). This in turn makes it possible for patients with asymptomatic diseases to be submitted to an early surgical intervention. In vascular surgery, the most frequent asymptomatic diseases qualifying for surgery are abdominal aortic aneurysm (AAA) and internal carotid artery stenosis (ICAS).

The current criteria based on the small aneurysm trial (UKSAT) and Aneurysm Detection and Management (ADAM) trial^{1, 2, 3, 4} which enable physicians to qualify patients diagnosed with asymptomatic AAA, are favourable to patients submitted to selective surgical treatment of aneurysms exceeding 55 mm in diameter for men and >52 mm for women. Introducing the endovascular aneurysm repair (EVAR) technique in treating abdominal aortic aneurysms, which is characterized by a lower 30-day mortality rate (about 1.5%),⁵ has not led to reducing the qualification criteria for surgical treatment due to the relatively low annual risk of rupture for aneurysms less than 50 mm in diameter.¹⁻⁴ As for the ICAS, the research conducted by NASCET, ACAS and ESCT has shown the advantages consisting in the relative reduction of the five-year risk of cerebral stroke following carotid endarterectomy (CEA) of symptomatic 60-99% stenosis and of asymptomatic 70-99% ICAS⁶⁻⁷ The current guidelines issued by SVS. and ESVS.^{8, 9} recommend CEA or carotid artery stenting (CAS) in cases of asymptomatic stenosis ex-

ceeding 60-70%. Submitting patients diagnosed with asymptomatic diseases to surgery is based on a premise that the risk of undesirable events (stroke, aneurysm rupture) should be reduced, having assumed that the risk involved in the surgical intervention is no greater than the inherent risk connected with the disease itself. The perioperative mortality risk in the case of selective surgical treatment of aneurysms falls within the range from 1.5% to 7%, and in the case of CEA or CAS it ranges from 2% to 9%.^{9, 10}

From the patient's point of view, giving a consent to the operation is considerably easier when the disease is accompanied by symptoms. When the disease does not produce any symptoms, it is difficult for the patient to trust the physician's diagnosis or believe it is necessary to make a decision whether to be operated on.

In an outpatient department working under National Health Fund it is assumed that a physician can examine and inform each patient within 15 minutes, medical companies under private health insurance allow 20 minutes for a visit; however, ICAS and AAA are often subject to a number of exclusions leading to an inadequate number of visits. The formula for a conversation between a physician and a patient with asymptomatic AAA or ICAS is that the physician presents the benefits of the surgical treatment. The patient provided with some selected statistical data, and is expected to give a consent to the surgery, as a person provided with an adequate level of knowledge regarding the illness.

When a patient is making a decision on undergoing a surgery, decision is not based on the same rational reasons as those applied by the physician who is qualifying the patient for surgery. It is often thought that the patient's consent to surgery is based on emotions related to trusting the physician, rather than making a deliberate choice being a result of thinking over the benefits of the suggested treatment. The factor that distinguishes the physician's decision and the patient's decision are the reasons underlying those decisions. It is only natural for the physician, who evaluates the problem from a purely medical perspective, to apply rational reasons to justify the decision, whereas the patients feel personally concerned about the diagnosis and therefore the decision and its underlying reasons are simply a matter of life and death to them.¹⁰⁻

¹¹ Hence, it is understandable that the patient is influenced by powerful emotions and is likely to react emotionally, especially in the case of asymptomatic diseases, when some of the patients, having heard a totally unexpected diagnosis, experience an extreme cognitive dissonance.^{12, 13} Emotions experienced in stressful situations and in particular any unexpected diagnosis of a disease and its potential consequences for one's life and health have an important adaptive function. Thus the emotions activate very important processes of dealing with the cognitive dissonance and the related stress and the patient's participation in the therapeutic proceedings.

In view of the research on the relationships between the attitude to one's disease and the resulting will to fight the disease and recover from it,^{12, 15, 16, 20, 21} two hypotheses were formulated: presumption that regardless of the disease, asymptomatic patients will display a predominantly emotional attitude to their illness, whereas the rational attitude will occur less frequently.

The logical consequence of the presumption which assumes predominance of the emotional attitude towards one's illness in asymptomatic patients is the second hypothesis presuming that emotional reasons involved decision-making will dominate over the rational ones, since this approach to illness does not lead to treating it as some kind of a problem or task that needs a rational solution, *i.e.* a well-thought-out decision on undergoing surgery.

An additional purpose is to establish practical recommendations for physicians dealing with asymptomatic patients in order to increase efficiency of their conversations with the patients.

Materials and methods

Study involved all the patients admitted to the vascular surgery department in order to undergo surgery of asymptomatic AAA and asymptomatic ICAS from January to March 2009. Four patients with coexisting AAA and ICAS and 19 patients who had not consented to participate were excluded from the study. The study questionnaire was filled in by 50 persons, divided into two groups: the ICAS group-27 patients (qualified for CAS or CEA) and the AAA group-23 patients (qualified for EVAR or open surgical repair).

Both groups did not differ in terms of risk factors such as hypertension (86% vs. 94%), diabetes (37 vs. 41%), tobacco smoking (51 vs. 45%) or ischaemic heart disease (63 vs. 68%).

The survey was carried out by means of a specially constructed questionnaire consisting of 18 closed-ended questions which at the same time always made it possible for the patients to express their own view. Two questionnaires were rejected as incomplete. The questions regarded three psychological and one psychosocial categories, namely: 1) self-image; 2) attitude to one's illness; 3) reasons for taking the decision on the surgery; 4) attitude of the social environment to the patient and to his or her illness. The analysis involved the results obtained from 48 patients, out of whom 25 (9 women and 16 men) had been qualified for the surgical treatment for asymptomatic ICAS, and 23 patients (2 women and 21 men) had been qualified for the surgical treatment of asymptomatic AAA.

Statistical analysis

The results of the comparative research are presented below, statistically verified by means of the chi-square (χ^2) test, regarding the two selected psychological categories. Wherever the results do not sum up to 48 (*i.e.* the number of the survey participants), there was a possibility to choose any number of answers.

Results

The analysis of the results, performed for the particular groups of patients, revealed no differences between answers given by men and women, therefore the results were treated collectively as characteristic for the two main categories of patients (ICAS and AAA). Also, the patients' age did not prove to be a differentiating variable,

the average age being: 1) 66.8 years in the ICAS patients group and 2) 73.8 years in the AAA patients group.

Attitude to one's illness

This psychological category was assessed on the basis of the answers to 3 questions referring respectively to: 1) the memory of the first reaction to the news of the illness; 2) the feelings experienced when thinking about one's illness; 3) any change in attitude towards oneself as a result of the illness. The survey results are presented below in the above sequence.

The prevalence of the reaction category "Nothing to worry about, every illness can be cured" (37.7%) is the evidence of the rational attitude to the disease – approaching it as a practical problem which can be overcome with some help from the physicians. Purely emotional reactions which denied the physician's diagnosis were found in the case of 16 patients (26.2%). These reactions were three times more frequent in the case of the AAA patients. The news of the illness was a shock to them, leading to even more emotional responses "It's terrible, what's going to happen to me now?" (11.5%). Only the ICAS patients (5 persons) reacted rationally, stating that "It's a mistake", and 8 persons from ICAS group decided to check it out: "Who else should I consult about it?" Thus, the AAA patients reacted more emotionally and they were more inclined to believe the physician during the first visit and none of them (except for 2 persons) verified the information. The statistic analysis showed that the differences in the response distribution in both groups of patients are significant $\alpha=0.05$ (calculated $\chi^2=18.0$; χ^2 according to the Table I=16.9).

The aggregated results concerning the patients' first reactions to the news of their illness confirm that the ICAS patients reacted more "rationally" (59.3%) than "emotionally" (40.7%),

TABLE I.—Comparing first reactions to the news of one's illness.

Denotation	Answer category	ICAS	AAA	Total	%
1	Nothing to worry about, every illness can be cured	9	14	23	37.7
2	It's impossible, it doesn't hurt me, does it?	4	12	16	26.2
3	Who else should I consult about it?	8	2	10	16.4
4	It's terrible, what's going to happen to me now?	1	6	7	11.5
5	It's a mistake	5	0	5	8.2
	Total	27	34	61	100.0

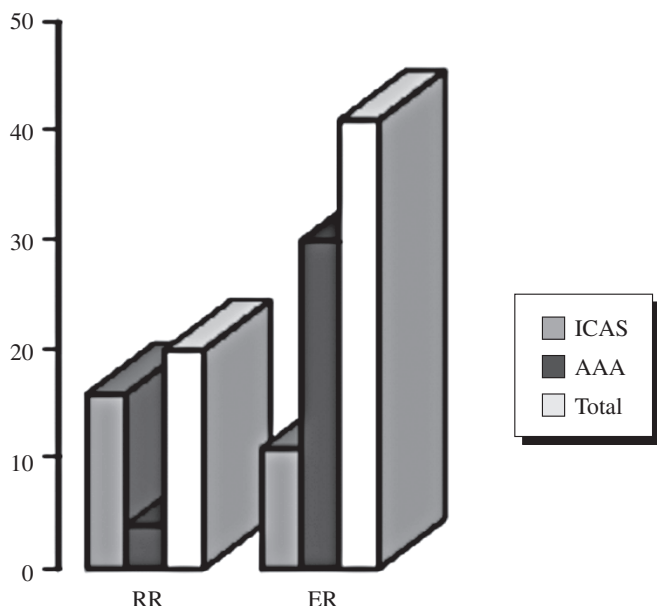


Figure 1.—Comparing the number of rational (RR) and emotional (ER) reactions.

whereas the AAA patients—more “emotionally” (88.2%) rather than “rationally” (11.8%) (Figure 1). Overall first reactions of all the asymptomatic patients to the news of their illness were predominantly emotional (67.2%) rather than rational (32.8%). However, it was mainly the AAA patients who contributed to this result, as their responses accounted for 73.2% of the total number of emotional reactions, whereas the rest (26.8%) came from the ICAS patients. An almost reversed situation is observed in the case of rational reactions, where the ICAS patients prevailed (80.0%). The differences between both groups of patients are significant at the level $\alpha=0.01$ (calculated $\chi^2=14.7$; χ^2 according to Table II=11.3).

Presented with a list of feelings that are likely to be experienced when faced with an illness, the patients indicated mainly the negative ones, as specified in Table II. Anxiety and fear come first

(27.8% of the overall responses), although in the case of AAA patients, who made distinctly more choices, these feelings came third after embarrassment (15 responses) followed by horror (14 responses). The statistical analysis showed that the differences between both groups of patients are significant at the level $\alpha=0.001$ (calculated $\chi^2=29.725$; χ^2 according to the tables=27.9).

None recognized that the illness had changed attitude towards him-or-herself for better. The most (52.1%) admitted that the illness had resulted in upsetting the attitude towards themselves, mainly the ICAS patients. ICAS patients also dominated the second biggest category (27.1%) showing no difference in the attitude towards themselves, with as few as 3 AAA patients falling within this group. However, the AAA patients were the only ones whose attitude towards themselves had worsened as a result of the illness (20.8%). The statistical analysis showed that the differences between both groups of patients are significant at the level $\alpha=0.001$ (calculated $\chi^2=25.9$; χ^2 according to Table II=20.5).

Reasons for the decision on undergoing the surgical operation

This psychological category consists of several selected aspects reflected in the questions on: sources of knowledge about the surgical operation, the dominating reason for undergoing the operation, the feelings connected with the post-operative health status and assessing the rightness of the taken decision.

The preferred (and often the only one) source of knowledge on the surgical operation turned out to be the physician who had diagnosed the disease (41.7%). However, the majority of the ICAS patients, who displayed a more rational attitude to their illness, sought a second opinion from another physician (20 responses). Merely 2 AAA pa-

TABLE II.—Comparison of feelings experienced when thinking about one’s illness.

Denotation	Type of feeling	ICAS	AAA	Total	%
1	Anxiety, fear	10	12	22	27.8
2	Horror	7	14	21	26.6
3	Embarrassment	0	15	15	19.0
4	Sadness	4	8	12	15.2
5	Nothing special	8	1	9	11.4
	Total	29	50	79	100.0

tients attempted to verify the information on their illness, while 21 of them accepted the news of the disease and its treatment, and some of them (8 responses), unlike the ICAS patients, proceeded to seek information e.g. in the internet. At the same time, they more often consulted persons who had undergone the surgical treatment (9 responses). Compared to the ICAS patients, the respondents diagnosed with AAA were less likely to consult their spouses or expect their support with regard to taking a decision on the surgical treatment (Table III). The statistical differences between both groups are significant at the $\alpha=0.01$ (calculated $\chi^2=24.3$; χ^2 according to Table III=21.7).

Motivations in both groups of patients are decidedly different (Figure 2). The ICAS patients are distinctly internally motivated (78.7%), whereas the AAA patients are mostly externally motivated (63.9%). The internal motives included the following responses: fear of death, anxiety connected with health deterioration, a belief that surgical treatment may help prolong their life and a belief that undergoing a surgical operation is connected with a smaller risk than not being operated on at all; and also the thought "There is no other way out." The external motives, in turn, included the responses which involved an element of persuading the patient to undergo the

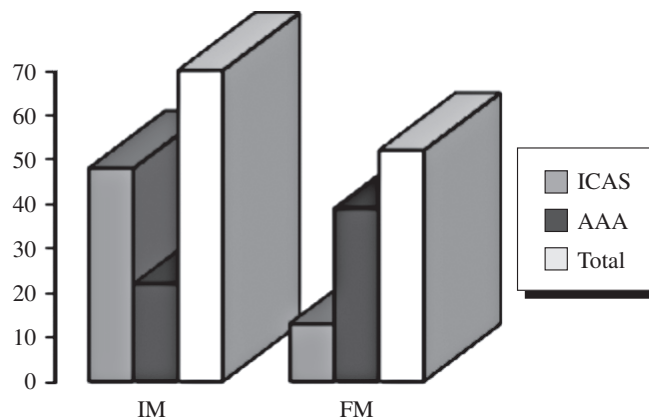


Figure 2.—Comparison of internal motivation (IM) and external motivation (EM).

operation: the stories of patients regaining their health after the operation, the doctor's or several doctors' diagnosis, the inevitability of a surgical operation as such and the pressure from the closest relatives. Statistical differences between both groups are significant at the $\alpha=0.001$ (calculated $\chi^2=22.6$; χ^2 according to Tables=16.3).

What the patients feared most was being a burden to their family (21.9%) and any possible postoperative complications (17.1%), however, the former regards mainly the ICAS patients, while the latter – almost exclusively the AAA pa-

TABLE III.—Comparison of sources of knowledge on the surgical operation.

Denotation	Response category	ICAS	AAA	Total	%
1	Physician who diagnosed the disease	19	21	40	41.7
2	Another physician	20	2	22	22.9
3	Spouse	9	5	14	14.6
4	Patients who underwent the operation	3	9	12	12.5
5	Nobody, searching for information on one's own, in the internet and other media	0	8	8	8.3
	Total	51	45	96	100.0

TABLE IV.—Comparison of feelings connected with post-operative health status.

Denotation	Response category	ICAS	AAA	Total	%
1	Being a burden to others	21	11	32	21.9
2	Postoperative complications	3	22	25	17.1
3	Suffering, pain	15	7	22	15.1
4	Recurrence of illness	5	12	17	11.6
5	Infirmity resulting from illness	12	3	15	10.3
6	Mental disturbances	14	1	15	10.3
7	Death	3	10	13	8.9
8	I'm not afraid of anything particular	7	0	7	4.8
	Total	80	66	146	100.0

tients (Table IV). The differences between both groups of patients are significant at the level $\alpha=0.001$ (calculated $\chi^2=50.3$; χ^2 according to the Tables=37.7). Moreover, the ICAS patients feared suffering and pain (15 responses) and mental disturbances (14 responses), which hardly concerned or only partially concerned the AAA patients who in turn were more afraid of recurrence of the illness (12 responses) and death (10 responses). Only the ICAS patients (7 responses) signalled they did not fear anything particular related with the surgical treatment.

Assessing the decision on submitting to the surgical operation as good or very good by the majority of the AAA patients (65.2%) is a specific effect of an emotional, immediate assimilation of the news of the illness and a manifestation of trusting the physician's diagnosis and the physician as such, whereas assessing the decision on the operation as "neither good nor bad, but necessary" prevailed in the ICAS group (72.0%). None of the patients assessed their decision as bad or very bad. On the whole, the rational assessment of the decision on submitting to the surgical operation (54.1%) outruns the emotional assessment (45.9%). The statistical analysis showed that the differences between both groups of patients are significant at the level $\alpha=0.05$ (calculated $\chi^2=10.1$; χ^2 according to the tables=9.49).

It was found out that on the whole the patients displayed an emotional attitude to their disease, as the ratio of the emotional attitude to the rational attitude is 76.2 to 23.8 (Figure 3). However, this overall result was affected mainly by the responses of the AAA patients, in whose case the ratio is 86.1 (emotional attitude) to 13.9 (rational attitude), whereas in the case of the ICAS patients the respective ratio is: 50.3 to 49.7. Therefore, it is possible to confirm the rightness of the presumption that the emotional attitude to one's illness is dominant in asymptomatic patients.

As for the reasons underlying the decision on undergoing the operation, on the whole they were predominantly rational, accounting for 55.8% of the total number of the respondents, compared to 44.2% of patients who took emotionally based decisions (Figure 4). It is mainly the ICAS patients who contributed to this result, as they predominantly displayed rational (75.3%) rather than emotional (24.7%) reasons for their decisions on undergoing the surgical treatment.

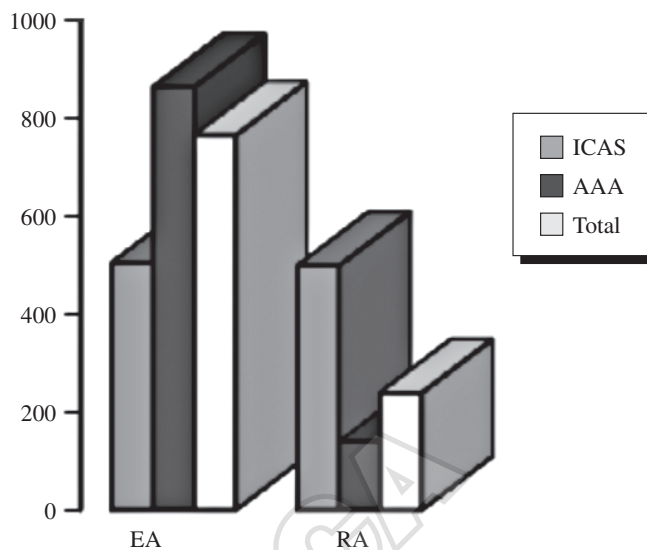


Figure 3.—Emotional (EA) or rational (RA) attitude to one's illness.

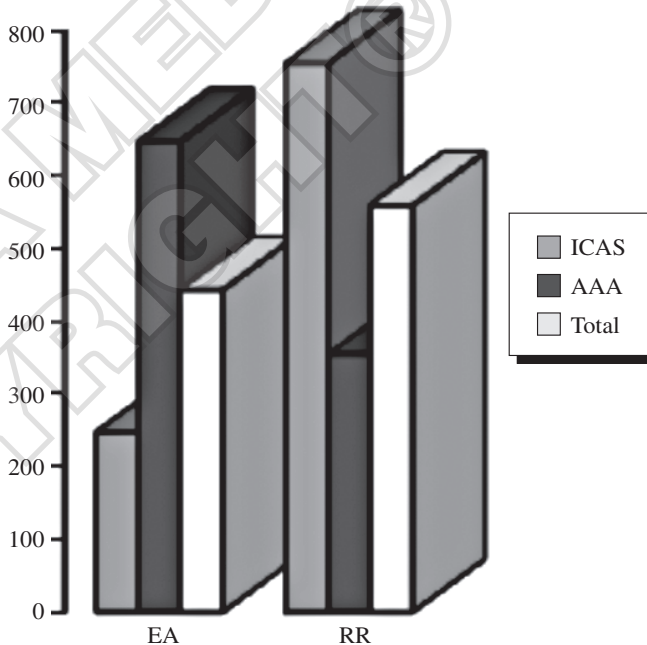


Figure 4.—Emotional (ER) or rational (RR) reasons underlying the decision on surgical operation.

However, in the case of the AAA patients the proportion was, respectively, 35.4% to 64.6%. This disproves second hypothesis presuming that emotional reasons prevail over rational ones in preoperative decision-making.

Figure 5 presents the emotional and rational aspects of the attitude towards one's illness as well as of the reasons underlying the decision on

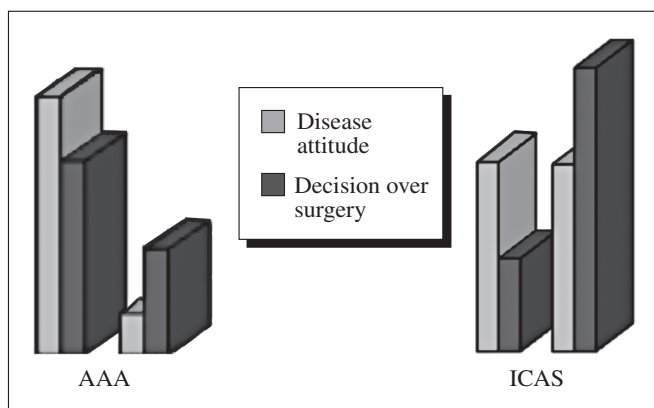


Figure 5.—Emotional (E) and rational (R) aspects of the attitude towards one's illness and the reasons underlying the decision on undergoing the surgical operation, taken by asymptomatic patients.

undergoing the surgical operation, taken by the asymptomatic patients diagnosed with an AAA and ICAS.

Discussion

The prevailing reaction of the patients asked to describe their attitude towards their illness was: "Nothing to worry about, every illness can be cured", which is the evidence of a rational approach to the disease and treating it as some kind of obstacle which doctors can help to overcome and is the evidence of a high degree of trust and confidences. However, this reaction may also be interpreted as triggering of the defensive mechanism (rationalization) which has a self-calming effect on the patients and mitigates emotions evoked by the unexpected disease. Moreover, the reaction may be a result of triggering the projection mechanism which transfers the responsibility for one's own health to physicians.¹⁴ Choosing this response may also suggest a low intellectual capability level of the patients who – despite the doctor's explanation of the nature of the disease and its life threatening risk level – resist to assimilate the medical knowledge, naively trying to convince themselves that the situation is not that bad (rationalization) and that the doctors will surely help them.

A completely different view on the disease entities in question is held by physicians. In accordance with medical knowledge, it is not the causes of AAA or ICAS that are treated, but mere-

ly the final manifestations of the conditions.¹⁻¹⁰ The physician presents the treatment results in terms of 30-day, 1-year, 5-year or 10-year effectiveness, based on the assumption that some medical conditions may be cured with a good short-or long-term effect, without a possibility of a total elimination of the illness.¹⁻¹⁰ Regardless which interpretation of the patients' emotions is correct, it should be recognized that those reactions help the patients adapt to the new stressful situation. As reported in some publications,^{11, 12, 15, 16, 20} the emotions initiate the process of coping with the new circumstances, depending on the individual assessment whether or not the situation can be resolved. If someone recognises that it is possible to change for better, then subject will approach the stressful situation in a rational and task-oriented manner, or coping with the situation will be emotional.

AAA patients reacted more emotionally, as they were more inclined to trust the physician's diagnosis virtually during the first conversation and they were not going to verify the information obtained. Adaptive, self-calming mechanism was initiated, which makes it possible to take defensive actions – manipulate own emotions and transfer the responsibility for own health to the physician. The ICAS patients reacted more rationally, as simultaneously with the quoted response: "Nothing to worry about, every illness can be cured", they also asked themselves: "Who else should I consult about it?", inclining to verify the received information on the illness. They did so even though the physician ensures them about keeping due diligence during the surgical operation, though not guaranteeing a 100% elimination of the illness, which in fact goes unnoticed by the patients.

Emotional reactions of the patients denying the physician's diagnosis cannot be surprising, as the patients in fact do not have any complaints and the illness comes as a considerable emotional shock. That is why the emotional attitude prevailed. However, this was mainly due to AAA patients. In fact, physicians expect emotional reactions from each patient, and try to change it to a rational approach by providing the patient practical information. Although at this stage the information is most probably sufficient to eliminate the emotional factor only in the doctor's thinking.

Anxiety and fear are on top of the list of feelings in connection with disease (27.8%), even though in the case of the AAA patients these feelings are outrun by embarrassment and horror. We can suspect that in the case of the AAA patients those feelings are related to the anatomical location of the illness and expected operation field, which are perceived in a particularly controversial manner. After all, this is the abdomen, which according to universal stereotypes is perceived as something "dirty" and "impure." This speculation was confirmed by the responses given by the ICAS patients, none of whom experienced a feeling of embarrassment at their illness. The neck and the head are stereotypically perceived as places much more "noble" than the abdomen, and they do not give rise to any embarrassment or disgrace. 8 out of those patients did not experience anything special in connection with thoughts concerning their illness. This confirms the prevalence of the ICAS patients' rational attitude to their illness.

Apart from the stereotyped thinking, the attitude towards one's illness may be affected by the epidemiological factor. As the occurrence of AAA in family members is quite well documented, and the health care level 20-30 years ago was not the same as it is nowadays, each event of a sudden death in the family may be associated by the AAA patients with a sudden rupture of an aneurysm. It is significantly important for those patients whose parents or siblings died as a result of that illness. Association with inevitable death led to an escalation of negative feelings. Moreover, the associations and fears probably result from the specific manner of informing the patients of the nature of their illness and its potential complications – during conversations with AAA patients much attention is paid to complications connected with the perioperative death risk or serious disability (amputation, intestinal necrosis), hence the patients were afraid of postoperative complications (33.3%), whereas conversations with ICAS patients concentrate primarily on stroke and paresis, while the risk of mortal complications is discussed parenthetically. Therefore, the ICAS patients associated their illness primarily with infirmity following stroke, which requires long-lasting care, therefore their feelings concentrated on the fear of "being a burden to the family" and "mental disturbances".

Rational attitude towards the illness came easier to ICAS patients, because, the vision of sudden death was not the first thing that came to their mind in connection with their disease.

Most of the patients admitted that the illness had upset their attitude towards themselves, while a clear-cut gap was observed between both groups of patients when asked whether the attitude towards themselves worsened as a result of the illness: the affirmative response was given by as many as 43.5% of the AAA patients and none of the ICAS patients. ICAS patients came out as more rational in comparison with the whole sample group.

The most popular source of knowledge on the operation in the whole sample group was the physician diagnosing the illness. It is noticeable that almost exclusively the ICAS patients were inclined to consult another doctor to verify the diagnosis and treatment. On the other hand, the ICAS patients expected more support from their families due to the risk of a perioperative stroke. Different attitudes to one's illness result in different motives underlying the decision on submitting to surgery. The ICAS patients were motivated explicitly internally, which is mainly due to the extra knowledge gained from consulting other physicians and to the generally more rational attitude towards their illness. The AAA patients, were mostly externally motivated and emotionally fuelled by the stereotypical associations that the illness is located in a "dirty" part of the body or by exceptionally vivid stories of big aneurysms rupturing in "that" place and inevitable death in case of rupture. Therefore, the most of the AAA patients assessed their decision on undergoing the surgical treatment as very good or good. We may say that it is a result of emotional assimilation of the news of the illness and the manifestation of trusting the diagnosis and the diagnosing physician, being the external motivators. By contrast, the prevailing response of the ICAS patients who assessed their decision on operation as "neither good nor bad, but necessary" may be considered to be the result of deliberations over the illness and the surgical treatment, which led to the internally motivated, rational decision.

Patients from both groups almost unanimously claimed they wanted to undergo the operation as soon as possible and forget about it, proving

a generally prevailing task-oriented approach to stressful event. The responses which came second and third are: "I keep thinking what is going to happen to me and whether I will be healthy" – which shows an emotional approach to the scheduled surgical operation; and (b) "I'm trying to cope with the thought of the coming operation" – which is a proof of a task-oriented approach to the stressful event. Another response (selected only by the ICAS patients) was "I approach the operation with indifference – what will happen will happen".

Asked whether they would make the same decision on undergoing the operation, patients from both groups responded unanimously that their decision would be "absolutely" the same or "rather" the same. It would be hard for them to change the decision-taking the decision reduces the cognitive dissonance and the resulting stress effectively and accurately. It is evident that the patients are not going to refuse to be operated during hospital stay, as the decision might negatively affect the relations between the patient and the medical staff and it could be included in the patient's medical records. Another important fact that the patient has to wait even six months for a scheduled surgery, so withdrawing from the operation after waiting for half a year would seem a waste of time. Finally, during a scheduled hospitalization medical staff treat the patient as someone who has already given consent, and signing the formal consent is a mere technicality for them. Therefore, the preoperative period spent in the hospital does not contribute to the patient's knowledge of disease or prognosis, compared to the information obtained before admission.

Conclusions

In decision-making over surgery by asymptomatic patients, the emotional attitude to one's illness finally leads to taking a rationally evaluated decision. The course of the transformation process is as follows: 1) intensive cognitive dissonance; 2) initiating defensive mechanisms, *i.e.* self-calming rationalization and projection transferring the responsibility for own health status to the physician (s); 3) a change in the attitude towards oneself; 4) searching for additional information on the disease and treatment;

5) formation of predominantly internal, rational motives which favour the decision on surgery; 6) making a well-thought-out decision on consenting to the operation and working out a rational assessment of the decision; 7) the final elimination or mitigation of the cognitive dissonance.

The process of reaching a rationally assessed decision on undergoing surgery was not homogeneous in both groups of asymptomatic patients.. The process of making a decision on undergoing surgery tended to run more smoothly in the case of the ICAS patients.

The ICAS patients tended to display a rational attitude to their illness. Their attitude towards themselves did not change as a result of the illness or it became unstable, but did not turn worse.

AAA patients displayed a distinctly emotional attitude towards their illness making the surgery an inevitable necessity. Those patients' attitude towards themselves changed as a result of the illness to worse or unstable. Despite the predominance of the emotional attitude towards the illness – the patients' decisions on surgery were assessed by them to be predominantly rational.

Following recommendations for physicians, should be applied in conversations with patients:

— Following the diagnosis it is advisable to schedule at least two conversations with the patient. After breaking the first news of the disease the patient should be given some time to deal with. It is advisable that the second visit take place in the presence of the patient's family member who is open to the rational arguments.

— ICAS patients should be provided with much more information on their illness and consequences of its surgical treatment. When talking to AAA patients it is advisable not to stun the patients with a vision of death as a result of the untreated illness.

— Conversation should be concentrated on the final effect of getting free from the disease and the related risk.

— The minimum conversation time should be at least 20 minutes, and the conversation should be held in a separate room to guarantee privacy.

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