

Lek. med. Jacek Stankowski

Wroclaw Medical University

Neurosurgery Ward, Klinikum Bayreuth, Germany

Jacek_Stankowski@poczta.fm



Jacek Stanowski is a graduate of the Faculty of Medicine at Wroclaw Medical University and a student of doctoral studies at the Department of Anatomy. He also works at the Neurosurgery Ward at Klinikum Bayreuth, Germany. Before studying medicine he graduated from a bilingual class in the Secondary Compulsory No. XIII in Wroclaw specializing in German language as well as...Karol Szymanowski Music School, class of piano and saxophone.

In his free time he goes sailing and does taekwondo.

Ailments of old age

Summary: The presented article is a brief overview of senior age-specific ailments targeted at readers with no medical background. The author has attempted to select the problems most commonly diagnosed in older people. By making this text accessible to the average reader through the lack of use of medical jargon, the author has attempted to provide simple methods of avoiding illnesses, reducing the risk thereof and alleviating their symptoms, which are within reach for everyone.

Key words: illnesses, old age, seniors, prevention.

It is often said that “illnesses don’t read books”. It is of course only part of the truth and a significant simplification, because the human organism is, contrary to popular belief, definitely an imperfect machine, prone to malfunction, having no warranty card nor user’s manual. Therefore, the same illness may look totally different with different people, despite following the same “model” provided in literature. It is a known fact that the character of every illness depends on the period of life

in which they are encountered. For instance, heart attack is usually lethal for a 30-year-old, while for a 60-year-old diabetic it may cause so little pain that it may be unnoticed and the patient will continue living a seemingly healthy life. Another example is that of an intercranial hematoma. For the aforementioned 30-year-old its course is often severe, its clinical picture clear and with a negative prognosis, requiring instant treatment, when every minute counts, and the neurosurgeon's dexterity of utmost importance and pivotal for the patient's survival. Whereas the 60-year-old with the same condition comes to the neurological practice because of continual dizziness and headache which are unpleasant but do not impede everyday activities. The diagnosis is made after a week following a computer tomography or MRI head scan and the patient may be operated in urgent mode¹⁾ – with no risk to their health. Also, there exist some illnesses which are specific to a given age: multiple sclerosis, which begins between 20 and 30 years of age, amyotrophic lateral sclerosis, which becomes evident only after the age of 40. The aim of this article is to present basic information on the health problems of seniors (the assumed age being 60 and older²⁾) The author does not intend to write another academic textbook, which would contain typical specialist medical knowledge, but to provide an overview of the most common health issues in the Polish senior population.

Cardiovascular illnesses

Atherosclerosis is the most widespread vascular illness, concerning both systemic and coronary circulation. People tend to believe that it stems solely from and unhealthy lifestyle. Despite it being known to intensify the condition, it has to be understood that atherosclerosis is a process which begins practically at the moment of birth. Changing one's lifestyle at the age of 40 cannot „fix” the body – it can only lead to the risk of heart attack, stroke or Leriche syndrome reaching the average level for the population at the age of 60. The Polish are generally convinced that e.g. an hour of swimming every week is a waste of time and that the traditional „bigos” (sour cabbage and meat stew) or „schabowy” (breaded pork chop) with potatoes constitute the healthiest diet. Polish people generally eat a lot, with a lot of fat, few vegetables, often in a hurry, which has to be considered harmful. Together with lack of physical exercise it leads to serious consequences: bypass surgery³⁾ or

¹⁾ Many people confuse acute mode with urgent and scheduled mode. Scheduled mode is used in situations when the patient's illness is non-threatening, i.e. varicose veins. Therefore admission to hospital even at a year's notice does not pose any medical risk. Urgent mode is used in situations when postponing therapy may significantly worsen the patient's state, but immediate treatment is not required. It is usually a matter of several days. Urgent mode constitutes the situation when postponing therapy poses high risk regarding the patient's health and life. It is usually related to injuries or severe internistic and oncologic cases.

²⁾ According to the WHO definition senior age is divided into three stages: 60–75 years of age – old age, 75–90 – elderly age, more than 90 – longevity.

³⁾ CABG-cardio-aorticby-passgraft.

lower extremity amputations because of severe atherosclerosis in the case of people who would be described from the medical point of view as simply mature. Genetic factors are obviously significant, but are beyond our reach in the current state of medical art. What we can do, following the example of better developed countries, is promote the habit of everyday physical exercise, at least an hour long, as well as healthy diet – with more vegetables and less fat. When designing one's diet, it is advised not to follow popular solutions praised in the media. For example, a diet constituting of meat alone may lead to weight loss – but also to acidosis and may result in heart failure or a stroke. If diet change is needed, one should trust a nutritionist as a person educated in this field. „Eating hygiene”, i.e. avoiding eating in a hurry, in a standing position or at night, is also an important factor.

Cardiovascular illness symptoms may be diverse. The most widely recognized is chest pain. However, it does not necessarily mean there has been a heart attack – it can also be caused by autonomous nervous system⁴⁾, conditions or intercostal neuralgia⁵⁾. Still, severe chest pain, especially if radiating towards the mandible or left upper extremity requires urgent cardiological diagnostics to rule out the possibility of a life-threatening state.

The issue is similar for the lower extremities. The author has observed numerous cases of patients consulted at the vascular surgery practice when atherosclerosis was suspected, but ultimately neurologists diagnosed spinal arthrosis or herniated nucleus pulposus at the given spine level⁶⁾.

Metabolic disorders and endocrine system illnesses

Diabetes is still the most common metabolic disorder. A description of its causes and mechanisms, of which there are many, would much exceed this volume. The illness is often diagnosed by chance during routine check-ups, or when facing its complications such as diabetic foot, kidney conditions, and ultimately diabetic coma⁷⁾. The patient's self-control is fundamental for successful treatment – regular glycemia⁸⁾, checking, medication intake and keeping the prescribed diet. Diet therapy is also fundamental for many other illnesses, including gout, inflammation of the pancreas, as well as the young age-specific lysosomal storage disease⁹⁾. It is

⁴⁾ Autonomous nervous system – part of the nervous system responsible for „governing” the functioning of internal organs.

⁵⁾ Intercostal neuralgia – pain in the nerve area, below one of the ribs. It may be the result of an injury to the nerve or inflammatory factors, e.g. Varicella Zoster Virus infection, which is responsible for chickenpox and shingles.

⁶⁾ A common symptom of this condition is severe, treatment-resistant sciatica.

⁷⁾ Diabetic foot, diabetic nephropathy, diabetic retinopathy, diabetic coma – diabetes complications resulting from lack of treatment or patient-specific low reaction to therapy.

⁸⁾ Glycemia – blood glucose level.

⁹⁾ Lysosomal storage disease – illnesses resulting from disorders in the metabolism of certain substances, usually congenital, with clinical symptoms visible during childhood.

important to remember that neither pharmacotherapy, nor adequate diet can lead to full recovery from atherosclerosis, but they facilitate staying healthy and leading an active life.

Thyroid conditions constitute a serious and broad problem. There exist both hyperthyroidism and hypothyroidism (thyroid swelling caused by increased or decreased hormone production) and one may transform into the other. Also, it is similar to inflammation as well as cancer attacking this organ. Diagnostics is often problematic and other illnesses may cover the basic problem. As long as it is not cancer, operating is not required, unless it is needed in cases of large retrosternal goiters which impede breathing and may cause sleep apnea. Obesity is also often erroneously linked with thyroid conditions, while in fact there is often no connection and they act as a mere excuse from changing eating habits.

Respiratory system illnesses

Lung neoplasm (cancer, if it is malignant) is the most widely known lung condition. There are many popular misconceptions connected with it. It is worth remembering that currently neoplasms constitute a group of chronic illnesses, with patients able to live for a long time in a generally good state, thanks to the new options in therapy. What is more, there exist respiratory illnesses with much more severe and swifter consequences. COPD¹⁰⁾, diagnosed mainly in smoking addicts, seems to be the most serious of these. It is a result of chronic bronchitis and emphysema and leads to the need of constant oxygen therapy, frequent hospitalization and ultimately the need to use a respirator as breathing aid, even for people in their early 40s. That is why when attempting to prevent respiratory illnesses what matters most is to break the nicotine habit, because apart from the widely known mechanisms responsible for lung cancer, it is also directly linked to inducing inflammatory reactions in COPD, asthma, as well as infectious respiratory system diseases. It is important to take care to maintain a good general condition of the respiratory system, mainly through sports. This allows to reduce the risk and symptoms of all the illnesses mentioned above.

Abdominal organs illnesses

This is a wide group of illnesses and the most common is peptic ulcer disease. Its features include seasonality (a rise in symptoms during spring and autumn), strong pain especially in the epigastrium. In the past, surgery used to be considered a form of treatment: section of the vagus nerve branch responsible for gastric acid secretion or removal of part of the stomach with remodelling of the remaining part. Currently, treatment is focused on improving eating habits, diagnostic and therapeutic endoscopy and pharmacotherapy, which gives much better results, especially thanks

¹⁰⁾ Chronic Obstructive Pulmonary Disease.

to the advances in endoscopic technology. Surgery is now generally performed only in cases of ulcer complications, i.e. perforated ulcers¹¹⁾, or the need for resection¹²⁾ of possibly cancer-developing fragments.

Gallstones is a condition which is commonly treated surgically, by performing gallbladder removal. On the one hand, it is an illness which can be successfully controlled by adequate diet, but on the other hand, continued inflammation of the gallbladder may lead to cancer development. That is why, in the context of recent research, it is now preferred to remove the gallbladder in every case of the illness – including cases of gallbladder inflammation with no gallstones, as well as minor even gallstones with no symptoms. It is often performed by laparoscopy¹³⁾, which is minimally invasive, with only three small incisions. The operation is not riskier than standard surgery, which would require opening the abdominal cavity.

Appendicitis should be considered the most common surgical condition of the abdominal cavity. At the same time it is the most difficult to diagnose digestive system illness, hence the proverb: "nobody has made their career on the appendix, but many have ended it there". The typical textbook description of appendicitis refers to laboratory test results, pain in the epigastrium radiating within several hours to the right hypogastrium, nausea – usually with no vomiting, a slight fever, raised pulse. Despite the rather thorough description in literature, the author admits to having dealt with only one case where most of the criteria listed above were met. Therefore, patients coming to surgical reception, despite suspected appendicitis, are often being admitted to the surgical ward for observation, or diagnostic laparotomy¹⁴⁾. Diagnosing appendicitis is complicated because many other conditions may mimic this illness; these include pneumonia, inflammation of female reproductive organs or intestinal ischemia caused by mesenteric artery blockage¹⁵⁾ or a condition as rare as porphyria¹⁶⁾. Appendicitis is dangerous because of its complications, i.e. distributed inflammation of the peritoneum, which still happens to be lethal. Despite the stereotype that appendectomy is a simple procedure, not a real surgical operation, the risk related to surgery remains the same as with other operations which include opening the abdominal cavity and the intestine.

¹¹⁾ Perforated ulcer in the stomach or duodenum – fracture of locally transformed stomach or duodenum wall with leakage of digestive juices into the abdominal cavity causing a life-threatening inflammation.

¹²⁾ Resection – removal of part of the organ.

¹³⁾ Laparoscopy – an operation which consists of inserting two tools and a video camera into the abdominal cavity, using three small tools. This currently allows to perform many types of surgery which used to require leaving large surgical scars and other, much more significant complications.

¹⁴⁾ Opening the abdominal cavity for the purpose of thorough diagnostics. Unfortunately, in some cases it is the only effective diagnostic method.

¹⁵⁾ Blood vessel responsible for supplying blood to most of the intestines.

¹⁶⁾ Porphyria – a group of illnesses related to invalid metabolism of heme, a component of hemoglobin.

When talking about abdominal illnesses one cannot forget about vascular conditions. The most important of these are intestinal ischemia (which leads to bowel necrosis and obstruction as well as inflammation of the perineum) and aneurysm of the aorta – the main blood vessel of the human body. Aortic aneurysms are dealt with in urgent mode because a burst aneurysm which is not dealt with within several hours leads to death caused by blood loss. Its symptoms are again non-specific and may consist only of distributed abdominal pain. Diagnostics is possible only through imaging – USG and computer tomography. Surgical treatment involves considerable risk¹⁷⁾, however, it is the only effective method that gives a chance of survival.

Acute and chronic pancreatitis constitute another major group of illnesses. In the case of this article it is enough to remind that this is a highly lethal condition and even after having suffered from it already, it is advised to keep a strict diet and avoid alcohol.

Urinary system illnesses

Kidney stones, which are mainly caused by genetic predisposition, are definitely the most common urinary system illness. Their occurrence is often accompanied by severe pain. Untreated they may lead to kidney obstruction and ultimately atrophy. Surgical treatment is currently rarely undertaken – thanks to advances in non-invasive techniques it is possible to destroy kidney stones virtually painlessly. It is, however, important to note that the condition may recur despite accurate treatment.

Severe complications include kidney inflammation (nephritis). Nephropathy¹⁸⁾ (including its post-inflammatory case) constitute a large group of conditions which, unfortunately, often lead to kidney atrophy and failure as a result. The only option for therapy is dialysis or kidney transplant. Poland differs from Western countries in the fact that these transplants are still rare here, despite major information campaigns in the media. Technically, there even exists the option of transplants within the family, which are the safest form for the patient, and if certain conditions are met – virtually harmless for the donor, because the human organism requires only 25% of healthy liver core to function.

Another group of illnesses consists of cancer conditions of the urinary system. As in many other cases, both lifestyle and environmental factors play an important role here. People commonly believe that smoking causes only lung cancer, while it also promotes oral cavity and larynx cancer and in fact the most common cancer for smokers is bladder cancer...

Most media attention is still targeted at prostate cancer. However, it is to be noted that most men over 50 years of age suffer from enlargement of the prostate. This automatically leads to a higher level of markers (substances found in

¹⁷⁾ According to some authors the risk level in ruptured aortal neurysms reaches 50% of cases.

¹⁸⁾ Nephropathy – illness of the kidney as a whole.

patient's blood) considered typical for this cancer. That is why men aged 50 and more, regardless of urination or sexual function problems, should have their urinal system examined – so as to exclude the possibility of malignant tumours.

Central nervous system illnesses

This is another broad group of conditions which include functional and degenerative disorders, as well as vascular and neoplastic diseases. Understandably, the one feared the most is central nervous system cancer. However, they are considered rare and meningiomas – described by Harvey Cushing in 1936 – are the most common, but are usually mild and nonrecurring, given of course that complete tumour resection is possible. Meningiomas are interesting in the context of this article because they usually occur in patients aged over 50. They can often grow for as long as 20 years and symptoms become evident only after the tumor has become massive. This means that they are often diagnosed simply by chance, e.g. during computer tomography in the case of head injuries. Unfortunately, other types of central nervous system cancer lead to more serious consequences and therapy brings much worse results. For instance, average survival period for glioblastoma multiforme is still as little as 52 weeks.

Vascular central nervous system illnesses constitute a major group. They most notably include aneurysms and arteriovenous malformations¹⁹⁾, but also strokes. The former two can be diagnosed before they are fully apparent, while when it comes to strokes we are virtually helpless. The current state of medical knowledge, despite recent general advancement, does not allow to predict strokes nor to prevent them apart from general hygiene rules. The progress and outcome of these illnesses is also quite random - for some patients a discreet asymmetry of facial muscles is the only symptom of having had a stroke while for others it may result in severe disability even if the stroke was caused by the same artery closure.

Aneurysms and arteriovenous malformations are very versatile and are sometimes mild with the first symptom being only the strongest headache ever experienced and neck stiffness. In such a case the prognosis is positive and after aneurysm occlusion (usually intravenous²⁰⁾) the patient recovers fully. Unfortunately, this mainly depends on the localization: a subarachnoid hemorrhage may well result in death or severe disability despite therapy and rehabilitation.

Degenerative illnesses of the central nervous system: Alzheimer's and Parkinson's, which lead to progressive dementia, constitute another significant group of conditions. Alzheimer's disease therapy is currently a matter of testing new

¹⁹⁾ Artery to vein connection disorders, which bring the risk of intercranial hemorrhages, often life-threatening.

²⁰⁾ Intravenous therapy – operations consisting of puncturing the vessel, then inserting a catheter which includes the tools needed for occluding the aneurysm. Therapy is not constricted to brain vessels – coronoplasty, i.e. widening the vessels which supply the heart, is done similarly.

medications, while it has been possible to control Parkinson's for nearly 60 years. In the 1950s surgical Parkinson's disease therapy was introduced and it consisted of implanting special electrodes in certain regions of the brain. Despite initially positive results, this method was discontinued for nearly 20 years, since the arrival of a new therapeutic option – the L-DOPA. It is generally still used in treatment, however, since it did not live up to the expectations, surgical treatment has been reintroduced. Combination therapy, in which both a surgery is done and dopamine is supplemented, currently seems to be the most effective form of therapy. It allows to keep the therapeutic effect of L-DOPA for a longer period of time and still use smaller doses, and therefore avoid adverse drug reactions.

Degenerative spine disease is another common problem, especially for obese people, who rarely engage in any sports. It usually takes the form of degenerative disc disease. Depending on which curve is affected, the symptoms may include as follows: in the cervical region – headaches and vertigo, paresthesia in the upper extremities or even difficulty in handling objects; in the lumbar region the most common symptom is pain radiating along the back surface of the thigh, even as far as the foot. In the most serious cases it may lead to foot drop and a decline in muscle strength. Treatment depends on the severity of the illness – surgery is considered the last resort in the case when rehabilitation and anti-inflammatory drugs do not bring the expected effects and the pain impedes the patient's daily life.

Mental disorders

A common Polish misconception is that having visited a psychiatrist is something to be ashamed of and perhaps even harmful. It is important to note here that in fact the psychiatrist's duty is to help their patients. It is especially the case since many states are found to be a symptom of underlying depression, and not actually organic diseases as they were expected. These include chronic fatigue, different kinds of pain, and also a lot of different conditions which seem to be organic diseases at first.

Addiction therapy is still a significant problem. The psychiatric definition of addiction differs greatly from the one commonly known in society. In short, it is not related to the amount or frequency of intake of a certain psychoactive substance, but it rather refers to the effect on professional and private and family life of the patient. Despite the existence of numerous models, there are no exact directives – every case has to be assessed individually by the psychiatrist.

Conclusion

Readers should concentrate first and foremost on the health factors which they can influence directly. In other words, it is difficult to predict who might have a brain aneurysm which poses an immediate risk of rupture, but it is much easier to state that an overweight person will much more probably have a heart attack than someone who does sport every day, keeps a sensible diet and follows their doctor's

instructions. It is also worth noting that sport does not only mean weightlifting or Eastern martial arts, but also one hour of jogging per day, swimming or even walking in the park, for older people. And success comes mostly from constant self-improvement, which can be observed e.g. in the practices mentioned above.

Bibliography:

- Beers M.H. (ed.), *The Merck Manual. Podręcznik diagnostyki i terapii*, Wrocław 2008.
- Bell R., Dayton M., *Essentials of General Surgery*, Baltimore 2005.
- Bilikiewicz A., Landowski J., Radziwiłowicz P., *Psychiatria – repetytorium*, Warszawa 2003.
- Boffetta P., *Tobacco smoking and risk of bladder cancer*, "Scand J UrolNephrolSuppl" 2008, 42.
- Fauci A., Braunwald E., Kasper D., Hauser S., Longo D., Jameson J., Loscalzo J., *Harrison's Principles of Internal Medicine*, Columbus 2008.
- Hemelt M., Zeegers M.P., *The effect of smoking on the male excess of bladder cancer: a meta-analysis and geographical analyses*, "Int J Cancer" 2000, 124 (2).
- Libby P., Bonow R., Mann D., Zipes D., *Braunwald's Heart Disease. A textbook of cardiovascular medicine*, Philadelphia 2007.
- Rowland L., *Neurologia Merritt'a*, vols. 1-3, Wrocław 2008.
- Szczeklik A., *Choroby wewnętrzne – stan wiedzy na rok 2010*, Kraków 2010.
- Szmidt J., Gruca Z., Krawczyk M., Kuźdżał J., Lampe P., *Podstawy chirurgii. Podręcznik dla specjalizujących się w chirurgii ogólnej*, vols. 1-2, Kraków 2003.
- Warlow Ch., Gijn J., Dennis M., Wardlaw J., Bamford J., Hankey G., Sandercock P., Rinkel G., Langhorne P., Sudlow C., Rothwell P., *Stroke. Practical Management*, "Wiley-Blackwell", 2008(8).
- Zeegers M.P., Tan F.E., Dorant E., Van Den Brandt P.A., *The impact of characteristics of cigarette smoking on urinary tract cancer risk: a meta-analysis of epidemiologic studies*, "Cancer" 2000, 89 (3).
- Zeegers M.P., Goldbohm R.A., Van Den Brandt P.A., *A prospective study on active and environmental tobacco smoking and bladder cancer risk*, "Cancer Causes Control" 2002, 13 (1).