The diagnosis of myxoma itself at the same time represents the indication for surgical procedure. Surgical resection is the only efficient therapeutic option for patients with heart myxomas and it should not be delayed because of possible consequences due to obstruction or embolism.

All operations were performed using extracorporeal circulation and medial sternotomy approach, with cannulation of aortic and caval veins and creation of aortic arch hypothermia with local heart cooling. Manipulation with the heart before the cardiopulmonary bypass establishment has been extremely delicate because of fragility and embolic tendency of myxoma.

In case of myxoma of the left atrium, venous cannulation is usually placed through the right atrial appendage and the right atrial wall. Once the myxoma of the right atrium is located - it is usually placed through the superior vena cava. Myxoma in the fossa ovalis region used to be removed by atriotomy, while in a case of myxoma of the right atrium it is usually placed through the right atrial wall and the right atrial appendage.

Excision of the attachment or the base of myxoma localized close to atrioventricular valves has to be performed much more delicately, avoiding valvular and conduction system damage.

Ventricular myxoma is to be approached through tricuspid valve, and myxoma of the left ventricular outflows through the aortic valve. After myxoma removal, in case of valvular damage annuloplasty or implantation of the artificial valve is to be done. All removed myxomas were pathohistologically analyzed and diagnosis was verified.

Myxomas occur with peak incidence between the third and sixth decade of life and tend to be more common in women (4-13,15). Myxomas of the right atrium are more common among women (4,13-15), as was also our experience. About two thirds of myxomas are oval or round, poly- or pedunculated, pedunculated, mobile, tumors with smooth or slightly lobulated surface, yellowish-green to brown color, frequently covered with thrombus (2, 4, 13, 15). Mobility depends on the length of the stalk and the width of attachment to the heart, as well as the amount of collagen in the tumor (4). Less common villous or papillary myxomas are gelatinous and fragile and prone to fragmentation and embolization, occurring about one third of the time (15). The average size of myxomas is about 5 cm (4), but myxomas have also been reported. Their weights range is from 50-60 g (16), they could be even bigger. In our series the largest one was 152 g or the right atrium. 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Surgical treatment of heart myxomas

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ABSTRACT

During a period from 1961 until May 2006, there were 50 patients - 32 females and 18 males, between 22 and 77 years of age. Approximately 50% of benign heart tumors in adults are myxomas (2, 5). Although primary heart tumors are rare, the incidence of primary heart neoplasms is between 0.17–0.19% (1, 4). Seventy-six percent of myxomas were found at the left atrium, 10% at the right atrium, 2% at the left ventricle and sixth decade of life and tend to be more common in women (4, 13–15), as was also our experience.

RESULTS

Eighty-six percent of myxomas were found at the left atrium, 10% at the right atrium and 2% at the right ventricle. There were neither multiple, nor biatureal tumors. In majority of the patients (over 80%) cardiac symptoms prevailed, predominantly with symptoms of malfunction of AV valve. Embolism appeared in 5 (10%) patients. Three youngest patients (6%) were asymptomatic.

DISCUSSION

Myxomas occur with peak incidence between the third and sixth decade of life, and tend to be more common in women (4, 13–15), as was also our experience. About two thirds of myxomas are oval or round, poly- poid, pedunculated, mobile, tumors with smooth or slightly lobulated surface, yellowish-green to brownish color, frequently covered with thrombus (2, 4, 13, 15). Mobility depends on the length of the stalk and the width of attachment to the heart, as well as the amount of collagen in the tumor (4). Less common villous or papillary myxomas are gelatinous and fragile and prone to fragmentation and embolization, occurring about one third of the time (15). The average size of myxomas is about 5 cm (4), but we have also reported. Their weights range is from 50–60 g (16), they could be even bigger. In our series the largest one was 152 g and it was in a patient of 50 years. Most myxomas appear to grow rapidly, but growth rates vary and occasionally tumor growth arrests spontaneously (4). There are reports of slowly growing myxomas in surgically high-risk patients during 79 months with growth rate of 0.2 cm per year (17).

About 5% of myxoma patients show familial pattern of tumor development; approximately 20% of them have complex myxomas2 or Carney’s complex: associated conditions such as adrenocortical nodular hyperplasia, Sertoli cell tumors of the testicle, pituitary tumors, multiple myoid fibroadenomas, cutaneous myxomas, and facial and labial spots (18). In spite of the above, we have never determined any of these conditions in our patients.

Histologically, myxomas are composed of polygonal cells and cappillary channels with eosinophilic and/or granular acid mucin, and hyaline or acellular areas of matrix (4). The base of the myxoma contains a large artery and veins that connect them with subendocardium and in most cases they tend to grow into the overlying cardiac muscle rather than into surrounding myocardium (18). All our removed myxomas have been histologically verified, and dilemma arose only in one case. The classical triad of myxoma symptomatology is intracardiac obstruction with congestive heart failure (67%), embolization (29%), systemic or constitutional symptoms of fever (19%) and weight loss and fatigue (17%) (13-15, 19, 20). The nature of these symptoms depends on size, localization and way of tumor attachment.

Majority of the patients (> 80%) in our series do not have dominant symptoms of obstruction of the mitral and tricuspid valve with signs of mitral stenosis, right heart failure all the way to pulmonary edema, which appeared in three of our patients. Large ventricular myxomas may mimic the tricuspid valve, while the majority of atrial tumors are located near the mitral valve, which can be easily identified as the left atrial tumors. The majority of the patients (> 80%) in our series do not have dominant symptoms of obstruction of the mitral and tricuspid valve with signs of mitral stenosis, right heart failure all the way to pulmonary edema, which appeared in three of our patients. Large ventricular myxomas may mimic the mitral valve, while the majority of atrial tumors are located near the tricuspid valve, which can be easily identified as the right atrial tumors. The majority of patients (> 80%) in our series do not have dominant symptoms of obstruction of the mitral and tricuspid valve with signs of mitral stenosis, right heart failure all the way to pulmonary edema, which appeared in three of our patients. Large ventricular myxomas may mimic the mitral valve, while the majority of atrial tumors are located near the tricuspid valve, which can be easily identified as the right atrial tumors.
4. Manipulation of the heart before aortic cross-clamping in deference to the known friability and embolic tendency ing ours, meticulous investigation reveals constitutional described (21), and we have faced it in one case.

2. clinical examination, positively established with echocardiography (24, 25). Transesophageal echocardiography (TEE) provides the best information concerning size, location, mobility and attachment and it can detect even the smallest myxomas of 1–3 mm in diameter (26). In patients older than 40 years planned for a surgery, coronarography is necessary to exclude occlusive coronary artery disease. Our policy is to resect full thickness whenever possible. However, only partial thickness resection of the area of tumor attachment has been performed when anatomically necessary without a noted increase in recurrence rate (29). Some authors favored excision of the full thickness of the wall at attachment (25). We usually excise radically the part of septum with base of tumor, and subsequent defect is reconstructed by direct suture or by means of pericardial or synthetic “patch” (13).

Heart mortality rate was about 5% (15). Excision of ventricular myxomas has operative risk up to 10%, but the experience is still insufficient. In some larger series mortality of about 8% was reported (25). Mortality rate in our group of operated patients was 6%

1. Ventricular-ventricular valve damages arise due to mobility and friction of myxoma through the valve nowadays are not conducted, even the smallest myxomas of 1–3 mm in diameter (26). In patients older than 40 years planned for a surgery, coronarography is necessary to exclude occlusive coronary artery disease. Our policy is to resect full thickness whenever possible. However, only partial thickness resection of the area of tumor attachment has been performed when anatomically necessary without a noted increase in recurrence rate (29). Some authors favored excision of the full thickness of the wall at attachment (25). We usually excise radically the part of septum with base of tumor, and subsequent defect is reconstructed by direct suture or by means of pericardial or synthetic “patch” (13).

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3. Heart myxomas, benign tumors which could be cause of serious complications due to their clinical features and strategic position, are rare and relatively simple diagnosed by echocardiography. The only effective treatment is surgical removal, that is connected with low operative mortality.

(type, intensity, duration) relation, with lot of influence
to perform psychiatric patient satisfaction survey .

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Overall impression is that outcome measures could be a useful tool to this end, provided that they are validated, accept- able to clinicians, and routinely used (26).

However, understanding importance of the issue of quality improvement, we have to ask ourselves would all these measures be of real value and, if so, what are they? As Martin wrote: “What actually does go on in the clinical consulting room?” (27) Answering this ques- tion he stressed the importance of training, building of commitment and passion for what we do, a thorough knowledge of what it means to be ethical, learning how to be effective and efficient.

Any of the quality indicators can give an overview of the current situation, but it cannot provide information on possible areas for improvement of services. As often cited Berwick said: “Every system is perfectly designed to achieve the results it achieves” (10). In order to improve itself, the system has to change. Unless we change, we shall continue on doing what we know the best, but the best that we know sometimes is not good enough. In the end, keeping this in mind, we must again consider something that is in the core of our professional identi- ties – the concern for the benefit of our patients. The continuous improvement of the mental healthcare qual- ity, together with education and scientific development, provides good enough basis for the future benefit.
quality and general characteristics of their measures. Structures refer to the healthcare system (12), describing personnel/staff characteristics (e.g. number of psychiatrists, or number of certified psychotherapists), organizational characteristics (facilities, technology resources), community, or other characteristics (15), and financial characteristics (e.g. proportion of population with health insurance). Measures of structure are, more or less, easily available from the existing databases, at least in systems with higher organizational culture. In Serbian mental healthcare system, these databases are still "under development." The problem with structural measures is that these measures can be true measures of quality only if they are associated with superior results/outcomes, and direct evidence for such connections are rarely available (9).

Processes refer to the consumer’s interaction with the healthcare system, where technical processes are actually those that have clinical content, and interpersonal are related to the patient (consumer)/healthcare staff interactions. Interpersonal processes are evaluated through surveys and interviews with patients. Due to still present stigmatisation of mental healthcare consumers, and predominantly authoritative model of patient – carer interaction, this aspect of processes has not been adequately evaluated in Serbia.

Technical processes are far more acceptable, from the clinicians point of view, for evaluation, measurement and improvement. They include all “clinical” activities, i.e. prevention, detection, access, assessment, treatment/service availability. Measures for this dimension offer the most useful in evaluation availability of services. The well chosen measures could confirm or discard our beliefs and views on the mental healthcare, and service availability. Measures of safety are more and more used in the assessment of processes, and, with the growing culture of comparison and selection, we face development of new indicators, as well as increase in improvement activities. Having in mind historical abuse of mental healthcare services, and current seclusion, restraint and commitment to care activities, it is understandable that we, regardless of current high level, have to insist on improvement, both of the processes and the working conditions.

It is obvious that measurement of quality within all seven domains depends highly on attitude of mental healthcare providers. The importance of all stakeholders in mental healthcare and quality improvement is high, but the measurement itself is field in which opinions and beliefs of "frontline provider" count a lot. Not many studies assessed these opinions, but Valenstein et al. study offers new and useful data on the role of "frontline providers" in the process (28). In our healthcare system, quality indicators are developed mostly by policy-makers and public health specialists. Anecdotal evidence suggest that considerable resistance of the providers comes from the experience that the indicator set, although small and insufficient, is forced on them, demanding just additional work, and not providing adequate overview. These impressions still have to be checked by the research.

The outcome represents a third dimension of the healthcare quality. Measurement for this dimension often offers the most meaningful information, because the ultimate questions in healthcare is the outcome (24), "whether symptoms remit, functioning and quality of life improve; adverse events are avoided, and consumers are satisfied" (9). Symptoms, functional impairment and quality of life are considered to be dimensions of severity of illness, and for those involvement of providers is essential. Adverse events, satisfaction and effectiveness are including other stakeholders. For a number of medical specialties clinical outcome measures have been developed, but mental health is not following them as closely as it should. One characteristic of mental healthcare, "complex range of interacting services and diversified interventions" (25), makes it difficult to assess outcomes. There is also an issue of complexity of diagnosis – care