

Clinical Forms of the Lower Oesophageal Sphincter Functional Pathology

Sulkhan Kemoklidze

Department of surgery, Tbilisi State Medical University

ABSTRACT

BACKGROUND: Two forms of the lower esophageal sphincter functional pathology (LESFP) are defined: cardio spasm and achalasia. This pathology may progress with the nearly normal, increased or decreased esophagus motility. Analyzing our cases we found that clinical features correlate well with the motility of esophagus. Therefore we modified the academician B.V. Petrovsky's classification which is accepted the Eastern Europe and CIS countries and is based on the oesophageal dilation degree. This point is important for the selection of treatment methods and prognosis. **PURPOSE** of our research was to get the indications of treatment methods more precise and to improve the results of treatment of LESFP. **MATERIALS AND METHODS:** Analyzing clinical and x-ray findings we got assured that cardiospasm properly could be divided in two groups: "A"-when the disease is associated with the normal or nearly normal esophageal motility and "B"-when the motility is decreased. Achalasia always progresses with the decreased esophageal motility. We determine it as cardiospasm "C". **RESULTS:** Out of 922 patients with LESFP cardiospasm "A" was diagnosed in 58% of cases, "B" - 15% and achalasia and megaesophagus were diagnosed in 27% of patients (cardiospasm "C"). **CONCLUSION:** The addition of esophageal functional condition to the academician BV Petrovsky's classification makes it more complete and informative, lets possible to define a clinical form of cardiospasm. It's been getting possible to refine indications of cardiadilation and surgery.

KEYWORDS: *cardiospasm, cardia cancer*

Two forms of the lower esophageal sphincter functional pathology (LESFP) are defined: cardiospasm and achalasia. This pathology may progress with the nearly normal, increased or decreased esophagus motility. Analyzing our cases we found that clinical features correlate well with the motility of esophagus [1].

There are many classifications of the lower esophageal sphincter functional pathology (LESFP). In the East Europe and CIS countries the classification of academician B. Petrovski is widely used. At first, the author had distinguished 4 stages: 1) Functional spasm of esophagus with insignificant dilation. 2) Permanent spasm with moderate dilation 3) Scar formation in the muscular layer of cardia with significant dilation 4) Severe stenosis of cardia with vigorous dilation of esophagus.

Inclusion of organic changes in the LESFP classification does not correspond with the modern view of the neuromuscular nature of this disturbance. Such changes, like scars and stricture are considered to be a result of complications or treatment. Using this classification and meeting modern view of LESFP, quantitative measures of esophageal dilation were developed. These measures are the base of this classification: Stage I-esophageal dilation up to 2-2.5 cm; Stage II-dilation up to 2.5-4 cm. Stage III – up to 5-8 cm and stage IV – dilation and lengthening of the esophagus over 8 cm [2].

However, in the final version of academician B. Petrovski's classification the functional status of esophagus is not reflected.

MATERIAL AND METHODS

Analyzing 922 cases of LESFP we have got assured that this pathology progresses with nearly normal, increased or decreased esophageal motility. Studying clinical features of LESFP we found well defined correlation between clinical signs and esophageal motility.

We have got assured that esophageal motility has a great importance not only for the clinical appearance of LESFP but for the choice of treatment, for outcome and complication prognosis. Therefore, we decided to include the esophageal motility state the classification of LESFP.

We offer the classification of LESFP which defines 3 forms of disturbance.

Clinical signs and x-ray data make us assured that 2 groups of patients are to be distinguished among the cardiospasm patient: Cardiospasm "A" – cases with normal or nearly normal esophageal motility; Cardiospasm "B" – cases with increased esophageal motility. Achalasia is always associated with decreased esophageal motility. Although, some investigators distinguish achalasia as a separate disturbance, others believe that it is a form of cardiospasm.

Sharing the later approach, we develop the following classification of LESFP.

Cardiospasm "A" – spasm of cardia with normal esophageal motility

Cardiospasm "B" – spasm of cardia with esophageal hyper motility.

Cardiospasm "C" – Achalasia-failure of opening of cardia with decreased esophageal motility.

Sharing academician Petrovski's classification we get more informative and improved classification with reflection of functional state and dilation grade of the esophagus. The distribution of patients according to the such classification is shown on *Tab. 1*.

RESULTS

The majority of patients – 58% belong to group "A", less of them to group "B"- 27%. The "C" group contains 15% of patients only. The major group of esophageal dilation has III degree (51%).

In general I degree of dilation is associated with least motility disturbances but II stage - with hypermotility. III stage group is the largest. It contains patients with normal, increased and decreased esophageal motility. IV degree dilation group unites patients with achalasia and megaesophagus.

According to the recommended classification, LESFP diagnosis is formulated like this: "Cardiospasm B II" i.e. the patient has a cardiospasm with esophageal dilation from 2.4 to 4 cm and with its increased motility.

DISCUSSION

Analyzing our cases according to our classification, we made some corrections in indications for two main methods of treatment of cardiospasm: cardiodilation and surgery.

We got assured that cardiodilation is the essential method of treatment for 'A' group patients. They develop fewer recurrences and they have 5-6 months long clear period between them (up to 10 years). In general, one or two dilation procedures are enough.

For group 'B' patients the series of dilation procedures are required to achieve satisfactory results. Interval between recurrences gets shorter (from 6 months to 1 year). For such patients the surgery is indicated. Repeated dilation procedures are not recommended, because a scar formation following them makes difficult or even impossible to perform Heller type procedures developing the stricture of distal esophagus.

Among surgical methods most authors prefer Heller procedure with proximal selective vagotomy plus Nissen fundoplication as an antireflux component.

Analyzing our material, we concluded that neither complete nor incomplete fundoplication must not be used in cases with decreased esophageal motility (cardiospasm 'C'). Unsatisfactory results of this method are caused by impaired esophageal motility but not by 'hyper function of the fundoplication cuff' as believed.

CONCLUSION

The inclusion of functional state of the esophagus in the classification of cardiospasm allows us to distinguish more clinical forms of cardiospasm and to revise indications of surgical treatment. The application of offered classification is necessary for the selection of appropriated method of treatment of cardiospasm.

Esophageal motility degree	Clinical group	Esophageal dilation stage				Total	%
		I	II	III	IV		
		2-2,5 cm	2,5-4 cm	5-8 cm	8 cm >		
Nearly normal	Cardiospasm "A"	21	196	318	-	535	58
Increased	Cardiospasm "B"	6	51	82	-	139	15
Decreased	Cardiospasm "C"	4	39	64	141	248	27
Total		31	286	464	141	922	
%		3	31	51	15	100	

Tab.1 The distribution of patients according to the classification of LESFP.

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Клинические формы функциональной патологии нижнего пищеводного сфинктера

Сулхан Кемоклидзе

Кафедра хирургии Тбилисского государственного медицинского университета, Грузия

РЕЗЮМЕ

В специальной литературе рассматриваются две клинические формы функциональной патологии нижнего пищеводного сфинктера (ФПНПС). Между тем ФПНПС протекает с почти нормальной, повышенной или пониженной моторикой пищевода. Мы обнаружили корреляцию клинической картины с моторикой пищевода. Учет данного обстоятельства имеет большое значение для правильного выбора метода лечения, прогнозирования результатов лечения и возможных осложнений. В странах Восточной Европы и СНГ распространена классификация функциональной патологии нижнего пищеводного сфинктера (ФПНПС) акад. Б.В. Петровского. Основу данной классификации составляет степень расширения пищевода. Целью данного исследования является совершенствование классификации ФПНПС акад. Б. Петровского-отражение в ней функционального состояния пищевода. Глубокий анализ клинико-рентгенологических данных 922 больных с ФПНПС показал, что собственно кардиаспазм четко делится на две группы: кардиаспазм А — когда болезнь протекает на фоне нормальной или близкой к норме моторной активности пищевода, кардиаспазм Б — когда моторика пищевода резко повышена. Что касается ахалазии, она всегда протекает с пониженной активностью пищевода. Мы ее обозначаем как кардиаспазм В. Из 922 больных с ФПНПС кардиаспазм А обнаружился у 58%, Б — у 15%, а в группу ахалазии и мегаэзофагуса (кардиаспазм В) вошли 27%. Учет в классификации акад. Б.В. Петровского функциональной активности пищевода делает ее более информативной и совершенной, позволяет выделить еще одну клиническую форму кардиаспазма. Создается возможность пересмотра показаний кардиадилатации и оперативного вмешательства в свете данной классификации.

КЛЮЧЕВЫЕ СЛОВА: кардиоспазм, рак кардии