ALCOHOL SEPTAL ABLATION FOR HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY

J. Sitar¹, L. Groch², N. Penkov², L. Dimitrova², R. Radoslavova²

¹St. Anne’s University Hospital, Brno, Czech Republic, ²SBALK Varna, Bulgaria

INTRODUCTION

Hypertrophic obstructive cardiomyopathy (HOCM) is characterized by asymmetric septal hypertrophy, systolic anterior motion (SAM) in echocardiography and gradient in the left ventricle outflow tract (LVOT).

The key elements in management of patients with hypertrophic obstructive cardiomyopathy is to control symptoms, assess risk for and prevent sudden cardiac death (SCD) and screening of the first degree relatives for HOCM. In pharmacological treatment beta blockers and Ca-antagonists are used. In non-pharmacological treatment of those patients with hypertrophic obstructive cardiomyopathy which are not responding to pharmacological treatment surgical myectomy or alcohol septal ablation are used. The first myocardial myectomy was performed in 1960, the first alcohol septal ablation was performed in 1994.

Alcohol septal ablation (ASA) is an interventional procedure that has been used in highly symptomatic patients with hypertrophic obstructive cardiomyopathy. It is a non-surgical interventional procedure for intraventricular septum thickness reduction. It is essential that this procedure is performed by experienced interventional cardiology team. Hemodynamic improvement of obstruction in LVOT. Maximal hemodynamic effect in 3 months follow-up can be observed. Limitations for ASA are potential serious adverse events as myocardial infarction, the third degree AV block, Right Boundle Branch Block, ventricular arrhythmias.

For ASA are indicated patients with NYHA III despite optimal pharmacological therapy, LVOT gradient more than 50mmHg in rest and/or more than 50-100mmHg after provocation and suitable coronary anatomy. Criteria for successful procedure are improvement in NYHA / CCS class and decrease in LVOT gradient by 50% in the third month of follow up.

Up today more than 10.000 procedures have been performed all over the world.
наблюдение.
Досега повече от 10 000 процедури са проведени по целя свят. Съществуващите данни са ограничени главно до проучвания на единични центрове, регистрите в Северна Америка и Европейското многоцентрово и мултинационално проучване.
Тази работа разглежда 39 пациенти, които са лекувани с помощта на ACA при СБАЛК-Варна от 2010 г. до април 2013 година.
Демографски данни: Включени са 39 пациенти (на възраст 62.4±10 години). Пациентите са прегледани 3 месеца след ACA.

РЕЗУЛТАТИ
Медианата на дозата алкохол е 1.8 мл. ACA довежда до значително намаляване на градиента в изходния тракт (PG) и на диспиента (медиана на PG от 79 mmHg до 9 mmHg; медиана на NYHA клас от 3 до 1; и за двете р <0.01). Процент на серозните усложнения: трета степен AV-блок периоперативно – 4 (10,3%), постоянни пейсмейкъри при пълен сърдечен блок са имплантирани при 2 пациенти (5%). Един пациент почива от масивен белиодробен емболизм на втория ден след процедурата, един пациент почива на четвъртия ден след процедурата, случай на ВСС. Повторна ACA се извършва на 3 пациенти (Фиг. 1 и Фиг. 2).

The existing data are limited mainly to single-center studies, the North American registry and the European Multicentre and Multinational Study.
This work reviewed 39 patients who were treated using ASA at SBALK Varna from 2010 till April 2013.
Demographics: 39 patients (age 62.4±10 years) were enrolled. Patients were checked-up in 3 months after ASA.

RESULTS
The median of alcohol dose was 1.8 ml. ASA led to a significant reduction in outflow gradient (PG) and dyspnea (median of PG from 79 mmHg to 9 mmHg; median of NYHA class from 3 to 1; both p<0.01). The incidence of major complications: the third degree AV block perioperatively 4 (10.3%), permanent pacemakers for complete heart block were implanted in 2 patients (5%). One patient died for massive pulmonary embolism on the second day after procedure, one patient died on the 4th day after procedure as sudden cardiac death. ReASA was performed in 3 patients (Fig. 1 and Fig. 2).
Multivariate analysis identified amount of alcohol, baseline left ventricular ejection fraction and age as independent predictors of PG decrease ≥50% (Fig. 3)

CONCLUSIONS
The results of the work shows that ASA is non-surgical invasive procedure with similar effect comparing to
Fig. 2

Fig. 3
ERROR: syntaxerror
OFFENDING COMMAND: --nostringval--

STACK: