ABSTRACT

Spontaneous coronary artery dissection is rare disease, occurring most often in young women. Clinical manifestation is acute coronary syndrome (ACS). Pathogenesis of the disease is not known. Diagnosis is made by ECG, coronary angiography and optical coherence tomography. There are unclear recommendations concerning therapy. In patients with SCAD we recommend conservative therapy initially and then delayed PCI, optimally as OCT guided procedure. The use of biodegradable vascular scaffolds (BVS) could be the ideal option in treatment of atherosclerosis unaffected dissected coronary arteries.

Keywords: SCAD, coronary artery, acute coronary syndrome, ACS

INTRODUCTION

Spontaneous coronary artery dissection (SCAD) is rare and interesting disease, occurring most often in young women, around their 40 years of age, most often peripartum, postpartum or after extreme physical stress. These women have no risk factors of coronary artery disease (CAD). Clinical manifestation of the disease is in 50% ST elevation myocardial infarction (STEMI) with mortality varying between 20-40%, sudden death is described in literature in 27% Pathogenetic of the disease is not known. Possible causes are pregnancy generated degeneration of collagen, increased levels of females hormones, eosinophil angiitis, fibromuscular dysplasia, binder tissue diseases, Marfan syndrome or extreme physical stress. Diagnosis is made by coronary angiography, optical coherence tomography (OCT) or autopsy. In women is most frequently affected Left Anterior Descending Artery (LAD), in men Right Coronary Artery (RCA).

There are unclear recommendations concerning the treatment. There are recommendations for conservative therapy (50%) - anticoagulants, antiaggregation therapy, statins, nitrates or immunosupression or invasive therapy (50%) - stenting or coronary artery bypass grafting (CABG).

For the last 50 years there are in the literature only hundreds of cases, there are no randomized trials, only single cases reports. There are collected data in Mayo Clinic Register of SCAD. 80% female at mean age of 42 years. There is no atherosclerosis documented on angiography. Multivessel SCAD is described in 15-20% of all patients, scSCAD is occurring most frequently in women, even triple SCAD is documented. Cases are clinically presented as acute coronary syndromes in 50% as STEMI. Risk factors are peripartum women and extreme physical activity in men.

CASE REPORT

In this work we are describing a clinical case of SCAD in a 52 years old lady with no risk factors of coronary artery disease suffering from strong chest pain after extreme physical activity (moving heavy wardrobes for several days). She was referred to the hospital with clinical manifestation of nonSTEMI with slight hypokinesis of the inferior wall and normal ejection fraction on ECHO. Because of persisting chest pain an urgent coronary angiography was performed and spiral dissection of right coronary artery was documented with thrombi and TIMI III (Fig. 1), there were no atherosclerotic changes in the left coronary artery (Fig. 2). Conservative therapy was initially used with use of Heparin, IbIIIa GP inhibitors i.e. bolus and continued with i.v. infusion, clopidogrel and acetylsalicylic acid.

One week later there were no thrombi but persisting dissection of the coronary artery documented...
Spontaneous coronary artery dissection (SCAD) is a rare disease, occurring most often in young women, around their 40 years of age with no risk factors of coronary artery disease (CAD). Risk factors are status peripartum, postpartum or after extreme physical stress. Clinical manifestation of the disease is acute coronary syndrome, in 50% ST elevation myocardial infarction (STEMI).

There are unclear recommendations concerning the therapy because of low number of documented cases over the world. As documented in the case described above, we can recommend conservative therapy initially and then delayed PCI, optimally if the procedure is OCT guided to avoid complication while introducing the wire into the false lumen and to check the result after the procedure. In stenting can be use of biodegradable vascular scaffolds (BVS) the ideal option in treatment of atherosclerosis unaffected dissected coronary arteries.

It was decided to perform delayed PCI with multiple drug eluting stents (DES) implantation during this session. There was three biolimus A9 DES implanted (3.0x33mm, 3.5x33mm and 3.5x28mm) from distal part of the vessel to the proximal part (Fig. 5) with optimal final angiographic result (Fig. 6). In medication clopidogrel was recommended for 12 months, ASA, beta blockers and statins.

The final result after stent implantation was checked with OCT (Fig. 7a,b). There was planned one year clinical, angiographic and OCT follow-up in January 2013. Patient was without any subjective complaints. Coronary angiography showed persisting optimal result with no in-stent restenosis (Fig. 5), optical coherent tomography documented optimal stent struts epithelization (Fig. 9). Acetyl salicylic acid only was recommended in further medical therapy.

Patient status at two year’s clinical follow-up visit in January 2014 was stable, without complaints, with no chest pain at exercise nor dyspnoea.

CONCLUSION

Spontaneous coronary artery dissection (SCAD) is rare disease, occurring most often in young women, around their 40 years of age with no risk factors of coronary artery disease (CAD). Risk factors are status peripartum, postpartum or after extreme physical stress. Clinical manifestation of the disease is acute coronary syndrome, in 50% ST elevation myocardial infarction (STEMI).

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Миокардит - профилактика, диагностика, лечение, използване на сърдечно-магнитен резонанс и ...

около раждане, след раждане или след екстремни физически натоварвания.

Клинична проява на заболяването е остър коронарен синдром, в 50% инфаркт на миокарда с ST елевация (STEMI).

Няма ясни препоръки относно терапията поради ниския брой на документираните случаи по целия свят.

Както е документирано в случая, описан по-горе, можем да препоръчаме консервативна терапия първоначално и след това отложена PCI, оново ако процедурата се ръководи с OCT за да се избегнат усложнения по време на въвеждане на балон-катетъра във фалшивия лумен и за проверка на резултата след процедурата. При стентиране могат да се използват биоразградими съдови скелета (BVS) – идеалният вариант при лечение на незасегнати от атеросклероза раскъсани коронарни артерии.

Адрес за кореспонденция:

REFERENCES


