

Percutaneous Coronary Intervention In octogerians compared with very young Patients

مقارنة للتدخل عن طريق الجلد للشرايين التاجية بين المرضى المسنين و المرضى صغار السن

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الخلاصة:

الخلفية: يعتبر مرض عدم كفاية الشرايين التاجية من الأمراض الشائعة في المجتمع. وتوسع الشرايين التاجية بالبالون القسطاري هو العلاج القياسي لهذا المرض. نسبة التدخلات القسطارية لكبار السن قليلة نسبياً.
الغرض من الدراسة: مقارنة النتائج السريرية والصورة الوعائية القسطارية للمرضى كبار السن مع
طريقة البحث: تم اخذ عينتين ل 77 مريضاً مصابين بعدم كفاية الشرايين التاجية تم التدخلات القسطارية لهم في مركز الـ 75 سنة والثانية اصغر من 45. تم دراسة المرضى وتسجيل عوامل ذلك تم تحليل النتائج القسطارية كشكل الشرايين وشدة تصلبها.

النتائج: وجدنا ان ارتفاع دهون الدم منتشر بصورة مثيرة للانتباه في
في صغار السن ولكن بقيمة اصغر اما التدخين فكان اكثر في صغار السن ولكن لم يرقى إحصائياً. وجدنا ان بار السن لديهم أوعية شريانية معقدة ومتعددة التضيق. نسبة استخدام الشبكات الدوائية في كبار السن كانت اقل التدخلات القسطارية للشرايين التاجية في الـ

Abstract:

Background: Still percutaneous coronary intervention (PCI) in elderly people challenging for the interventionist as complications and comorbidities are frequent in them.

Aim of study: clinical and angiographic comparsion in PCI between the elderly and the young age patients.

methods This is aretrospective comparative study enrolled 77 patients divided in to two extremes of age one more than 75 years old(38 patients) ,second younger than 45 years old(39).

statistical Analysis: Both groups analyzed statistically according to their risk factors, angiographic results and in hospital outcome. Chi square taken for level of significance

results: We find hypercholesterolemia ,hypertension and diabetes was frequent in young age people, smoking was more frequent with less significance .The elderly people had complex lesions and multivessels diseases .Incidence of drug eluting stents was less in elderly.

key word : Ischemia, intervention, elderly

INTRODUCTION

Although PCI became the standard therapy for CAD⁽¹⁾, PCI in elderly people consist only 6% of total PCI procedures. Comorbidities and higher chance of complications may be behind this discrepancy⁽²⁾.

In contemporary practice, more than one in five patients treated for coronary artery disease(CAD) are elderly and the proportion of elderly individuals in the population is growing. The elderly have more cardiovascular risk factors and a greater

burden of ischemic disease than younger patients needing PCI and, therefore, derive greater benefit from revascularization⁽³⁾

Multiple physiological changes occurring with age augment the risk of adverse outcomes with PCI . From a coronary perspective, elderly patients who require revascularization are more likely to have complex(classified into B2 and C), multivessel disease necessitating more-challenging multilesion interventions, than the young ^(4,5)

Age is also a significant predictor of coronary medial calcification^(6,7) Interventions on calcified plaques are associated with increased frequency of periprocedural complications, decreased procedural success rates, and inadequate stent expansion and, thus, increased rates of restenosis⁽⁸⁻¹¹⁾ Tortuous vessels, more commonly observed in older than in younger adults, increase the difficulty of coronary device deployment and the risk of complications associated with vascular access⁽¹²⁾.

Aim of the study

Clinical and angiographic comparison in PCI between the elderly and the young age patients.

METHODOLOGY:

77 patients The population involved in the study were divided into two groups, performed percutaneous coronary angioplasty in Najaf cardiac center .from January to July 2012

The first group including 39 elderly patients(meanage79 years) ,compared with younger population <45 years of age(mean age 39 years).

Both groups were verified regarding risk factors, angiographic findings (like targetartery, extent of coronary arteries involved, complexity of lesions), then the PCI procedure was analyzed for angiographic and clinical success.

Angiographic Successful PCI was considered if there is reduction in the minimum stenosis diameter to <50% with final TIMI flow grade 3(visually Assessed by angiography)without side branch loss, flow limiting dissection or angiographic thrombus ,for coronary stent minimum stenosis diameter of <20% with final TIMI III⁽¹³⁾

Procedural success was considered when achieve angiographic success without associated in-hospital major clinical complications (death, MI, stroke, emergency coronary artery bypass grafting(CABG)⁽¹³⁾

Statistical analysis

All the data in both groups analyzed with SPSS15 data sheet, then independent variables analyzed, estimated P- value considered if <0.05 as significant.

RESULTS

We find the hypercholesterolemia highly significant in young people(p value 0.0001),also young age group were more hypertensive and more diabetic

(pvalue,0.04,0.02 respectively) table(1)

Other risk factor like male gender and smoking also were more in younger age group but less significant. table (1)

We find the elderly group had worse vessels regarding complexity of lesions(table 2) The number of vessels involved were multi vessels pattern in most of elderly people, while one vessel pattern was the usual in younger age group (table4)

left anterior descending artery (LAD) was involved in most of patients in both groups and was the target vessel in most of procedures in elderly and young age groups .

Regarding angiographic and clinical outcomes were successful in both groups, however ,difference occur regarding the type of stents used as Drug eluting stents used less frequently in elderly group compared with young age group (figure 2)

DISCUSSION

Obviously we compared two extreme of age one too old ,the second were too young, some variables possibly changed when comparing the too- elderly people with just elderly people (around 60 years old)

No explanation for CAD in those young age, as possibility of ischemia is low, accelerated atherosclerosis blamed for that⁽¹⁴⁾

Diabetes and Hyperlipidemia are frequently in young age group and the relation with pathogenesis of CAD are well documented⁽¹⁵⁾

Young age people proved had less extensive CAD in many studies⁽¹⁶⁾ this consist with our study ,however many cases might undiagnosed (represent iceberg phenomena).

The lower uses of DES might represent an isolated discernation of the interventionist or might represent the precautions required for longer Dual antiplatelet therapy when drug eluting stents (DES) is used and their side effects.

Table (1) demographic characterization of the two study sample(chi-square test)

	Age>75	Age<45	P value α
number	38	39	
Mean	76.22 +-3.63	37.9+4.81	
Gender Male	27	34	0.367*
hypertension	10	14	**0,04
Diabetes	4	17	0.002**
hyperlipidemia	5	31	0.0001***
smoking	2	7	0.140*
des	29	36	

*Non significant ** significant ***highly significant

Table (2) number of coronary arteries involved in the procedure

	3vd	2vd	1vd	Total
age<45	4	7	28	39
age >75	5	6	27	38

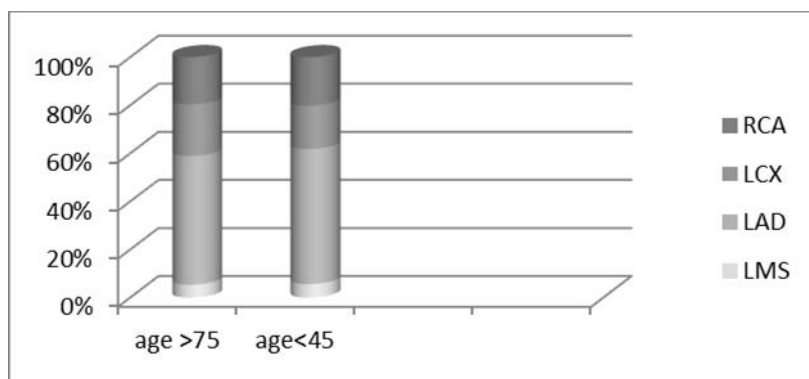


Figure (1) distribution of target vessels in both groups

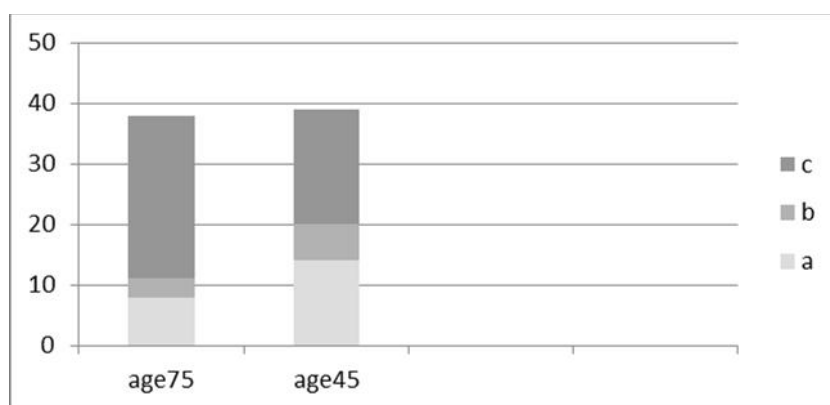


Figure (2) complexity of lesions among both groups

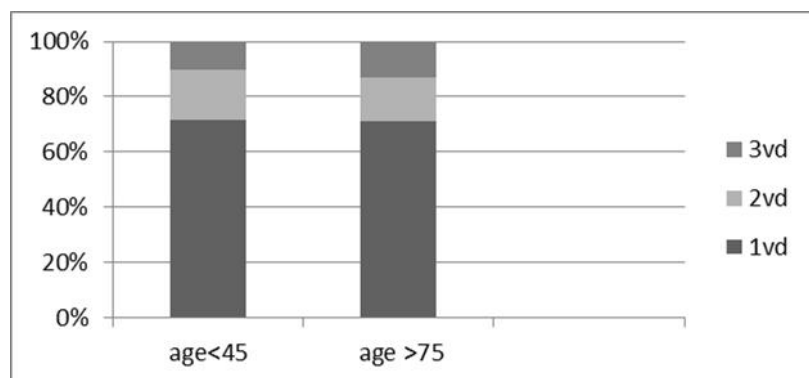


Figure (3) the number of coronary arteries involved in both age groups

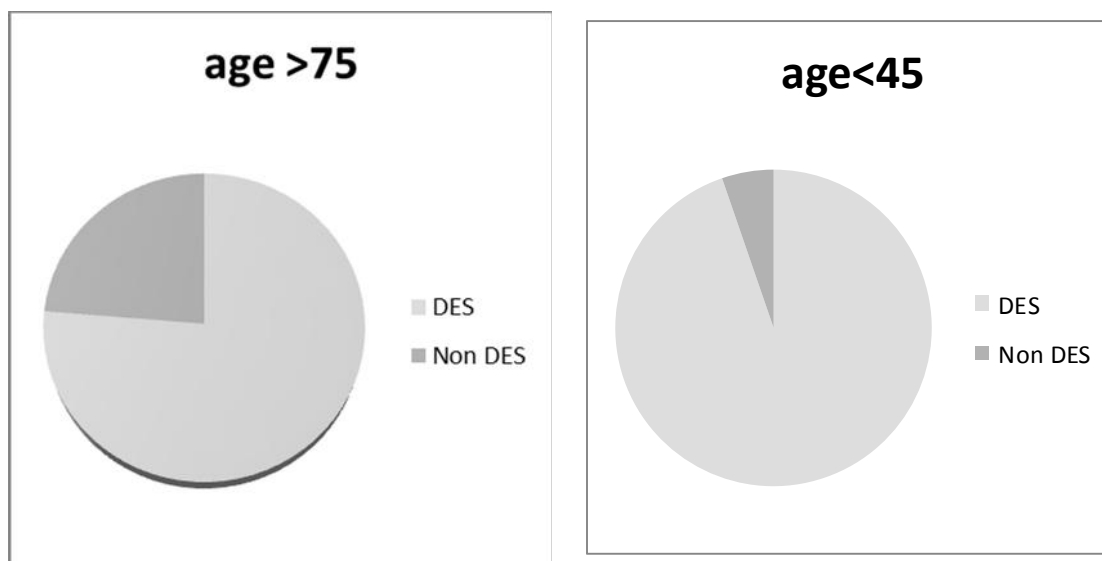


Figure (2) type of stents used in the PCI in both groups

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