

Epidemiological and clinical characteristics of patients with unstable angina and critical coronary stenosis detected by angiography

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Abstract

Certain clinical predictors like age, cardiac biomarker positivity, ST segment depression and congestive heart failure (CCF) can help effectively in predicting high risk group patients with critical coronary artery disease. Khat chewing is a significant risk factor for ACS in Yemenite patients, but correlation of heavy Khat chewing with critical artery stenosis in unstable angina (UA) patients is not studied. The aim of this study is to define the epidemiological and clinical characteristics in UA patients included in this prospective clinical study. Based on the angiographic findings, patients with UA were classified into 2 groups: Group (I): patients with coronary stenosis ($\geq 70\%$), significant enough to require PCI or CABG, (n=213) and Group II (control) patients who had insignificant coronary stenosis ($\leq 50\%$), (n=42). Our results showed that group I patients were more likely to be males, elderly, with a prior history of CAD and MI, heavy khat chewers and in heart failure. Mean of age was 66.54 years, and 78.87 % were males. Age ≥ 65 years was found in 29.11%. Predictors of high risk CAD (critical stenosis) were found to be significantly in group I, compared to group II patients. We concluded that age ≥ 65 years, male gender, aspirin use and heavy Khat chewing during the last week, CCF with EF $<35\%$ and elevated Troponin were strong predictors for critical stenosis in UA patients.

Key words: unstable angina, clinical predictors, heavy khat chewing.

Introduction

Unstable angina (UA) and non ST elevation acute myocardial infarction (NSTEMI) account for approximately 2 million to 2.5 million hospital admissions annually worldwide. (10) Subsequently, the evaluation and management of patients with UA is an important clinical problem; determining the prognosis of disease is troubled by a wide variation in the definition of UA, duration of follow up and treatment differences. Moreover, unstable angina patients with high risk are at risk for death, myocardial infarction or recurrent ischemic events. (6, 7)

Since recent investigations have indicated that coronary angiography clearly predicts major cardiovascular events, angiography should be recommended only in high risk group who have more probability of significant coronary artery disease. (18) Certain clinical predictors, like age, cardiac biomarker positivity, ST segment depression and heart failure, can help effectively in predicting high risk group with significant coronary disease. Similar clinical predictors include duration of chest pain, age, cardiac biomarker positivity, ST segment depression in ECG, congestive heart failure (CHF). (11,19). Khat chewing is a significant risk factor for ACS in Yemenite patients, but correlation of heavy Khat chewing with unstable angina (UA) patients with critical artery stenosis, yet was not studied.

Our study aimed at defining the epidemiologic and clinical background in UA patients who have critical stenosis, detected by angiography. In Yemen, Khat chewing, in addition to other conventional risk factors, may play a role in provocation of ACS.

Chewing of khat (*Catha Edulis* Forskal) is a wide spread habit in Yemen and East African countries, due to its psycho stimulating effect. The most important gradients responsible for developing the cardiovascular effects of khat are phenylalkylamine cathinone, cathine and norephedrine with similar structure to amphetamine and noradrenaline. Cathinone has vasoconstrictor activity, which explains the increase in blood pressure (BP) and pulse rate (PR)

seen in humans, and might be related to the increased incidence of myocardial infarction occurring during khat sessions.(4) In Yemen, there are about 44 types of khat; as the quality estimation (cost) of every type depends on its cathinone content. (8)

Khat chewing is a significant risk factor for ACS in Yemeni patients, but correlation of heavy Khat chewing with critical stenosis in UA is not studied.

Objectives of study

- 1) To compare epidemiological and clinical findings in unstable angina patients who have critical stenosis on angiography with those same findings in patients who have insignificant stenosis.
- 2) To define predictors of extent coronary disease in patients with critical coronary stenosis.

Patients and Methods

Two hundred and fifty five (255) patients were involved in this prospective clinical study and guided by special protocols. They were diagnosed and followed up in a private clinic in Aden for 4years from January 2005 to January 2009, where the clinical and the noninvasive activities had been carried out. The invasive procedures were performed in Cardiac Surgery Center at Al-thawra Hospital in Sana'a. High and intermediate risk patients were admitted to intensive care unit at the clinic. Low risk patients were followed up in outpatient department (OPD).

Patients were diagnosed as suspected cases of unstable angina (UA), according to the Braunwald's clinical guidelines of UA from 1989, and revisited classification from 2000. Prior to coronary angiography, patients were classified according to the severity of the acute ischemic episode and the circumstances of the acute ischemic event.

Included and controlled patients

Regarding coronary angiography, patients were classified in 2 groups:

- Group I: patients who had coronary stenosis significant enough ($\geq 70\%$) to require percutaneous coronary intervention or CABG (n=213), and
- Group II: patients who had insignificant coronary stenosis ($\leq 50\%$), (n=42).

Group II is used as control to compare with patients in the study group (Group I), who had critical coronary stenosis.

We isolated and defined 3 subgroups within our Group I:

- Patients with two vessel disease,
- Patients with three vessel disease and
- Patients with left main stem stenosis.

The degree of CAD ,as determined by angiography was, classified as follows:

1. Insignificant coronary stenosis a) normal coronary angiogram; and b) mild stenosis ($< 50\%$ stenosis in one or more epicardial vessels)
2. Critical coronary stenosis:
 - a) Significant two-vessel CAD ($\geq 70\%$ stenosis in two major epicardial vessels);
 - b) Significant three-vessel CAD ($\geq 70\%$ stenosis in all three major epicardial vessels);
 - c) Significant left main CAD ($\geq 50\%$ stenosis of the left main coronary artery).

Cases with significant single vessel disease were excluded.

Regarding khat chewing, patients were included according these criteria

1. Patients with history of daily Khat chewing with a duration ≥ 2 years, and for an interval ≥ 3 hours.
2. Patients with history of heavy Khat chewing with increase of amount, quality and interval of chewing.

Patterns of Khat chewing were considered according to WHO studies.

Heavy Khat chewing: This is referred to as the increase of amount, quality and interval of chewing

- **Amount:** ≥ 2 bands of fresh khat leaves, as 1 band weighs ≥ 200 grams

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- **Quality:** according to W H O guides, expensive Khat is referred to sorts with high levels of amphetamine like compounds of khatcathinone and cathine
- **Interval of chewing** > 3 hours of daily consumption

Excluded patients

Patients were excluded from both groups under the following circumstances:

- Patients with one vessel disease
- The presence of ST-segment-elevation myocardial infarction (STEMI)
- False diagnosis of STEMI as indicated by pacemaker rhythm or bundle-branch block upon electrocardiography (ECG);

Statistical analysis

Descriptive statistics are presented as percentages, means, and standard deviations (SDs). Two sample Student's t tests were performed for between-group comparisons of continuous variables and chi-square tests for categorical variables. Variables included in the protocol were sex, age, history of MI, prior PCI or CABG, DM, hypertension, dyslipidemia, history of heavy Khat chewing during UAor before attacks, heavy Khat chewing during last week prior to presentation, smoking, double vessel disease, triple vessel disease and left main disease. Data were analyzed using the medical statistical program EPI-INFO version 0.8. P <0.05 was considered statistically significant.

Results**Basic historical data**

As shown in Table 1, Group I consisting of 213 patients were more likely to be male older, with a prior history of CAD and MI, congestive heart failure and coronary revascularization. The mean of age was 66.54 years. Males were 78.87 % and females -were 31.13%.the age \geq 65 years was found in 29.11%. This group was divided to three subgroups according the number of involved vessels: a) patients with two vessel disease, b) patients with triple disease, and c) patients with left main stem stenosis.

In contrast, group II patients (n=42) were more likely to be female, younger, without prior history of MI, without congestive heart failure and coronary revascularization. The mean of age was 54.66 years. Males were 16.67 % and females- were 83.33%.the age \geq 65 years was found in 7.14%. (Table 1)

Women comprised 31.37 % of all investigated patients: 80 were women of all 255 patients. It was found that females account about 83% of patients, with insignificant stenosis v/s 21% of patients with critical stenosis.

As shown in Table 2, patients with critical stenosis, compared with those with non-significant stenosis, had higher rates of acute resting angina (class III), primary and post MI-angina. Class I (severe episodic not resting angina) and subclass A (secondary angina) were more frequent among Group II patients. Causes of secondary angina were anemia, hypotension, chronic obstructive airway diseases and thyrotoxicosis.

Laboratory cardiac markers

Elevated CK-MB, troponin I or T were considered, in absence of MI-criteria, including ECG criteria. Our study showed an increasing frequency of elevated levels of troponin I or T and CRP in patients with critical stenosis, compared with patients with non-significant stenosis. Table 3 demonstrates the frequency of main laboratory parameters in the two groups of patients. Dyslipidemia was slightly less frequent in Group I patients, compared to Group II patients. In contrast, Group I patients showed an increasing mean value of triglycerides, especially in the diabetic patients.

Electrocardiographic analysis

Analysis of the ECG (Table 4) for the presence of ST-segment depression (Group I, 112 [52.58%] versus Group II, 10 [23.81%]) and the presence of T-wave inversion (Group I, 110 [54.46%] versus Group II, 11 [26.19%]) revealed insignificant differences. However, new ST

elevation was less frequent among Group I patients: 22.7% versus 33.33% among Group II patients without statistically significant differences.

Echocardiographic assessment

As shown in Table 5, the results of the echocardiographic assessment showed that segmental hypokinesia was found in 37% of patients, with critical stenosis v/s 33% of patients, with non-significant stenosis and with statistically no significant difference. Global hypokinesia was found only in 75 (35.21%, p value=0.001) patients with critical stenosis, and with mean ejection fraction (EF) of 32.18%. This condition of left ventricular dysfunction was associated with the development of heart failure in these patients, which varies from moderate to severe form, including pulmonary edema.

Table 1: History of UA patients with critical coronary stenosis, in compare to patients with non-significant stenosis

Historical parameter	Patients with critical stenosis (N1 =213) n1 (%)	Patients with non-significant stenosis (N 2 =42) n2 (%)	Total (N=255) N*(%)	P-value
History of CAD	155 (77.7%)	14 (33.33%)	169 (66.27%)	0.011
History of MI	92 (43.19%)	3 (7.14%)	99 (38.82%)	0.002
History of CABG	14 (6.57%)	0 (0.0%)	14 (4%)	0.0001
History of PCI	86 (40.38%)	3 (7.14%)	89 (34.90%)	0.0001
Mean of age	66.54 years	54.66 years	60.60 years	0.011
Age ≥ 65 years	62 (29.11%)	3 (7.14%)	65 (25.49%)	0.001
Male gender	168 (78.87 %)	7 (16.66%)	175 (68.63%)	0.0001
Three or more major risk factors	140 (65.73%)	6 (14.29%)	146 (57.25%)	0.001
DM	104 (48.83%)	14 (33.33%)	118 (46.27%)	0.04
AHT	130 (61.03%)	17 (40.48%)	147 (57.65%)	0.001
Hyperlipidemia	86 (40.38%)	18 (42.86%)	104 (40.78%)	0.1
Smoking	104 (48.83%)	14 (33.33%)	118 (46.27%)	0.04
Aspirin use during the last week	153 (71.83%)	14 (33.33%)	167 (65.49%)	0.02
Khat chewing	168 (78.78%)	12 (28.58%)	180 (70.50%)	0.01
Heavy Khat chewing prior to attacks	86 (40.38%)	3 (7.14%)	89 (34.90%)	0.0001
Heavy Khat chewing during last week	106 (49.77%)	3 (7.14%)	109 (42.75%)	0.0001

Note: N1= number of patients with critical stenosis, n1= number of patients with critical stenosis, with positive findings, N2= number of patients with non-significant stenosis, n2 = number of patients with non-significant stenosis with positive findings, N= total number of patients, N*= total number of patients with positive findings.

Table2: Clinical presentation of patients with critical stenosis, according to the Braunwald's Classification of UA

Clinical Parameter	Critical Stenosis N1=213		Non-significant Stenosis N2 =42		Total N=255 (%)
	n 1	%	n 2	%	
Class I (Severe not resting angina)	21	9.86	30	71.43	51 (20%)
Class II (Sub-acute rest angina)	73	34.27	10	23.81	83 (32.55%)
Class III (Acute rest angina)	119	55.87	2	4.76	121 (47.45%)
Subclass A (Secondary angina)	44	20.66	30	71.43	74 (29.20%)
Subclass B(Primary angina)	150	70.42	8	19.05	158 (61.96 %)
Subclass C (Post MI angina)	19	8.92	4	9.52	23 (9.02%)

Note: N1= number of patients with critical stenosis, n1= number of patients with critical stenosis, with positive findings, N2= number of patients with non-significantstenosis, n2 = number of patients with non-significantstenosis with positive findings.

Table3: Laboratory Cardiac Markers in UA patients with critical coronary stenosis

Laboratory Cardiac Markers	Critical stenosis (n1, %)	Non-significantstenosis (n2, %)
Elevated Troponin I or T	78 (36.62%)	3 (07.14%)
Elevated CRP	121 (56.81%)	7 (16.67%)
Dyslipidemia	86 (40.38%)	18 (42.86%)
Mean total cholesterol	260.80 mg/dl	241.66 mg/dl
Mean LDL	151.31 mg/dl	156.66 mg/dl
Mean Triglycerides	238.69 mg/dl	180.25 mg/dl
Mean Triglycerides in diabetics	275.00 mg/dl	238.50 mg/dl

Table4: ECG markers in USA patients with critical coronary stenosis

ECG Markers	Significantstenosis (n1, %) n1=213	Non-significantstenosis (n2,%) n2=42	Total (N, %) N=255
New ST depression > 0.05 mV	112 (52.58%)	10 (23.81%)	122 (47.84%)
New ST elevation > 0.05 mV	44 (22.72%)	14 (33.33%)	58 (22.75%)
T wave inversion ≥ 0.1 mV	116 (54.46%)	11 (26.19%)	127 (47.80%)
Arrhythmias	115 (53.99%)	11 (26.19%)	126 (49.41%)

Tab 5: Echocardiographic parameters in UA patients with critical coronary stenosis, compared with those with insignificantstenosis

Echocardiographic parameters	Critical stenosis (n1, %)	Non-significantstenosis (n2, %)	P value
Segmental hypokinesia	78 (36.62%)	14 (32.%)	0.1
Global hypokinesia with EF< 35%	75 (35.21%)	0 (00.00%)	0.001
Mean ejection fraction (EF%)	32. 18%	49.16%	--

Correlation between epidemiological, clinical, paraclinical markers and coronary angiographic findings within Group I patients

As shown in Table 6, patients with critical stenosis involved 213 individuals, as 104 patients presented on angiography with two vessel disease, 81 within triple vessel disease and 28 of them with left main stem stenosis (LMS).

Categorization of patients, according to Braunwald's clinical classification (Table 6), showed double vessel disease to be higher in class II as compared to class III (50% vs 29.8%; p = 0.03) and class I (50% vs 20.19%; p < 0.01). Double vessel disease was found to be higher in subclass B as compared to class A (69.23% vs 28.85%; p = 0.01). Three vessel disease were higher in class III as compared to class II (74.8% vs 25.9%, p = 0.001). Three - vessel disease incidence was higher in class B as compared to class A and C (72.84% vs 13.58%; p = 0.001).

Left main stem stenosis (LMS) was exclusively characterized by involving class III (n=28, 100%), with the absence of classes I & II. LMS was found to be higher in subclass B as compared to class C (67.86% vs 21.43%; p = 0.01) and class B (67.86% vs 10.71%, p = 0.01). The mean of age was 63.9 years, 66.9 years 68.9 years with double vessel disease, three vessel disease and left main stem stenosis respectively.

The age > 65 years, male gender and diabetes were found to be higher in left main stem stenosis and three vessel disease. (Table 6)

New ST depression, T wave inversion, EF < 35% & elevated Troponin were found to be higher in left main stem stenosis and three vessel disease.

Khat chewing was seen in all subgroups but heavy Khat chewing, during or before attacks, was found more frequently in LMS, compared to triple vessel disease (85.7% vs 54.3%) and double vessel disease (85.7% vs 17.37%) (P=0.01).

Table 6: Correlation between epidemiological, clinical, paraclinical markers and coronary angiographic findings within Group I patients

Parameter	Double vessel disease (n=104)	Three vessel disease (n=81)	Left main stem stenosis (n=28)	P value
Class I	21 (20.19%)	0 (0.0%)	0 (0.0%)	0.001
Class II	52 (50%)	21 (25.93%)	0 (0.0%)	0.01
Class III	31 (29.81%)	60 (74.07%)	28 (100%)	0.03
Secondary UA	30 (28.85%)	11 (13.58%)	3 (10.71%)	NS
Primary UA	72 (69.23%)	59 (72.84%)	19 (67.86%)	NS
Post-infarct UA	2 (1.92%)	11 (13.58%)	6 (21.43%)	NS
Mean age (years)	63.90	66.86	68.87	NS
Age > 65 years	21 (20.19%)	27 (33.33%)	14 (50%)	0.02
Male gender	74 (71.15%)	66 (81.48%)	28 (100%)	0.04
DM	49 (47.12%)	39 (48.15%)	16 (57.14%)	NS
EF < 35%	20 (19.23%)	33 (40.74%)	22 (78.57%)	0.01
New ST depression > 0.05 mV	35 (33.65%)	56 (69.14%)	21 (75.00%)	NS
T wave inversion ≥ 0.1 mV	38 (36.54%)	55 (67.90%)	23 (82.14%)	NS
Elevated troponin	30 (28.85%)	36 (44.44%)	22 (78.57%)	0.02
Heavy Khat chewing prior to attacks	18 (17.37%)	44 (54.32%)	24 (85.71%)	0.01
Heavy Khat chewing during last week	19 (18.27%)	59 (72.84%)	28 (100.00%)	NS

NS* = Not significant

Discussion

Patient's characteristics

Our study aimed at defining the clinical predictors of critical coronary stenosis, including predictors of severity or extent of unstable angina. For this purpose, 213 UA patients (Group I) with angiographically critical coronary artery stenosis were evaluated and compared with 42 patients who have insignificant stenosis (Group II).

Regarding Braunwald's clinical guidelines of UA, all of our investigated historical parameters were of great value, not only for diagnosis, but also for early risk stratification of patients with unstable angina. Such predictors were known: history of CAD, MI, CABG, PCI, age > 65 years, male gender, diabetes, aspirin use during the last 3 months, history of more than 2 major risk factors and others.

Significant differences between these 2 groups of patients were found in terms of age, sex, history of previous myocardial infarction, and history of CAD or PCI, and with regard to Khat chewing.

Group I patients were significantly older and more often males, and they had more cardiovascular risk factors. Diabetes and smoking were more frequent among these patients. Significantly, more Group I patients had history of aspirin use during the last week, but dyslipidemia slightly was more frequent among Group II patients.

Khat chewing was found more frequently in patients with critical stenosis (Group I). Furthermore, a significant portion of patients with a history of Khat chewing had experienced the ischemic attack during chewing or several hours after scission of chewing.

Certain predictors were found to be significantly higher in group I, compared to group II patients. These include known history of, MI, CABG, age \geq 65 years, male gender, aspirin use during the last week, heavy Khat chewing during the last week, class III, subclass B, CCF with EF < 35% & elevated Troponin, (P value = < 0.01).

In contrast, other predictors-like diabetes, AHT, smoking, ST elevation and T wave inversion were found to be higher in group I, but with statistically less significant difference, compared to group II patients.

Our findings were consistent with data of a recent study; published during 2015, which showed that, among the various clinical predictors of the severity of UA, the use of aspirin, age \geq 65 years and presence of CHF were stronger predictors of Modified Gensini score. Presence of elevated enzymes and age > 65 years were more significant predictors of percentage stenosis of culprit artery. (14)

Regarding correlation between Braunwald's classes and angiographic severity, our findings also were consistent with recent studies performed in different Arab countries. (2, 9) The highest level of Braunwald's classification of unstable angina can be used to assess the severity of clinical presentation in correlation with angiographic findings showing severe coronary disease. (9)

Regarding the clinical profile of patients with NSTEMI/UA and triple vessel disease, our findings were concordant with new original studies. (24, 13) In a large Chinese clinical angiographic study, involving 17061 patients with three vessel disease, unstable angina was identified as an independent risk factor for reduced left ventricular (LV) function. (13) Previous history of MI, male gender and DM were also significant correlates of reduced LV function in patients with three vessel disease. (13) Our data showed that 35% of patients with significant stenosis were with reduced EF, compared with none of patients with insignificant stenosis. Among group I patients, reduced EF was found more in patients with LMS and three vessel disease.

Heavy Khat chewing

Previous studies have reported the association between khat chewing and ACS, regarding clinical characteristics and outcome of khat chewers. However, among these studies, none have

included a sufficient number of UA patients, presenting with heavy khat chewing, during or before attacks. (24, 1)

In our study, we investigated the phenomenon of heavykhat chewing related to extend interval, quality and amount of chewed fresh khat leaves, and its relation to UA attacks and clinical & angiographic impact.

Group I patients were found to be higher in heavykhat chewing during or before UA attacks, compared to Group II patients (40.38% vs7.14%, p value=0.001). Group I patients were found to be higher in heavykhat chewing during last week, compared to Group II patients (49.77% vs7.14%, p value=0.0001).

Comparing these khat markers between the 3 subgroups, patients with LMS were found to be higher in heavykhat chewing, during or before attacks, compared to triple disease and double vessel disease (85.71 % vs 54.32% vs 17.37 % respectively). Patients with LMS were found to be higher in heavykhat chewing, during or before the last week, compared to triple disease and double vessel disease (100% vs 72.84% vs 18.27% respectively). These data indicate that at near future more attention should be given to study the role of heavy khat chewing as predictor of severity or extent of disease.

The pathophysiological mechanisms of khat related to induction of ACS were discussed and analyzed by different references. Analyzing our data, we accept the following as main pathophysiological mechanisms:

1. Khat induced tachycardia and arterial hypertension

Cathinone has been shown to increase heart rate and blood pressure in animals and human studies, and this increase seems to concur with elevated plasma levels of cathinone, while some investigations suggested that this effect was mediated by β_1 -adrenergic receptors (17). Others found that blood pressure remains elevated for about 3 hours after 1 hour of chewing about one quarter of a traditional khat-session dose. (21) Consequently, these effects might increase myocardial oxygen demand and precipitate ACS.

2. Khat induced coronary vasospasm

Khat-induced coronary spasm is initially supported by the fact that different sympathomimetic substances like amphetamine, cocaine, and 3, 4-methylenedioxymethamphetamine, which are structurally and/or functionally similar to cathinone, are believed to increase the risk of ACS through the induction of coronary artery spasm. (23) However, through khat animal studies, it was found that cathinone infusion produces a marked vasoconstriction of the coronary vasculature of isolated guinea pig hearts. (5) Remarkably, cathinone-induced coronary vasoconstriction of porcine arteries was not blocked by the α_1 -adrenoceptor antagonist prazosin or by the neuronal uptake inhibitor cocaine. (7)

3. A cathinone effect of catecholamine-induced platelet aggregation

This action of cathinone was suggested to be mediated by releasing catecholamines, and β_2 -adrenoergic effect. (16) Different cases of ACS, related to thrombus formation, were demonstrated in khat chewers. (12, 20) Recently, a significant reduction in bleeding time with aspirin use was reported among khat chewers with acute MI, compared with non-khat chewers. (3)

Categorization of predictors of critical coronary stenosis

Finally, analyzing the above data, the investigated predictors can be categorized in three groups:

First, predictors of critical stenosis may include those showing a significant difference between the study group and control, like history of a MI, CABG, age ≥ 65 years, male gender, aspirin use during the last week, heavy Khat chewing during the last week, class III, subclass B, CCF with EF<35% & elevated Troponin, (P value ≤ 0.01).

Second, predictors of extent disease may include those showing a significant difference between the three subgroups of group I, like age ≥ 65 years, aspirin use during the last week, heavy Khat chewing during the last week, class III, CCF with EF<35% & elevated Troponin and Third, predictors like DM, arterial hypertension, smoking, ST elevation and T wave inversion were found

to be higher in group I, with less significant difference, compared to group II patients. Consequently, these predictors could not affect the severity of disease.

Our study is probably one of the few investigations which compare the various clinical predictors, as well as heavy khat chewing in relation to angiographic severity and extent of disease in ACS. This study is also different from previous studies as khat chewing was investigated in details and closely related to UA attacks, clinical classes and angiographic subgroups.

We suggest that our study will provide some novel insights that may be clinically practical upon initial patient assessment and early précised risk stratification.

Conclusions

1. MI, age \geq 65 years, male gender, aspirin use during the last week, heavy Khat chewing during the last week, class III by Braunwald's classification, CCF with EF<35% & elevated Troponin are strong predictors for critical stenosis in UA patients.
2. Age \geq 65 years, aspirin use during the last week, heavy Khat chewing during the last week, CCF with EF<35% and elevated Troponin are seem to be predictors of extent disease, showing a significant differences between the three subgroups of group I patient.

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المميزات السريرية والوبائية لمرضى الذبحة الصدرية الغير مستقرة مع انسداد متقدم

للشرايين الإكليلية المكتشف بالقسطرة الوعائية

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الملخص

لقد اثبتت مؤشرات سريرية محددة مثل العمر و زيادة نسبة الإنزيمات القلبية و هبوط مقطع ST و قصور القلب الاحتقاني دورا في التنبؤ بالمجموعات الأكثر تعرضاً لخطر الإصابة ب انسداد حرج للشرايين الإكليلية. يعد مضغ القات عامل مخاطرة للإصابة بالمتلازمة الإكليلية الحادة عند المرضى اليمينيين المتعاطين لهذه النبتة، لكن ارتباط الإفراط في مضغ القات بالذبحة الصدرية غير المستقرة و الانسداد الإكليلي المتقدم لم يدرس حتى الآن. كان هدفنا تحديد المميزات السريرية والوبائية (السكانية) لمرضى الذبحة الصدرية غير المستقرة مع انسداد متقدم للشرايين الإكليلية المكتشف بالقسطرة الوعائية مقارنة بأولئك المرضى الذي لم يظهر لديهم انسداد محسوس. لذا شملت الدراسة 250 مريضاً، حيث تم تقسيمهم تبعاً للقسطرة الوعائية الى مجموعتين. في حين تشمل المجموعة الاولى 213 مريضاً مصابين بانسداد متقدم (حرج) بنسبة أكبر من 70% حيث يستدعي تدخلاً لأجراء قسطرة وعائية او عملية فتح قلب، تضم المجموعة الثانية 42 مريضاً مصابين بانسداد غير مهم (بنسبة اقل من 50%). اشارت نتائج الدراسة الى ان المجموعة الأولى تتميز بأنها تضم على الأغلب مرضى ذكوراً متقدمين في السن، لديهم تاريخ مرضي سابق لداء احتشاء القلب او نقص التروية القلبية، الإفراط في تعاطي القات وتزامن الإصابة بقصور قلب احتقاني بمتوسط العمر 66.54 عاماً، نسبة الذكور 78% اما الإناث حوالي 31%. خلصت الدراسة الى أن عوامل مثل العمر المتقدم أكثر من 65 عاماً، زيادة نسبة الإنزيمات القلبية والإفراط في تعاطي القات و تزامن الإصابة بقصور قلب احتقاني تعد مؤشرات قوية للتنبؤ بالانسداد المتقدم للشرايين الإكليلية لدى مرضى الذبحة الصدرية الغير مستقرة.

الكلمات المفتاحية: الذبحة الصدرية الغير مستقرة، مؤشرات تنبؤ سريرية، فرط تعاطي للقات.