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A secret unmapped-Clinical features and outcomes in Young Asian females with ST Elevation Myocardial Infarction (STEMI).

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Objective:

Studies show that young women with STEMI fare worse than men¹ and are usually underrepresented in studies done on coronary heart disease.² Limited data exists for these patients, in particular for South Asians. Therefore, this study evaluated the common risk factors, angiographic features and outcomes in these patients.

Methods:

It was a cross-sectional study done from 2013-2019 on female STEMI patients ≤ 45 years who underwent immediate Coronary Catheterization and revascularization at Aga Khan University Hospital, Karachi, Pakistan. Patients with prior MI or revascularization were excluded. Details of risk factors, Coronary lesions and outcomes were noted.

Results:

There were 23 patients in total. Median age was 41. Mean BMI was 27.4 (± 5.1) kg/m² with 50% of patients with BMI ≥ 27 kg/m².

Seventy-four percent patients had elevated sugars (pre-diabetes/Diabetes) and of those, 53% had uncontrolled diabetes. LDL was elevated in majority but lab values were missing for a significant amount of patients. Positive family history was seen in one-fourth, Hypertension in 8 patients and smoking in none. Details can be seen in figure 1.

Figure 1: Risk factors in Young females with STEMI

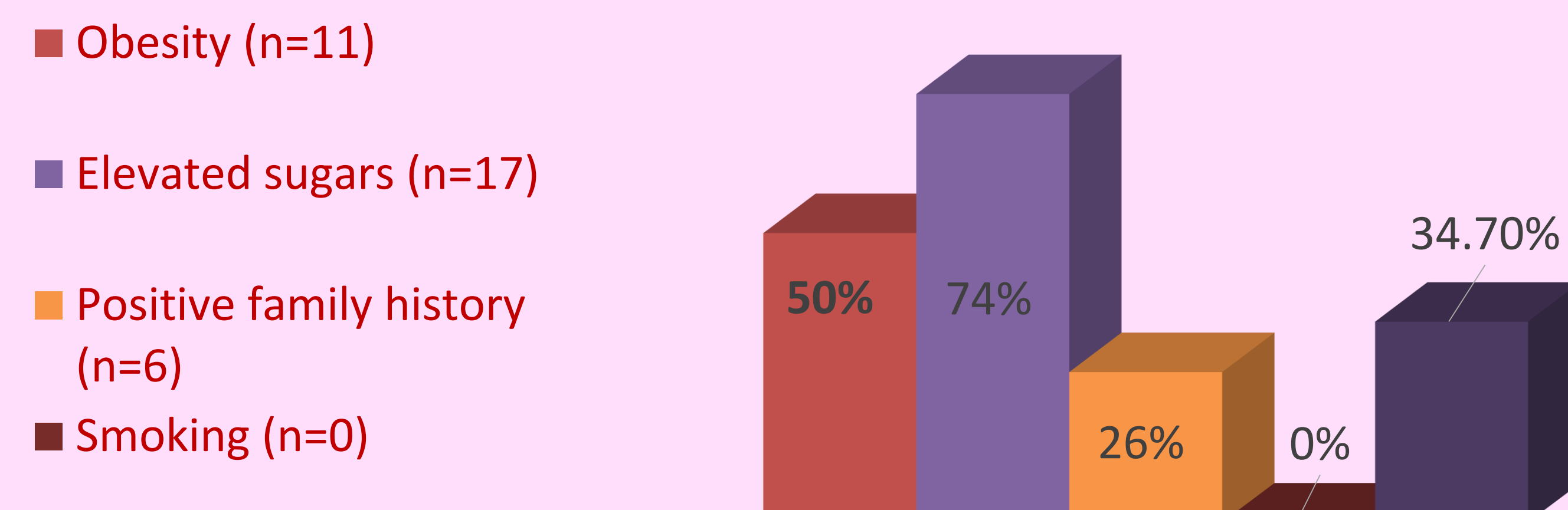
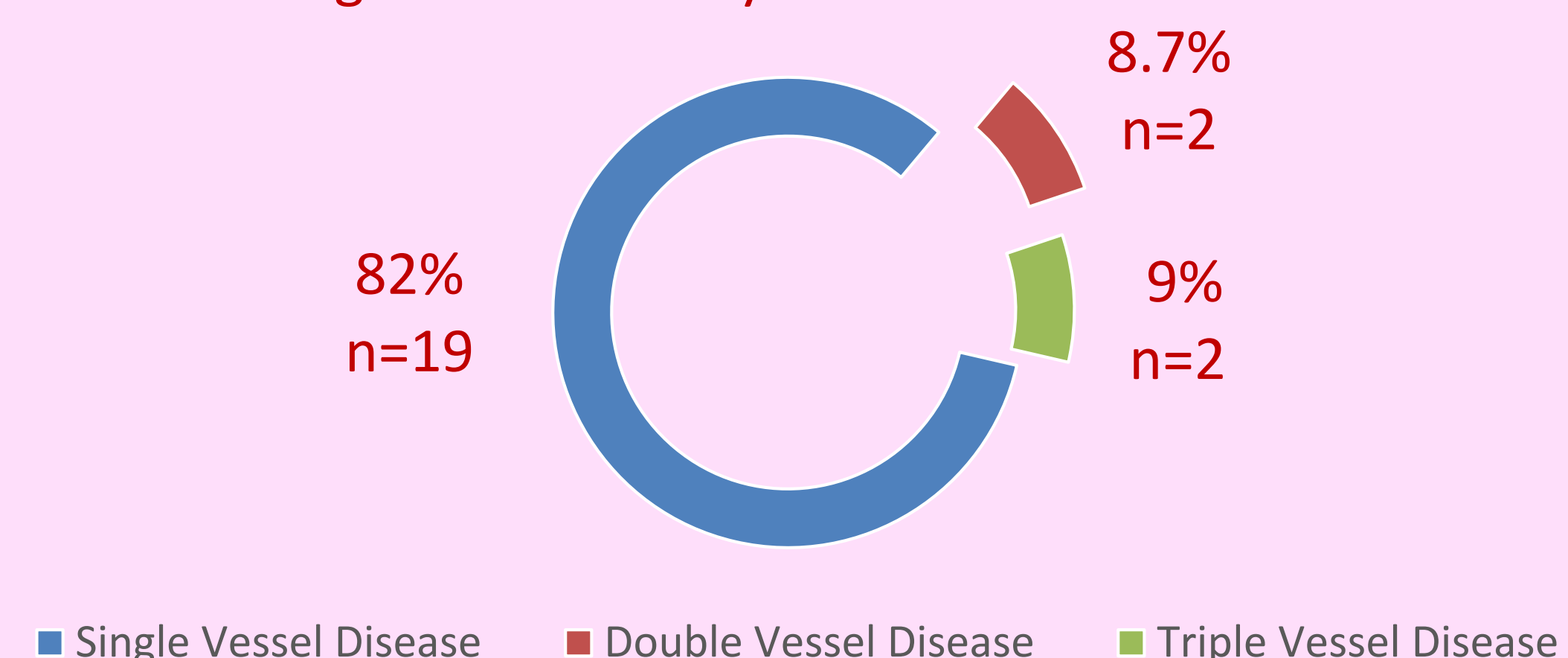


Figure 2: Coronary Disease distribution

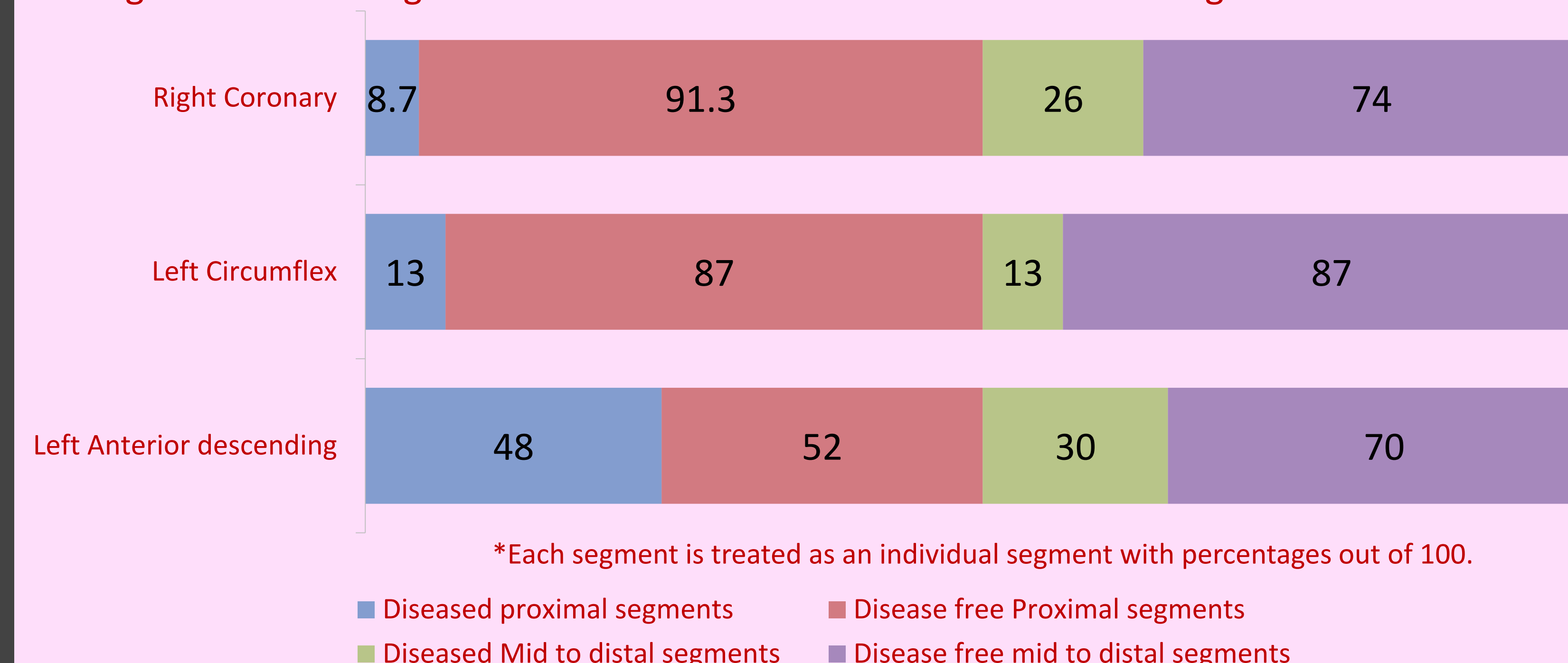


Eighty-two percent (n=19) patients had Single, 8.7% (n=2) had double and 8.7% (n=2) had triple vessel disease. (figure 2). Of these, 73.9% (n=17) had lesion in Left anterior descending (LAD)/Diagonal. Of all patients with LAD disease, 47.8% (n=11) lesions were between Ostial and proximal segments and 30.4% (n=7) from mid to distal. Right coronary/ Posterior descending artery was involved in 30.4% (n=7). Of all patients with RCA disease, 8.7% (n=2) lesions were between Ostial and proximal segments and 26.1% (n=6) lesions between mid to distal. Left circumflex/Obtuse Marginal was involved in 21.7% (n=5). Of all patients with LCx disease, 13% (n=3) had disease between Ostial and proximal segments and 13% (n=3) from mid to distal.

Proximal LAD lesions required stents 27.6 (± 10) mm long and 3.0 (± 0.4) mm wide on average. Mid or distal LAD lesions required stents as long as 21.7 (± 4.7) mm or as wide as 2.4 (± 0.3) mm.

Mortality was seen in one patient as was temporary pacing, Intubation, Cardio-pulmonary resuscitation and stroke. Two patients had heart failure and cardiogenic shock.

Figure 3: Percentages of disease distribution at each individual segment*



Conclusions:

Almost two-third young female STEMI patients had elevated sugars followed by high risk BMI. Three-fourths had Single vessel disease. LAD was the commonest culprit vessel with Proximal LAD being most common site. Longer stents were usually required for treatment representing longer lesion length.

References:

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