



Research Article

Impact of the Israeli attacks at 2014 on incidence of STEMI in Gaza

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Background

For 51 days, Gaza was pummeled down by the Israeli military in a war known as Operation Protective Edge. During the 50 days (7-7-2014 to 28-8-2014) of the Israeli campaign, 2104 Palestinians were killed, including 253 women (12%) and 495 children (24%). According to the UN, at least 69% of Palestinians killed were civilians. It is estimated that 10,224 Palestinians, including 3,106 children (30%) and 1,970 women (19%) were injured. Preliminary estimates indicate that up to 1,000 of the children injured will have a permanent disability and up to 1,500 orphaned children will need sustained support from the child protection and welfare sectors, 17,200 homes destroyed or severely damaged, 58 hospitals and clinics damaged [1]. Major stressful events are well documented to increase the incidence of acute cardiac events [2]. Cardiovascular complications more than doubled during the FIFA World Cup games of 2006 [3]. After the September 11 terrorist attacks, significantly more patients presented with acute myocardial infarction to the hospitals in Brooklyn [4] and New Jersey [5]. We were able to examine the effects of the Israeli attacks on acute STEMI presentations in Gaza city.

Methods

The Shifa Hospital Admission Registry was used to calculate number of patients admitted to the Coronary Care Unit (CCU) with the diagnosis of ST Elevation Myocardial Infarction (STEMI) between 30 March and 04 December for the years 2013 and 2014. Israeli attacks on Gaza occurred between 08 July 2014 and 28 August 2014. The period between 30 March 2014 and 07 July 2014 represents 100 days preceding the initiation of the attacks, and the period between 29 August 2014 and 04 December 2014 represents 100 days following the cessation of the attacks. The corresponding time periods from 2013 were used as control periods.

Results

A total of 215 STEMI patients (34 Female; 15.8%. mean age 58.3 ± 10.2 years) were admitted to the Shifa Hospital CCU between 30 March 2014 and 04 December 2014, while 187 STEMI patients were admitted for the same time period in 2013 (32 female, 17.3%, 57.8 ± 9.8 years) (Table 1).

This represents an overall increase of 21.5% in frequency of STEMI admissions from 2013 to 2014.

Table 1: Baseline characteristics of patients.

	2014	2013
Total	215	187
Age : mean± SD	58.3±10.2	57.8±9.8
Sex: female	34 (15.8%).	32 (17.3%)

For the 100-day period before the attacks (30 March to 07 July), the frequency of STEMI admissions remained similar (P value= 0.98) for the two years: 71 STEMI admissions were observed for 2014 and 68 STEMI admissions were observed for 2013.

A marked increase was observed in the frequency of STEMI admissions when the attack period (08 July to 28 August) was compared for the two years. A total of 58 STEMI patients were admitted to the CCU in 2014 for the attack period, compared to only 35 in 2013, representing a 65.7% increase in 2014 compared to 2013. This increase in frequency was found to be statistically significant (P <0.05). (Chi-square value=4.0589; P value= 0.0439).

For the 100-day period following the attacks (29 August to 04 December), a total of 86 STEMI patients were admitted to the CCU in 2014 compared to 74 in 2013, an increase of 16.2% which was not statistically significant (P value=0.13).

Conclusion

A significant increase in the frequency of STEMI admissions was observed in Gaza during the Israeli attacks in 2014. The difference did not appear to be due to temporal variation.

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