reports in adults of 42.9%,[1] however, there is no record of striae distensae among obese children. Previous reports demonstrate intertrigo among obese individuals,[4] and we similarly observed this in the present work, as we found intertrigo higher in obese versus normal adult individuals and children. Dry skin was a common problem found more in the obese individuals, mainly affecting cheeks, dorsa of the hands, feet, and legs. This observation was not noticed before, and we could find no clear explanation. We found hyperhidrosis high in obese individuals, when compared to overweight and normal weight children, and similarly found in adult obese in comparison with normal weight individuals. Previous reports confirm this.[5] Previous studies found skin infections, mainly in the form of boils, wart, tinea cruris, and erythrasma increased among obese individuals.[1] While in the present work although they did not reach statistically significant levels, we found more in obese individuals than normal weight individuals, apart from erythrasma, which was significantly high in adult obese individuals. The association between hirsutism and obesity was not be clear the in literature, and often hirsutism had been reported to be high in obese females with PCOS.[3] Similarly, in the present work, although it did not reach a statistically significant level, we found more in adult obese females than normal weight females.

The excessive fat deposition that leads to thickening of the fatty layer all over the body deserves the term adipomegaly, rather than obesity as it is more scientific, academic, and more socially and publically accepted.

In conclusion, skin manifestations are a common problem, and important markers of obesity reflecting impaired metabolism, especially acanthosis nigricans, skin tags, and planter hyperkeratosis.

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References

1. Garcia HL. Dermatological complications of obesity. ***Am J Clin Dermatol*** 2002; 3: 497-506.
2. Cruz PD Jr, Hud JA Jr. Excess insulin binding to insulin like growth factor receptors; proposed Mech for Acanthosis Nigricans. ***J Invest Dermatol*** 1992; 98: 82-85.
3. Sharquie KE, Al-Bayatti AA, Al-Zaidi QM, Al-Bahar AJ. Acanthosis nigricans as skin manifestation of polycystic ovarian syndrome in primary infertile female. ***Middle East Fertility Society Journal*** 2004; 9: 136-139.
4. Ive FA. The umbilical, perianal and genital regions. In: Champion RH, Burton DA, Burns SM, editors. Breathnach. Rook textbook of Dermatology. 6th ed. London: Blackwell Science Ltd.; 1998. p. 3167-3168.
5. Sato K, Kang WH, Saga K. Biology of sweat glands and their disorders. ***J Am Acad Dermatol*** 1989; 20: 537-563.

Prescribing pattern of angiotensin-converting enzyme inhibitors and beta blockers after acute myocardial infarction

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In recent years, many clinical trials suggested using certain medications such as beta-blockers (BB), angiotensin converting enzyme inhibitors (ACE-I), low dose aspirin, and statins to reduce morbidity and mortality after acute myocardial infarction (AMI). Since the 1980s, we have known the clinical benefits of BB post AMI. Angiotensin converting enzyme inhibitors are also useful in managing asymptomatic and symptomatic left-ventricular dysfunction (LVD), and thus preventing the development of cardiac remodeling process after AMI.[1] Lipid lowering agents, in particular statins decrease the risk of coronary events and total mortality in patients after myocardial infarction.[2] Previous randomized trials illustrate the significant reductions of mortality rate in patients receiving aspirin for secondary prevention after AMI.[3] To evaluate the impact of these clinical trials and evidence based medicine on physician practice pattern, we examined the trends in the use of BB, ACE-I and other medication therapy in patients discharged after AMI. We tried to identify clinical factors associated with ACE-I prescribing patterns.

The data were collected from Al-Watani Governmental Hospital in Nablus, Palestine from January to December 2004. The medical files of patients admitted to the ICU and diagnosed with AMI were reviewed and analyzed. An ECG, enzymes, and symptoms confirmed the diagnosis of AMI. Data obtained from medical files included age, gender, medical history, blood pressure, heart rate, myocardial infarction (MI) type and left ventricular ejection fraction (LVEF). The use of medications at admission and discharge was also obtained. The major dependent variable analyzed in this study was whether ACE-I or BB was prescribed at hospital discharge or not. The clinical factors associated with ACE-I and BB prescribing were also analyzed. The other 2 important factors in this study considered were MI type and LVEF, due to their important roles in determining appropriate treatment. All data were analyzed using statistical package for social sciences (SPSS) version 11. For statistical significance, chi-square test and cross tabulation were used.

We identified 174 patients with AMI. Twenty-three patients (13.2%) died during hospitalization and were excluded. The mean age of patients was 61.7 years, and the majority was male (72%). Analysis of risk factors predisposing the patients to AMI, among the studied sample, showed that more than half of the patients were men above 60 years old and mostly smokers. Approximately one-third of the patients were hypertensive, and 40% were diabetics. Low dose aspirin and BB were the most common medication prescribed at discharge. On admission, approximately 93% of patients were given both low dose aspirin and heparin as an anticoagulant. Calcium channel blockers were given at a higher rate on admission than at discharge (data not shown). Regarding BB, the rates of prescribing on admission were 79.5% while at discharge were 85.4%, with no statistical difference. Of all the patients included, only 22.4% were prescribed ACE-I at discharge. Neither gender, nor hypertension or the type of MI has a significant effect on prescribing ACE-I at discharge. However, ACE-I prescribing was significantly more common among diabetic patients, in patients with history of heart failure, and in patients with an LVEF less than 40%. Analyses of medications at discharge showed that patients prescribed calcium channel blockers or digoxin were more likely to receive ACE-I therapy at discharge. In contrast, patients prescribed with BB were less likely to receive ACE-I therapy at discharge. Of all the patients included, 129/151 (85.4%) were prescribed with BB at discharge. The presence of diabetes mellitus (DM) and MI had no significant effect on prescribing BB. However, BB prescribing was significantly more common among patients with an LVEF >40%, in patients with no heart failure, in patients with high blood pressure and in patients prescribed with neither CCB nor ACE-I (**Table 1**). All patients included were prescribed with low dose of 100 mg aspirin; none were prescribed anti-hyperlipidemic statin drugs while 10/151 (6.6%) patients were prescribed CCB. Temporal analysis showed that the prescribing of ACE-I or BB did not change with time during 2004, suggesting that changes in prescribing pattern are usually slow throughout the year.

We undertook this study to determine if, in Palestine, we have practically adopted the established clinical recommendations and evidence-based medicine for treatment after MI. We used physician's prescribing patterns of ACE-I and BB at discharge after MI as the main parameter of assessment, and concluded that there is a low post-infarction prophylactic used of ACE-I while a high post-infarction prophylactic used of BB. Unfortunately, there are no previous studies carried out in Palestine regarding postinfarction prophylactic drugs to compare the current data. Although we found BB

Table 1 - Influence of various clinical factors on the rate of ACE-I and BB prescribing at discharge after acute myocardial infarction.

Variable	ACE-I prescribed at discharge	ACE-I not prescribed at discharge	BB prescribed at discharge	BB not prescribed at discharge
BP				
High	12/51 (23.5)	39/51 (76.4)	44/51 (86.3)	7/51 (13.7)
Normal	23/100 (23)	77/100 (77)	85/100 (85)	15/100 (15)
DM				
Yes	23/62 (37)	39/62 (62.9)	6/62 (9.7)	56/62 (90.3)
No	12/89 (13.4)	77/89 (86.5)	73/89 (82)	16/89 (18)
LVEF				
< 40%	14/24 (58.3)	10/24 (41.6)	4/24 (6.7)	20/24 (83.3)
> 40%	21/127 (16.5)	106/127 (83.5)	125/127 (98.4)	2/127 (1.6)
CHF				
Yes	13/23 (4.3)	10/23 (43.5)	3/23 (13)	20/23 (87)
No	22/128 (17.2)	106/128 (82.8)	126/128 (98)	2/128 (1.6)

BP - blood pressure, DM - diabetes mellitus, LVEF - left ventricular ejection fraction, CHF - congestive heart failure, ACE-I - angiotensin converting enzyme inhibitors, BB - beta blockers.

commonly prescribed after AMI in the studied sample, generally, under prescription among patients with MI and heart failure still exists. It is noteworthy that a high percentage of diabetic patients received BB after AMI, agreeing with many studies indicating that BB is more effective in diabetic patients than non-diabetic patients.[1]

We cannot explain the low rate of ACE-I prescribed in the studied patients. It could be that fear from renal functional problems or potassium levels, or fears of hypotension discourage physicians from prescribing ACE-I. Analysis of the effect of age of patients on ACE-I prescribing showed that physicians prescribe this class of drug more commonly to patients above 70 years old compared with younger ones. Again, this is puzzling given the fact that the elderly tend to have higher contraindications to ACE-I than younger patients due to kidney function.

All patients in the study were prescribed low dose aspirin and none were prescribed any other anti-platelet. Statins were not prescribed despite several trials showing their effect in decreasing the risk of coronary events and total mortality in patients after acute MI. The failure to prescribe statins may be due to the unavailability of this class of drug in the hospital. The modern management of patients following MI rests on lifestyle modifications and addressing risk factors such as hypertension, hyperlipidemia, diabetes, and specifically intervening with medications such as ACE-I, BB, statins, and aspirin. We found a large percentage of smokers, and many had other co-morbid conditions that necessitated aggressive post MI prophylactic therapy. Similar studies have taken place in other countries. One carried out in Denmark, found the rate of BB prescribed at discharge after AMI was 67.9%, while prescribing of ACE-I was 35.5%.[5] Another study carried out in the USA in 1998 found the rate of ACE-I prescribing nationwide were 30.7% during the year 1996.[6] Another study carried out in the USA in the state of New York in 1999, found that the ACE-I prescribing rate at discharge after AMI were 34%.[7] A study carried out in Spain in year 2002 found that the rate of prescribing post MI of ACE-I was 32.5% and BB was 50.2%.[8]

In conclusion, we observed that post MI prescribing of BB and low dose aspirin follows the recommendations of major clinical trials. However, the post MI prescribing of ACE-I and statins do not closely follow the publications of major trials. Focus should be made on the recent updated trials in pharmacological intervention. Non-pharmacological counseling for patients is also needed and should be carried out by clinical pharmacists.

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References

1. Kober L, Torp-Pedersen C, Carlsen JE, Bagger H, Eliasen P, Lyngborg K, et al. A clinical trial of the angiotensin-converting-enzyme inhibitor trandolapril in-patients with left ventricular dysfunction after myocardial infarction. Trandolapril Cardiac Evaluation (TRACE) Study Group. ***N Engl J Med*** 1995; 21: 1670-1676.
2. Heart Protection Study Collaborative Group. MRC/BHF Heart Protection Study of antioxidant vitamin supplementation in 20,536 high-risk individuals: a randomized placebo-controlled trial. ***Lancet*** 2002; 360: 23-33.
3. Antithrombotic Trialists' Collaboration. Collaborative meta-analysis of randomized trials of antiplatelet therapy for prevention of death, myocardial infarction, and stroke in high risk patients. ***BMJ*** 2002; 12: 71-86.
4. Brotons C, Permanyer G, Pacheco V, Moral I, Ribera A, Cascant P, et al. Prophylactic treatment after myocardial infarction in primary care: how far can we go? ***Fam Pract*** 2003; 20: 32-35.
5. Gunnar HG, Steen ZA, Jeppe NR, Soren R, Pernilie B, Ida G, Jens F, et al. Nationwide trends in the prescription of beta-blockers and angiotensin-converting enzyme inhibitors after myocardial infarction in Denmark, 1995-2002. ***Scand Cardiovasc J*** 2005; 39; 42-49.
6. Barron HV, Michaels AD, Maynard C, Every NR. Use of angiotensin-converting enzyme inhibitors at discharge in patients with acute myocardial infarction in the United States: data from the National Registry of Myocardial Infarction 2. ***J Am Coll Cardiol*** 1998; 32: 360-367.
7. Luzier AB, Navsarikar A, Wilson MF, Ashai K, Forrest A. Patterns of prescribing ACE inhibitors after myocardial infarction. ***Pharmacotherapy*** 1999; 19: 655-660.
8. Brotns C, Permanyer G, Pacheco V, Moral I, Ribera A, Cascant P, Pinar. Prophylactic treatment after myocardial infarction in primary care: how far can we go? ***Fam Pract*** 2003; 20: 32-35.