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Editorial

Lipid Lowering Treatment: Current Issues

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Lipid lowering treatment is of benefit in the prevention of coronary heart diseases (CHD) and other vascular events.[1] So far many studies have been carried out to prove the safety, efficacy and beneficial effects of lipid-lowering treatment in various countries. These studies can be categorized into two groups: (1) studies done to prove the effectiveness of lipid lowering treatment in the primary prevention of coronary heart diseases e.g. WOSCOPS or West of Scotland Coronary Prevention Study (1995) and AFCAPS/ TEXCAPS or Airforce/Texas Coronary Atherosclerosis Prevention Study (1995) [2] (2) studies done to prove the effectiveness of these drugs in the secondary prevention of coronary heart disease e.g. CARE or Cholesterol And Recurrent Events trial (1996) and LIPID or the Long-term Intervention With Pravastatin in Ischaemic Heart Disease (1998)[3].

The results of the studies done for primary prevention of CHD with lipid lowering drugs are confirmatory and re-assuring. They also included women; though their number were relatively lower but it is proved that women are benefited from lipid lowering treatment in prevention of CHD as well. Benefit was apparent across all baseline levels of cholesterol and it was greatest in those at greatest risk e.g. in those with concomitant hypertension or diabetes mellitus.[2]

The trials done for secondary prevention of coronary heart diseases [CARE (1996) and LIPID (1998)] [3,4] revealed that in patients with CHD and a broad range of cholesterol levels, cholesterol lowering therapy reduces the risk of coronary events but the effects on mortality from CHD and overall mortality have remained uncertain. However, there was a reassuring consistency in the findings of lipid relative to the results of 4S[5] and CARE[4], which led the authors to conclude that cholesterol-lowering therapy should now be considered for virtually all patients presenting with CHD. So now it can be said that the recent clinical outcome trials have placed the "final seal of approval" on lipid-lowering treatment in patients known to have CHD[3].

But there are some unresolved questions: (1) What is the optimal target concentration for total and/or LDL cholesterol? (2) How important are the concentrations of HDL cholesterol and triglycerides? (3) Which drugs are ultimately cost-effective? (4) There is a discrepancy between "recommendation" and "implementation". How shall we fill up this gap?

EUROASPIRE survey[6] demonstrated a high prevalence of modifiable risk factors among the patients of CHD e.g. uncontrolled hypertension, lipid abnormality, poorly controlled diabetes mellitus, etc. But effective management of hypertension and dyslipidaemia (together with hyperglycaemia) is well justified by current scientific evidence and there would be clear benefits in terms of reduced needs for revascularization procedures, fewer hospitalizations and lower CHD morbidities and mortality. That is why the EUROASPRE study concluded that there is a considerable potential for physicians and cardiologists to reduce CHD further in addition to morbidity and mortality and improve chances of patient survival.

Now there are people who advocate dietary modifications as an important way of lowering cholesterol. But how far these dietary modifications can be helpful? Dietary intervention trials to lower blood total cholesterol in free living subjects with average motivation have proved that it is of modest effectiveness. This can reduce total cholesterol at best 5-10% of existing level[7]. Various studies have shown that despite good compliance, very low fat diet alone does not achieve recommended cholesterol goals in outpatients with coronary heart disease.[8]

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A clinically diagnosed case of dengue was defined as a person with fever and 2 or more of the following symptoms: headache, retro-orbital pain, myalgia, arthralgia, rash or haemorrhagic manifestations in the form of petechiae and positive tourniquet test in the early stage.[13] In DHF there may be haemorrhage in the form of bleeding from mucosa mostly epistaxis or gum bleeding and bleeding from injection or other sites. Haematemesis, melaena, haematuria and menorrhagia also occur. This study was done to observe the clinical presentation of various form of dengue syndrome.

Patients and Methods

This is a descriptive study and was carried out at Khulna Medical College Hospital with three hundred and sixty eight patients admitted to dengue ward from August 2000 to Dec. 2000. All the patients irrespective of age and sex were included in the study. After admission detailed history of the patients was taken and thorough examine and the clinical presentations were noted in detail.

The diagnosis of dengue fever (DF), dengue haemorrhagic fever (DHF) and DSS (Dengue shock syndrome) was made on clinical basis mainly. Tourniquet test was done in all the cases. Haematocrit estimation and platelet count was done in all the cases but serological test could be done in limited number of patients because of lack of facility in the hospital.

The patients were kept under close supervision during the period of hospital stay and its outcome was noted.

Results

368 cases of DF, DHF and DSS cases of both sexes male 240 (65.21%) and female 128 (34.78%) was studied. The age of the patients ranged from 1-70 yrs. But the majority of patients 309 (83.96%) was between 1-30 years (Table-I).

Clinical presentations of the patients were noted. Fever was the presenting feature in all the patients (100%). Headache was in 115 (31.35%), rash in 105 (28.53%) and body ache in 98(26.63%) cases. (Table-II)

The common haemorrhagic manifestation was haematemesis and melaena in 206 (55.97%) cases and others were epistaxis, gum bleeding and conjunctival haemorrhage. (Table-III). Tourniquet test was done in all the cases but it was found positive in 215 (58%) patients. Haematocrit was increased in most of the cases and was normal in few cases. Platelet count was also variable. (Table-IVA & IVB).

The patients included in the study were diagnosed as DF, DHF & DSS (Table-V).

During the course of treatment the outcome was noted. Majority of patients (94.56%) recovered well. (Table-VI).

Table-I:

Age in years	No. of patients	Percentage (%)
0-10	81	22.01
11-20	134	36.4
21-30	94	25.54
31-40	30	8.15
41-50	17	4.61
51-60	08	2.17
61- above	04	1.08

Table-II:

Clinical presentation	No. of patients	Percentage (%)
Fever	368	100
Headache	115	31.25
Rash	105	28.53
Body ache	98	26.63
Vomiting	88	23.91
Abdominal pain	60	17.93
Retro-orbital pain	45	12.22
Loose motion	09	2.94
Joint pain	03	0.8

Table-III:

Haemorrhagic manifestation	No. of patient	Percentage (%)
Haematemesis and melaena	206	55.97
Gum bleeding	61	16.57
Conjunctival haemorrhage	40	10.86
Epistaxis	23	6.25
Haematuria	16	4.34
Haemoptysis	12	3.26
Menorrhagia	05	1.35

Table-IVA: Platelet count of the patients

Platelet count	No. of patients	Percentage of patients (%)
<50,000/cmm	24	6.52
50,000-100,000	56	15.21
100,000-150,000	32	8.69
150,000-200,000	174	47.28
>200,000/cmm	82	22.28

Table-IVB: Haematocrit of patients

Haematocrit	No. of patients	Percentage of patients (%)
45 %	77	20.92
54%	155	42.11
56.25%	88	23.91
58.5%	48	13.04

Table-V

Diagnosis	No. of patients	Percentage (%)
DF	167	45.38
DHF	185	50.27
DSS	16	4.34

Table-VI

Outcome of treatment	No. of patients	Percentage
Improved and discharged	348	94.56%
Expired	15	4.07%
Referred to higher center	05	1.35%

Discussion

Though sporadic cases of DF and DHF were reported in our country during the last few years, it has emerged as an epidemic since July 2000. A lot of controversy exist regarding whether dengue is an emerging, reemerging or imported disease in our country.[9, 11] Dengue syndrome was detected for the first time in this country in 1964 which was remarkably known as 'Dhaka fever'.[14] Subsequently dengue was detected in a survey in Chittagong in 1996 through 1997 and later in 1998 and 1999, cases of dengue fever was reported in the media in Dhaka city.[5] So we can say that dengue was sporadic in this country which has emerged as an epidemic during post monsoon period of 2000. It may not be out of place to mention that dengue might be imported from neighbouring countries by the modern transportation system like direct bus/train communication and especially air craft.[1]

In Thailand a retrospective study showed that DHF was commonly found in patients whose age ranged from 10-14 years.[15] In our study, the result is similar that is majority of our patients are below 20 years (58.42%) and below 30 years was 309 (83.96%). This is also identical with other studies.[12, 13]

Studies in other countries revealed that 90% of hospitalized dengue patients are children less than 15 years of age.[12] Disease trend of DF and DHF in many countries reveal that initially it affects people of all ages but gradually children become the most susceptible group.[12] It might be because children are more vulnerable to mosquito bite.

Among the clinical presentations the common were fever (100%), headache (31.25%), rash (28.53%), body ache (26.63%) which fit WHO criteria for diagnosis of dengue fever.[12] Among the haemorrhagic manifestations in DHF, the commonest was haematemesis and melaena (55.97%). Others were gum bleeding, conjunctival haemorrhage and epistaxis which was revealed in other studies also[15] Menorrhagia was present in 05(1.35%) cases, which was also found in other studies.[16] Haematocrit of the patients was estimated and in most of the cases was increased.

Platelet count was also done and the count was low in most of the cases which is helpful in diagnosis of dengue fever.[4, 6]

Incidence of DHF is increasing in countries of South East Asian region.[12] In our study we got cases of DHF 185(50.27%). Mortality from DHF and DSS averages 5%. [12] In our study mortality from DHF/DSS are only 4.07%, which is comparable with other Asian countries.

Few patients, 5(1.35%) were referred to Dhaka for concomitant diseases like ARF and requiring platelet concentrate transfusion, which is not available here.

In absence of specific therapy and vaccination, the only way of saving our people is the prevention of spread of the disease by eradicating the mosquitoes and eliminating breeding sites in and around our houses, specially in towns and cities. Creation of awareness by mass media like Radio, Television and Newspapers can help in this respect. Different government and non-government organization (NGOs) can undertake appropriate measures for this purpose.

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