SURGEON AND HIV INFECTION, POST EXPOSURE PROPHYLAXIS : NEED OF THE HOUR

Dear Editor,

This is with reference to the article "Surgeon and HIV Infection, Post Exposure Prophylaxis : Need of the hour" by Lt Col Man Mohan Harjai, Surg Lt Cdr Rohit Sharma, Wg Cdr PK Menon, Col BM Nagpal VSM, Col Y Singh VSM, MJAFI 2000;56:328-31.

The article is extremely well written and addresses the burning problem of occupational exposure of HCWs to HIV, especially in view of the 3.7 million adults estimated to be infected with HIV/AIDS in India [1]. The observance of universal precautions and post exposure prophylaxis (PEP) remain the only suitable defences. However, it needs to be pointed out that the high cost (Tab Duovir, Cipla, approx Rs.130/- per day) and poor availability of these drugs, at present, make PEP an impractical proposition in most of the Military Hospitals. Further, for best response PEP should be started within one hour of suspected exposure to HIV [2,3]. This would be possible only if all Military Hospitals have a readily available stock of these drugs, especially the ones situated in remote areas.

It is requested that suitable action should be immediately taken

by the health care administrators to ensure easy availability of at least two drugs i.e. Zidovudine and Lamivudine or else PEP would just remain a pious hope for the HCWs of our Armed Forces.

References

1. NACO, Ministry of Health and Family Welfare. Towards an AIDS free India. The Times of India, New Delhi, 2000 Dec 1;11 (Col 1)
2. Henderson DK. Post Exposure Prophylaxis for Occupational exposure to Hepatitis B, Hepatitis C, and HIV. Surg Clin North Am 1995; 75: 1175.
3. Timothy G, Allen - Merish. Acquired Immuno Deficiency Syndrome in Russel RCG, Williams Normans Bulstrode, Christopher JK, editors. Bailey and Love's Short Practice of Surgery, 23rd ed. London : Arnold, 2000;118.

Lt Col SS JAISWAL

Classified Specialist (Surgery), Military Hospital, Establishment 22, C/o 56 APO.

CRUSH SYNDROME REVISITED

Dear Editor,

In wake of devastating disaster of Gujarat earthquake and casualties received at Command Hospital Pune, where about 7-8 patients (5%) developed renal shut-down following crush syndrome, we draw attention of all our colleagues towards this entity. Crush syndrome constitutes the systemic changes seen after crush injuries that are caused by either mechanical crush or extreme physical exertion. The pressure or entrapment causes necrosis of muscles and during revascularisation there is leakiness of the sarcolemmal membrane to cardiotoxic or nephrotoxic cations and metabolites (i.e. potassium, phosphate, myoglobin and urate) of the sarcoplasm. The rapid and massive uptake by damaged muscles of extracellular fluid, sodium and calcium leads to profound hypovolaemic and hypocalcaemic shock. Thus the causes of death in crush syndrome are severe hypovolaemic shock, hyperkalaemia, hypocalcaemia, metabolic acidosis and acute myoglobinuric renal failure [1]. The myoglobinuria refers to an abnormal pathologic state in which an excessive amount of myoglobin is found in the urine, imparting a cola-like colour, usually in association with myonecrosis and a clinical picture of weakness, myalgias and oedema. Acute renal failure due to tubular obstruction by myoglobin plugs and urate is the most serious complication of myoglobinuria, which can be prevented by prompt and aggressive treatment [2]. The laboratory test in this entity reveals marked elevation of creatinine kinase (CK) levels and histopathological examination of the excised muscle shows features of acute rhabdomyolysis. Treatment consists of early massive volume replacement followed by forced alkaline solute

(mannitol) diuresis. The fluids should be started preferably at site of disaster for a substantial salvage of lives, limbs and kidney function. The mannitol-alkaline regimen ameliorates the acidosis associated with shock and hyperkalaemia, and protects against the nephrotoxicity of myoglobin and urate by alkalization of the urine [1]. If renal failure develops, haemodialysis should be started. Early fasciotomy and debridement with use of hyperbaric oxygen and medical treatment substantially increases the survival of disaster victims [3]. Overall early diagnosis and treatment improve prognosis in crush syndrome, but outcome of such limbs is poor and Volkmann's ischaemic contracture often follows [4].

References

1. Better OS. Rescue and salvage of casualties suffering from the crush syndrome after mass disasters. Military Medicine 1999; 164: 366-9.
2. David WS. Myoglobinuria. Neurologic Clinics 2000; 18: 215-43
3. Myers RA. Hyperbaric oxygen therapy for trauma: crush injury, compartment syndrome, and other acute traumatic peripheral ischemias. International Anesthesiology Clinics 2000; 38: 39-51.
4. Von Schroeder HP, Botte MJ. Crush syndrome of the upper extremity. Hand Clinics 1998; 14: 451-6

Lt Col MAN MOHAN HARJAI^{*}, Brig YOGENDRA SINGH, VSM⁺

^{*} Reader and Pediatric Surgeon, Department of Surgery, Armed Forces Medical College, Pune - 40. ⁺ Commandant, Military Hospital, Agra.