Innovation : The Simple Stretchers

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The Making of Stretcher

A stretcher is the easiest thing to make. Stretchers can be improvised with many common things found anywhere. Combatants make stretchers by using blankets, atta sacs, web belts, anklets, pagri, ground sheet etc. with a few bamboo pieces and line bedding [1].

A lot of thinking should go in designing an ideal stretcher for universal use. It should be light, tough, easy to clean, spacious enough to accommodate at least an average patient, comfortable to the patient and the stretcher-bearers and suitable to all climates. Some additional requisites like collapsibility, foldability, stable feet, availability in two halves, features for wheeling, winching or sliding, devices like straps and slings and operational simplicity can make it an excellent appliance. It can also have some accessories like infusion bar to fix an intravenous bottle or a special splint to immobilise a complex fracture of lower extremity.

Such a dream stretcher is yet in the dreams. There are varieties of stretchers, which fulfill the requirement partially. The traditional stretchers used in the Armed Forces are strong and time tested, but fall short by many standards. Some of the modern stretchers have crept in Army for specific purposes. A model-71, basket stretcher can basket a patient. It is designed to be slid in the snow with minimum effort. It can also be carried by hand for a short distance or winched to anywhere. A sleek looking paraguard, is a light multipurpose stretcher with heavy straps to secure the patient and tough slings to hook on to helicopters. It can be vertically folded to a length of

less than a metre. But the most yielding new generation stretcher is orthoscoop, with its collapsibility, foldability and reconstituable horizontal halves. It is a specific device and treatment for spinal injuries. This is the only stretcher with its combing action and telescoping compression that can carry a patient from a peripheral hospital bed to II AC compartment of a train and further to a neuro-surgical bed of another hospital without any jerk.

But these modern stretchers are not designed to fit into the traditional ambulances of the Armed Forces. An improvisation can however disengage this incompatibility. Patients are loaded on these stretchers and then these stretchers are loaded on to the conventional stretchers like stretcher ambulance mark II. This double stretcher contraption is then slipped into the runner grooves of the ambulance in the usual way. It is necessary to secure the patients with straps while loading and on move. Alternatively, the patients can be shifted directly from the modern stretchers to the conventional stretchers before loading. One difficulty that is faced while using the orthoscoop stretcher in winter, is to cover the patients with blankets without moving them. One of the ways would be, to place the required number of blankets on to the floor as per the conventional blanket drill procedure and then to lay the loaded stretcher over the blankets and to wrap around. This blanketed orthoscoop can then be loaded on the traditional stretcher and strapped.

The perpetually snow bound areas of the high lands offer great challenge for casualty evacuation. Attempts

Fig. 1 : Neil Robertson stretcher

Fig. 2 : Neil Robertson stretcher

to carry the casualties on traditional stretchers will be both dangerous and absurd. Cue can be taken from the principle of ski and many of the new wave stretchers like basket stretcher, sledge snow mobile, metallic sledge, ski dynaster runners with binding emery, tobogan, rescue bag etc. have been designed either with a flat bottom or with a pair or more of skiis. They can be pulled either by humans or by snow scooter. Many of them have winching facility for a distant destination.

Conclusion

A simple equiptage like stretcher has tremendous potential for differentiation. The traditional stretchers used in the Armed Forces are still in great demand. These have matching ambulances for appropriateness, yet these

Fig. 3 : Orthoscoop

have many inadequacies. These are for general duties and not for any specific missions. Orthoscoop stretcher deserves special mention. This light bodied, silver hued, twin blade stretcher assembly can scoop a spinal injury case without causing further damage and place him/her gently on to a second AC berth or on a specialized ICU bed of a zonal hospital. While paraguard remains airborne, basket stretcher skiis over thick snow. Neil Robertson stretcher cruises past the steep and narrow aisles and ladders of the ships. Selected patients may find solace and comfort in casualty evacuation bags, though may look like bundles of clothes when loaded. Stretcher trolleys are refined, mechanically superior and mostly hospital bound. It is essential to have straps to all stretchers for loading/unloading and carriage through narrow slopes. Narrow slopes may warrant even slings. Some of the modern stretchers may require pairing up with conventional stretchers for ambulance compatibility. In the final analysis, it appears that stretchers are not as simple as they look.

Reference

AMC Training Pamphlet No 1: Carriage of Casualties, DGAFMS 1954;4111-4.

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The head doctors in an insane asylum had a meeting and decided that one of their patients was potentially well. So they decide to test him and take him to the movies. When they get to the movie theater, there are signs of wet paint pointing to the benches. The doctors just sit down, but the patient puts a newspaper down first and then sits down. The doctors get all excited cause they think maybe he's in touch with reality now. So they ask him, "Why did you put the newspaper down first?" He answers, "So I'd be higher and have a better view."

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