Treatment of Casualties in a Forward Hospital of Indian Army: Nine Years Experience

Dear Editor,

I read with interest the article on "Treatment of casualties in a forward hospital of Indian army: nine years experience" published in MJAFI 2004;60:20-4[1] and I congratulate the authors and editor for bringing out this timely article and focusing attention on the war / militancy related trauma. I agree with the authors that in selected cases the colonic injuries can be closed primarily. The main area of controversy in the management of colonic wounds is the recent trend away from mandatory colostomy, which is followed by good result [2]. We also managed 10 cases of colonic injuries with primary repair and results are encouraging.

In view of increasing number of mine blast, mortar blast and gunshot injuries the number of hollow viscus perforations is also increasing along with solid organ injuries. The cases of colonic injuries are increasing due to penetrating splinters or bullet injuries among the troops due to militancy trauma. These injuries are the most dangerous. The contents of colon are teeming with all kinds of virulent organisms especially coliform and clostridal group and anaerobic bacteroides. A perforation rapidly infects the peritoneum or retro-peritoneal areolar or muscular tissue, the latter can result in gas gangrene. The primary repair of colon injuries without stoma is still controversial within surgical experience and the potential risk factors affecting morbidity and mortality are not sufficiently known [3]. The primary repair without a stoma is the treatment of choice when the tissues show a good vascularisation. This often is the case with stab wounds and low velocity gunshot wounds. A diverting colostomy is preferred in cases of trauma of high energy and while haemodynamic instability makes the estimation of adequate tissue vascularisation difficult. Colonic injuries that are managed with resection are always associated with a high complication rate regardless of whether an anastomosis or colostomy is performed [4].

For most injuries of right side of colon, primary repair or resection is satisfactory. Occasionally where severe wounding with extensive contamination has occurred a vented ileotransverse anastomosis is warranted. On the left side, a one-stage procedure may be undertaken in favourable circumstances i.e. if minimal peritoneal contamination, limited blood loss and time interval between injury and operation of less than six hours. However if

injury is associated with high risk factors, the injured colon is resected and proximal end brought out as colostomy and distal end as mucus fistula. If the distal end cannot be brought to the surface as in low sigmoid and rectal injuries it may be closed off as in Hartmann procedure. Subsequent resection or continuity will be required [5].

In our small series of 10 cases of colonic injury due to gunshot or splinters managed at various border static military hospitals, we performed primary closure in two layers using non-absorbable suture material. The selection criterion was small through and through perforating injury, minimal contamination, injury within 6-8 hours and mainly right sided colonic injuries. Post-operative recovery was uneventful in all except in one case of left sided injured colon, which required re-exploration and bringing the two ends to the surface as proximal colostomy and distal mucus fistula. Though our few cases showed encouraging results, the time tested surgical war doctrine of protective colostomy for colonic injuries still holds good in field conditions, where poor conditions for advanced surgery can change the final result, making the outcome of the war wound worse.

References

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Reply

The author thanks.... for this letter, and is in broad agreement with the views expressed therein. Colonic injuries were repaired primarily only in selected cases in the present series, as is clearly mentioned in the section on 'Abdominal Trauma' on page 21 of the Journal. Gross contamination of peritoneum, severe hemodynamic instability and delayed surgery are obvious contraindications to this approach. The case of always performing a colostomy for high velocity gunshot wounds (GSW) is overstated; it may be very difficult to tell whether abdominal GSW is of low or high velocity. The experience of the surgeon and the facilities available in the

hospital would determine the approach. The aim of mentioning primary colonic repair was to impress upon the surgeons that this can be undertaken for war injuries under favourable circumstances. The statement needs qualification (see above), and is not an across the board recommendation, certainly not for surgeons working in field ambulances and forward surgical centers.

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