AXIOSTAT® A NEW GENERATION HEMOSTATIC DRESSING FOR CONTROLLING ACUTE HAEMORRHAGE IN ACCIDENT VICTIMS: A CLINICAL EVALUATION

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SUMMARY: Accidents and trauma are one of the leading causes of death and disability throughout the world. In developing countries like India, where emergency trauma care is still in its infancy, it accounts for almost 10% deaths every year. Lack of adequate pre-hospital care and uncontrolled bleeding from wound site are stated to be the prominent reasons for such deaths. In this study, we investigated the efficacy of a novel chitosan-based hemostatic dressing (Axistat®, Axio Biosolutions, India), as a hemorrhage control device in pre-hospital scenario.

RESULTS

A total of 104 patients with scalp injuries were enrolled for the study. The selected patients were randomly assigned into the test and control groups. The test group received Axistat® (47 subjects) and the control group received the conventional cotton-gauze dressing (47 subjects). The dressing was applied as detailed in the treatment protocol. The time at which the blood oozing through or from periphery of the dressing stopped, was considered as the efficacy endpoint. Finally, the total blood loss from the wound was determined by measuring weight of the dressing after first application. The wound characteristics in selected patients are presented in adjacent charts.

STUDY DESIGN

The Axistat® showed greater efficacy in controlling bleeding in comparison to the cotton gauze. The average time for haemostasis with cotton gauze was about 18.56 ± 5.04 minutes; while the Axistat® achieved haemostasis in under 5 minutes (4.68 ± 1.04 min). Additionally, total blood loss from the wound site decreased by over 50% in Axistat® treated patients compared to the control group. Additionally, no adverse reactions were reported with the use of Axistat®. Cases of uncontrolled bleeding was observed in 21 subjects treated with cotton gauze and only 9 in Axistat® treated group.

TREATMENT PROTOCOL

1. The wound was carefully inspected prior to application for inclusion in the study.
2. A randomly selected dressing, either Axistat® or cotton gauze was placed on the bleeding wound.
3. Moderate pressure was applied with fingers for about 2 minutes.
4. When bleeding was persistent, second application of Axistat® or Cotton gauze was used above the previous one.
5. The Axistat® dressing was kept for 30 minutes after complete hemostasis was achieved.
6. It was then removed easily by applying saline or water on to it and gently lifting it off.
7. Once hemostasis was achieved and dressing removed, patients were treated as per institutional standard of care.

CONCLUSION

These results show that Axistat® enables rapid haemostasis and can prevent significant blood loss during emergency trauma and accidents. Additionally, it also allows easier removal from the wound site without leaving any residue, which helps in rendering wound clear. In conclusion, the study successfully demonstrated the potential of Axistat® as a first-line intervention in controlling acute hemorrhage in emergency care.

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