Complications of generalized tetanus

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To the Editor,

We read with avid interest the recently published article regarding tetanus in developing countries,¹ and we thank the authors for providing information for anesthesiologists and critical care physicians on the management of generalized tetanus, which is a serious life-threatening condition. In this letter, we comment on several other aspects of clinical concern that are often encountered while managing victims with generalized tetanus.

The problem of bradyarrhythmias in patients suffering from generalized tetanus has been documented in the literature since 1974.² Although high-dose atropine may be effective, Gibson *et al.* did not mention the role of cardiac pacemakers.¹ Pacemakers have been shown to be useful in managing severe bradycardia in patients with generalized tetanus.³ Caution needs to be exercised, as the pacing leads can become dislodged during episodes of severe muscle spasm.

Patients with generalized tetanus often require long-term immobilization, which can predispose them to the development of deep vein thrombosis and pulmonary thromboembolism, which is a common cause of death in patients with severe tetanus. Hence, routine deep vein thrombosis prophylaxis is advised in the majority of patients with tetanus.^{4,5} Long periods of immobilization may also predispose such patients to other complications, such as development of pressure sores and limb contractures.^{4,5} Therefore, it is important that the patients are nursed in water beds, and frequent position changes are necessary to prevent development of decubitus ulcers.

Early institution of limb physiotherapy may help to reduce the likelihood of developing limb contractures.

In view of repeated muscular contractions and sepsis, energy demands in patients with generalized tetanus can be very high. Hence, early administration of high caloric nutrition with high protein content is advised to minimize the catabolic stress-related breakdown of muscle proteins.⁵ Finally, to help overcome this stressful situation, the importance of psychological support for the victims and their families should not be underestimated.

Conflicts of interest None declared.

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Reply

The authors thank Drs. Umesh, Nanda, and Prasad for the important additional information they have provided. These comments highlight the variability in presentation of this disease as well as the severity and duration of symptoms. In fact, since the treatment of the ventilatory and cardiovascular complications of tetanus has improved markedly in many developing countries, increasing numbers of patients

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are living much longer. Thus, longer-term considerations, such as deep vein thrombosis prophylaxis, avoidance of pressure sores and contractures, as well as nutrition, are now more relevant. With changing immigration patterns and increasing involvement in development projects, physicians in developed countries will be called on more frequently to treat patients with severe tetanus.

Conflicts of interest None declared.

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