was the control of spasm and the shorter the duration in hospital. Besides thrombophlebitis at the site of venepunctures (probably secondary to benzoic acid present in injectable diazepam) a common complication was apnoea, which responded to partial withdrawal of diazepam. At 3–4 months all 6 neonates who returned for follow-up were developmentally normal.

We feel a combination of high doses of diazepam and chlorpromazine with intrathecal ATS (given early after onset of tetanus) is effective in reducing mortality.

Reference

SUNIT SINGH and PRATIBHA SINGHI
Department of Paediatrics,
JLN Medical College,
Ajmer (Rajasthan) 305001,
India

Dr Khoo and co-workers comment:

We did not claim that the low mortality rate in our patients with neonatal tetanus was due to high dose diazepam alone. Other equally important therapeutic measures that contributed to the improved survival rate in our patients included good nursing care, tetanus antitoxins, antibiotics, nutritional support, and the judicious use of sedatives. In our study, the use of continuous high dose IV diazepam (20–40 mg/kg per day) certainly decreased the mortality rate and also the need for artificial ventilation from 77 to 37% (Khoo et al., 1978).

The treatment regimen advocated by Singh and Singh is very similar to ours except for the use of intrathecal ATS and the very high dose of chlorpromazine. The role of intrathecal ATS in the management of neonatal tetanus is still controversial (Laurence, 1975). The reason for injecting ATS into the CSF is to neutralise the tetanus toxin that has penetrated the CNS but has not yet begun to act. Besides, ATS given via the IV route penetrates the blood/CNS barrier poorly, and the levels of antitoxin in the CSF are approximately 400 times less than in the blood (Patel et al., 1963; Ildirim et al., 1969). In 1917, Sherrington obtained good results from the use of intrathecal ATS in monkeys with tetanus. It was subsequently tried in man but eventually abandoned because of adverse reactions to the CNS and doubts about its efficacy (Dietrich, 1940; Pratt, 1945). However, recent reports of the use of intrathecal ATS in tetanus are encouraging (Ildirim, 1970; Sanders et al., 1977; Salimpour, 1978). Ildirim (1970) treated 28 cases of neonatal tetanus with intrathecal ATS and prednisolone mixture and had a low mortality rate of 10.7%. In another clinical trial on 322 cases of adult-type tetanus, 200 units intrathecal ATS (horse) was found to be an effective adjuvant in reducing the mortality rate from 14.5 to 4.5% (Sanders et al., 1977). No complication was encountered apart from occasional difficulty in giving ATS intrathecally, while remarkable relaxation was observed in the patients.

With the availability of human antitetanus serum, which is relatively free of allergic side effects and less irritating to the CNS, the prospects for intrathecal ATS (human) is promising, but needs further tests before it can be recommended.

References


B. H. KHOO, E. L. LEE, AND K. L. LAM
Department of Paediatrics,
University Hospital,
Kuala Lumpur,
Malaysia
Dr Khoo and co-workers comment

B. H. Khoo, E. L. Lee and K. L. Lam

Arch Dis Child 1979 54: 651
doi: 10.1136/adc.54.8.651

Updated information and services can be found at:
http://adc.bmj.com/content/54/8/651.citation

Email alerting service

These include:
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/