BRACHIAL PLEXUS BLOCK FOR UPPER LIMB SURGERY IN LEPROSY

Sir,

For nearly 10 years I have been using a technique for brachial plexus block, which I have found extremely satisfactory, and which may be of interest to your readers.

Until about 1973 I was using, for surgery on the arm in leprosy patients, a block in the axillary space that attempted to inject the anaesthetic into the area around each of the 3 nerves. This requires a circular block proximal to the tournequet. The use of this technique resulted in only moderate success, with a number of patients not getting fully satisfactory anaesthesia.

In 1971 an article appeared in the Journal of the *American Medical Association,*

22 March, **215**, No. 12, pp. 1953–5 by Wen-hsien Wu, entitled '*Brachial Plexus Block; a double-needle technique via the axillary route*'. Its summary reads as follows:

> A new double-needle technique for brachial plexus block via the auxillary route has been used in 30 patients. The results have been evaluated against those of a control group in which the classic method for the block was used. Simplicity in performance, high success rate, and a reduced chance of traumatizing the neurovascular tissue stand out as advantages of the new technique.

The technical details are fully described in this publication, but I would like to record the following observations, based on my own series in Nigeria:

1. The site for injection is relatively easy to determine. I have tended to err by going too high in the axilla. It should be about 5–7 cm from the apex of the axilla and the site is just postero-medial to the deltoid.
2. At this point the vessels and nerves can be palpated, and usually the pulse can be felt in the axillary artery. Directly over the artery make a wheal of a small amount of procaine with a fine needle. Through this wheal insert the large-bore needle. Then with the blunt needle on the syringe pass the needle through the larger needle moving at an angle of about 45° to the skin toward the artery. As the needle passes through subcutaneous tissues there is little resistance until it meets the axillary sheath. Here there is usually quite a definite resistance, and a distinct pop is heard, or at least a sudden lack of resistance as the needle perforates the sheath. If the puncture is made higher in the axilla there is less resistance and the time the sheath is perforated is not as readily determined.
3. After the needle has gone into the axillary space it is possible to locate the arterial pulsation transmitted through the needle, or elicit paraesthesias on moving the tip of the needle about. I do not think these necessary, but it is essential to aspirate to assure that a vessel has not been entered. Then the entire 20 ml of procaine can be rapidly injected in the sheath where it readily moves to encircle the artery and all the nerves. Frequently, one can see the swelling of the sheath proximally just as the injection is made.
4. Only a few patients have complained of discomfort due to the tournequet when the surgery was nearly completed, and I never felt that it was serious enough to remove the tournequet. I had to do this occasionally prior to using this technique.

Using this technique for over 100 intrinsic replacements, I have found this procedure both successful and safe and there have been no significant failures.

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Editorial note. Dr Kenneth Seal (Plymouth, UK) very kindly mentioned the development of a project between the *University of Illinois,* the *University of Cincinnati,* the *University of New Mexico* in the USA, and *Chiang Mai University* and the *McKean Rehabilitation Institute* in Thailand. In reply to our letter of enquiry, Professor Victoria Schauf has furnished a great deal of information on what should be a potentially very important research activity, and with her permission we here extract the most relevant sections of her letter.