their stay in hospital, examining both arms for local reactions and recording any symptoms of discomfort or pain. The investigators were unaware of which arm had been used for the injection and application of the arterial pressure cuff. Two weeks after the injection patients answered a questionnaire as a follow-up.

Six patients were excluded from the study because of variability in the experimental procedure, or non return of the questionnaire. Thus the total number of patients was 134. Thrombophlebitis developed in 45 of the patients—21 in the dominant arm and 24 in the non-dominant arm. Of the patients with thrombophlebitis, 46% had the arterial pressure cuff applied at that arm and 54% at the other arm.

In conclusion, the investigation confirmed the high frequency of thrombophlebitis after etomidate i.v., but no significant difference could be found whether the injection was made in the dominant or non-dominant arm.

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REFERENCE

DORSAL NERVE BLOCK OF PENIS IN CHINESE CHILDREN

Sir,—In this study we have compared the effectiveness of dorsal nerve block of the penis for analgesia following circumcision in Chinese children, with that of pethidine.

Since little research in anaesthesia has been undertaken in the Chinese, we confined our study to them. Five-years-of-age was chosen as the lower limit since, below 5 yr, children are unable to express themselves and is difficult to find out why they cry. Twelve years was chosen as the upper limit.

Fifty boys (ASA Grade 1) admitted for circumcision were allocated randomly to two groups on the basis of a random sampling numbers chart. In this chart all even numbers received the dorsal nerve block and the odd numbers pethidine. If there were other operations in addition to circumcision the patients were omitted from this study.

All were premedicated with diazepam 0.2 mg kg\(^{-1}\) and all received a similar inhalation induction with nitrous oxide, oxygen and halothane, and were maintained with these agents. Following induction, but before surgery, they received either dorsal nerve blockade or pethidine i.m.

The blockade of the dorsal nerve was performed with 0.5% bupivacaine: 3 ml was injected to those between 5 and 8 yr, and 5 ml to those between 9 and 12 yr. A 23-gauge needle attached to a syringe containing the solution was directed in the midline to the space below the pubic symphysis between it and the corpus cavernosum and, after aspiration to exclude blood, all of the solution was deposited in the space.

Those who received pethidine were given 1 mg kg\(^{-1}\)i.m. in the lateral side of the thigh. The same surgical technique was used in all patients. Although usually the surgeons applied lignocaine jelly on the wound following the operation, this was omitted in this study as it would have influenced the pain relief.

Following operation the patients were allowed to recover in the recovery area and pain relief was assessed before they were taken to the ward. In the ward an independent observer, a nurse specially allocated for this purpose and who had no knowledge of what patients received, assessed the pain relief on a 10-cm line. (Even the notes of the patients did not have any reference to the method of pain relief, the method being entered on a different form, which was with the anaesthetist.)

Patient characteristics in the two groups were comparable (table I). The linear analogue assessment of the pain in the two groups (table II) showed that only two patients of the pethidine group complained of pain of their own accord. On questioning, some indicated pain of varying intensity. The differences in the pain score of the two groups were not significant and showed adequacy of pain relief (fig. 1).

Both dorsal nerve block and intramuscular pethidine seemed to relieve pain after circumcision in Chinese children. Neither

<table>
<thead>
<tr>
<th>Relative</th>
<th>Age (yr)</th>
<th>Weight (kg)</th>
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<tbody>
<tr>
<td>DNB (n = 25)</td>
<td>8.7 ± 2.6</td>
<td>26.3 ± 10.6</td>
</tr>
<tr>
<td>Pethidine (n = 25)</td>
<td>9.0 ± 2.2</td>
<td>25.9 ± 6.7</td>
</tr>
</tbody>
</table>

![Table I. Patient characteristics. DNB = Dorsal nerve block](image)

![Table II. Linear analogue pain scores. Total number of patients = 50; DNB = 25, pethidine = 25](image)
Dorsal nerve block was significantly superior to pethidine in that none of the patients in the former group vomited, whereas six patients of the latter group did so.

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