SUMMARY

A 35-year-old female had severe anaphylactoid reactions to prilocaine and lignocaine on separate occasions. Intradermal testing was positive to serial dilutions of both drugs and negative to bupivacaine, which was subsequently used uneventfully. While intradermal testing for local anaesthetic allergy has limited application, it would appear that when such tests are positive in high dilution they may discriminate between safe and unsafe anaesthetic agents.

The majority of patients with a history of allergy to local anaesthetic drugs are not allergic (de Shazo and Nelson, 1979) and true allergy, particularly to amide local anaesthetics, is rare. We report a patient with allergy to a number of local anaesthetic drugs in whom intradermal testing enabled subsequent regional anaesthesia to be administered with safety.

CASE REPORT

The patient was a female born in 1946. She had a past history of eczema and allergy to shellfish, cosmetics and deodorants. During her first pregnancy in 1975 she attended a dental practitioner who performed an inferior dental block with 1% prilocaine with 1:100,000 adrenaline. Within 10 min of the injection her face became swollen bilaterally and she complained of faintness and breathlessness. No further details are available. Six months later while she was in labour a pudendal block was performed for forceps delivery with 1% xylocaine 20 ml. Within minutes the patient complained of feeling unwell and developed a generalized flushing with large weals and bronchospasm. Her face and conjunctiva became swollen. She was given hydrocortisone 100 mg, promethazine 50 mg i.v. and 1:1000 adrenaline 0.2 ml i.m. The bronchospasm and flushing settled, while oedema persisted for 12 h.

Intradermal testing was carried out in 1980 using 0.1-ml injections of dilutions of local anaesthetics in normal saline on the anterior aspect of the arm. The results are shown in table I. The testing was performed because the patient was 3 months pregnant and was concerned about local and regional anaesthesia.

In March, 1981 she underwent a normal confinement and an episiotomy was performed using 10 ml of 0.25% bupivacaine. There was no adverse response.

DISCUSSION

There is considerable difficulty in verifying a history of local anaesthetic allergy. In a previous study Fisher (1979) noted that intradermal testing appeared useless in the assessment of anaphylactoid reactions to local anaesthetics. These patients, however, had reactions confined to the skin and intradermal testing is not useful with any anaesthetic drug for reactions confined to skin (Fisher, 1981).

Intradermal testing has been used by others in the diagnosis of anaphylactoid reactions to local anaesthetics (Aldrete and Johnson, 1970; Incaudo et al., 1978; de Shazo and Nelson, 1979). False positives, possibly related to paraben, appear to be the major disadvantage although there is a high correlation with drug reactions with dilutions of more than 1:1000 (Incaudo et al., 1978; de Shazo and Nelson, 1979).

<table>
<thead>
<tr>
<th>Drug</th>
<th>1:10000</th>
<th>1:1000</th>
<th>1:100</th>
<th>1:10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1% Procaine</td>
<td>NT</td>
<td>NT</td>
<td>—</td>
<td>0/8</td>
</tr>
<tr>
<td>1% Xylocaine</td>
<td>14/40</td>
<td>14/40</td>
<td>NT</td>
<td>NT</td>
</tr>
<tr>
<td>1% Mepivacaine</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>1% Bupivacaine</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
</tr>
<tr>
<td>0.5% Amethocaine</td>
<td>5/15</td>
<td>12/28</td>
<td>NT</td>
<td>NT</td>
</tr>
<tr>
<td>1% Prilocaine</td>
<td>10/45</td>
<td>15/45</td>
<td>NT</td>
<td>NT</td>
</tr>
</tbody>
</table>

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Severe systemic reaction has been described with 1:10 dilution (Mulvey, 1980). Progressive challenge has also been used to exclude and confirm the history (Incaudo et al., 1978; de Shazo and Nelson, 1979; Brown, Beamish and Wildsmith, 1981).

In this patient we found positive weal and flare reactions at high dilutions to the two drugs reacted to (lignocaine and prilocaine) and to tetracaine. A drug with negative skin tests (bupivacaine) was used uneventfully. Four patients in the series reported by Incaudo and colleagues (1978) reacted to more than one drug in high dilution and the drugs came from both amide and ester groups. Reddrop and Lilley (1980) emphasized that tests for one group give no information about the other, and both groups should be tested. It appears from the case under discussion that when positive weal and flare reactions to local anaesthetics occur in high dilution, the tests should be repeated with alternative local anaesthetics from both groups. Local anaesthetics with negative intradermal tests may be safe alternatives to those with positive tests in high dilution.

REFERENCES


Fisher, M. McD. (1979). Intradermal testing in the diagnosis of acute anaphylaxis during anaesthesia—results of five years experience. Anaesth. Intens Care, 7, 58


ALLERGIE A L'ANESTHESIE LOCALE

RESUME

Une femme de 35 ans a eu a plusieurs reprises de serieuse reactions anaphylactooides a la prilocaine et a la lignocaine. Les tests intradermiques ont ete positifs aux dilutions en serie de ces deux medicaments et negatifs a la bupivacaine que l'on a utilisee par la suite sans aucun inconvénient. Bien que les tests intradermiques pour determer les allergies aux anesthesiants locaux aient des applications limitées, il semblerait que lorsque ces tests sont positifs aux dilutions fortes ils permettent de distinguer les agents anesthesiants sûrs de ceux qui ne le sont pas.

ALLEGGIE AUF LOKALANÄSTHETIKA

ZUSAMMENFASSUNG


ALERGIA A LA ANESTESIA LOCAL

SUMARIO

Una paciente de 35 años de edad presentó agudas reacciones anafilactoides a la prilocaina y a la lignocaina en diferentes ocasiones. La prueba intradérmica fue positiva ante disoluciones seriales de ambas drogas y negativa ante la bupivacaina, que se usó posteriormente sin éxito alguno. Aunque la prueba intradérmica relativa a la alergia a la anestesia local tiene una aplicación limitada, parece ser que cuando tales pruebas son positivas en grandes disoluciones, puede que discriminen entre los agentes anestésicos seguros y peligrosos.