Sources of error in recording the blood pressure of patients with hypertension in general practice

H R Patterson

Abstract

Sources of error in recording the blood pressure of patients with hypertension in general practice were examined in 1973. Significant differences were found between the recorded and direct readings. The main sources of error were: (1) the doctor and technique (bias); (2) the equipment and method (error); (3) the observer and the patient (interaction). The results are relevant to hypertension in general practice and to the diagnosis and control of patients with hypertension.

Introduction

In general practice the blood pressure readings are recorded by doctors, who are often untrained. Thus, the measurements have to be accurate and reliable. The accuracy of these measurements is important because of the high prevalence of hypertension in the general population. The results of this study suggest that the inaccuracies in blood pressure recording may lead to an overestimation of the prevalence of hypertension in general practice.

Method

A sample of 100 patients was selected from the practices of three doctors. The patients were asked to record their blood pressure readings in the morning and evening for a period of four weeks. The readings were then compared with the recorded readings.

Results

The results showed that the recorded readings were significantly higher than the direct readings. This was true for both morning and evening readings. The difference was greatest in the morning readings. The results also showed that the error was greater in the older patients.

Discussion

The results of this study suggest that the inaccuracies in blood pressure recording may lead to an overestimation of the prevalence of hypertension in general practice. This may have important implications for the diagnosis and control of hypertension.

Appendix

Table 1. Comparison of the mean arterial pressure of the patients with the direct readings.

<table>
<thead>
<tr>
<th>Group</th>
<th>Recorded</th>
<th>Direct</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>120/80</td>
<td>115/75</td>
</tr>
<tr>
<td>B</td>
<td>130/90</td>
<td>125/85</td>
</tr>
</tbody>
</table>

Reference

Patterson HR. Sources of error in recording the blood pressure of patients with hypertension in general practice. British Medical Journal 1984; 289: 1661-1664.

One hundred years ago

It is said that the appearance of chloroform at the end of the century was a turning point in the history of anaesthetics. It was not only the general public that was amazed by the discovery. The story of chloroform in medicine is a classic example of the way in which scientific advances can change society. The introduction of chloroform marked the beginning of the end for the era of pain and suffering in surgery. It was a turning point in the history of medicine. The story of chloroform is a reminder of the power of scientific discovery to shape the world.

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