Resumption of car driving after total hip replacement

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ABSTRACT

Purpose. To assess periods required for resuming car driving in 130 patients who had undergone total hip replacement (THR).

Methods. 80 men and 50 women aged 39 to 80 years who had been driving automatic (n=49) or manual (n=81) cars in the previous 3 months and underwent unilateral primary THR of the right (n=85) or left (n=45) hip were recruited. Patients were advised to resume driving after 6 weeks if they felt comfortable to do so.

Results. 105 (81%) patients were able to resume driving at week 6 to 8; 67 (64%) had a right THR and 65 (62%) were manual car drivers. 22 (17%) patients were able to do so at week 12. The remaining 3 (2%) patients were not confident to drive even at week 12. No patient reported deterioration in driving ability, whereas 48 (38%) felt a subjective improvement in their driving ability.

Conclusion. The time to resume driving varies in different patients. The advice should be individualised, depending on the patient’s recovery and confidence level.

Key words: arthroplasty, replacement, hip; automobile driving

INTRODUCTION

The number of total hip replacements (THR) performed in the United Kingdom is likely to increase by up to 40% by 2026.1 The primary goals of THR are to relieve pain and restore mobility.2 Enabling resumption of sports,3 sexual activity,4 and driving5 are also important.

Driving is necessary in most professions and affects quality of life. Inability to drive during recovery may affect the patient’s life.6 Individuals restricted from driving are reported to develop symptoms of depression,7 loneliness and immobility,8 and manifest increased levels of anger and frustration owing to changes in personal, leisure, and vocational activities.9
We assessed the periods required for resuming car driving in 130 patients who had undergone THR.

**MATERIALS AND METHODS**

Between August 2003 and August 2005, 80 men and 50 women aged 39 to 80 years who had been driving automatic (n=49) or manual (n=81) cars in the previous 3 months and underwent unilateral primary THR of the right (n=85) or left (n=45) hip for osteoarthritis (n=129) or rheumatoid arthritis (n=1) by a pool of 6 surgeons were recruited. Informed consent was obtained from each patient during preoperative assessment. Patients who were not driving preoperatively secondary to causes other than hip pain were excluded.

Post-THR instructions and precautions (e.g. avoid bending the hip beyond 80º for 6 weeks) were given. Full weight bearing was allowed at day 1 as long as the patient was capable to do so. The mean length of hospital stay was 7 days. Patients were advised to resume driving after 6 weeks if they felt comfortable to do so. Before driving, some practised on a stationary vehicle (n=73) and others did not (n=54). Patients’ driving ability and resumption of driving before and after THR were investigated using a questionnaire.

**RESULTS**

105 (81%) patients were able to resume driving at week 6 to 8; 67 (64%) had had a right THR and 65 (62%) were manual car drivers (Table). 22 (17%) patients were able to do so at week 12. The remaining 3 (2%) patients were not confident to drive even at week 12. No patients reported deterioration in the driving ability, whereas 48 (38%) felt a subjective improvement in their driving ability.

**DISCUSSION**

Advice given to patients on resumption of driving after THR is inconsistent. The American Academy of Orthopaedic Surgeons recommends 4 to 8 weeks before doing so for automatic car users, but advice for manual car users and those with right THR is not well defined; in any case patients should seek their doctor’s opinion before resuming driving. The Arthroplasty Society of Australia advises not to drive for a minimum of 6 weeks, irrespective of vehicle type or operated side.

Proper use of foot pedals is important for safe driving. After lower-limb surgery, potential difficulties are related to the effective operating of foot pedals to control motor vehicles. To prevent hip dislocation and ensure safety of patients and other road users, patients should avoid driving during recovery of THR so as to avoid extreme hip movements while entering and exiting the car and excessive forces that might be incurred during emergency braking.

Previous studies on resumption of car driving after THR have focused on measuring the driving reaction time in a car simulator. In a study measuring the reaction times of 25 patients before and after THR, most could resume driving at week 6; a few patients with right THR took longer. However, the sample size was small, and there was no control for the prosthesis type, physiotherapy protocol, and gearshift type. Moreover, subjects were first tested at week 8, and then at week 32, making it inconvenient for patients (especially those who were younger) who wished to drive earlier. In a study measuring the reaction times of 90 patients before and after THR using an automatic car simulator, patients reached their preoperative reaction time at week 4 to 6 and then continued to improve. However, simulators lacked the noise, seat, controls, and steering columns, and vehicles differ in the placement of brake and gas pedals. Simulation is less realistic than real driving situations. In our study, patients resumed driving their own (manual or automatic) cars rather than simulators. Although patients with left THR were reported to resume driving sooner than those with right THR, there was no such evidence in our study.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Resumption of driving at 6 to 8 weeks (n=105)</th>
<th>Resumption of driving at 12 weeks (n=22)</th>
<th>Not confident to drive at 12 weeks (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operated side</td>
<td>Right 67</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Left 38</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Car</td>
<td>Manual 65</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Automatic 40</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Gender</td>
<td>Male 63</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Female 42</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>
The time to resume driving varies in different patients. Therefore, advice should be individualised, depending on the patient’s recovery and confidence level. Nonetheless, 81% of our THR patients were able to resume driving at week 6 to 8, irrespective of the gearshift type or operated side. Patients should practise on a stationary vehicle before driving. They should first drive short journeys, accompanied by another driver who can replace them should they have any problems. Orthopaedic surgeons should be aware of any potential liability in the event of road traffic accidents.

REFERENCES