AN EASILY MISSED FOREIGN BODY IN THE RESPIRATORY PASSAGES

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SUMMARY

A case is described of a 22-year-old man who had inhaled a piece of shattered windscreen glass following a road traffic accident. The indications for bronchoscopy are discussed and the literature reviewed.

In the past, there have been many descriptions of foreign bodies in the respiratory passages. With an increase in the incidence of serious road traffic accidents, a further type has come to be recognized and could become common. The origin of this foreign body is the shattered windscreen glass. It is surprising that there are only two cases reported—by Bishop and Grant (1968) and by Worsam (1968). The following is a report of a 22-year-old man who had inhaled a piece of shattered windscreen glass as a result of a serious motor vehicle accident.

CASE REPORT

A 22-year-old man was admitted to Stockport Infirmary following a serious accident in a motor vehicle in which the windscreen was totally shattered. He had sustained multiple injuries including fractures of skull, mandible, ribs, femur and pelvis. His face was badly lacerated. He was bleeding from ear, nose, throat and from the facial injuries. Two of his incisor teeth were missing. He was unconscious on arrival and in a state of haemorrhagic shock. He was resuscitated and his injuries were treated. Tracheotomy was performed, with removal of one tooth and blood clots from the tracheobronchial tree.

Subsequently, he developed acute renal failure, and he was transferred to Manchester Royal Infirmary 2 days later for renal dialysis. On arrival, he was conscious and was breathing spontaneously. Chest x-ray at this stage showed a rectangular opacity in the left hilar region (fig. 1). This was presumed to be the second of the two missing teeth. Bronchoscopy was performed. It showed marked inflammatory changes with swelling of the mucosa in the left lower lobe bronchus. A foreign body was seen, which appeared well impacted. After several attempts, and with some difficulty, the foreign body was removed eventually. This proved to be a piece of windscreen glass.

The patient was treated with intensive physiotherapy, antibiotics and anti-inflammatory drugs. The mandibular fracture was treated with inter-
A FOREIGN BODY IN THE RESPIRATORY PASSAGES

Table I. Review of cases who had inhaled pieces of windscreen glass.

<table>
<thead>
<tr>
<th>Source</th>
<th>Age (yr)</th>
<th>Sex</th>
<th>Associated injuries</th>
<th>Radiological opacities</th>
<th>Method of removal</th>
<th>Delay in diagnosis (days)</th>
<th>Subsequent course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bishop (1968)</td>
<td>24</td>
<td>F</td>
<td>Facial and cervical</td>
<td>Multiple bilateral and hilar</td>
<td>Bronchoscopy</td>
<td>Nil</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Worsam (1968)</td>
<td>18</td>
<td>F</td>
<td>Scalp and head</td>
<td>Multiple bilateral and hilar</td>
<td>Operative and spontaneous</td>
<td>19</td>
<td>Protracted but satisfactory</td>
</tr>
<tr>
<td>Present case</td>
<td>22</td>
<td>M</td>
<td>Multiple and head</td>
<td>Single left hilar</td>
<td>Bronchoscopy</td>
<td>2</td>
<td>Protracted but satisfactory</td>
</tr>
</tbody>
</table>

dental and intermaxillary wiring. The renal failure was managed initially with peritoneal dialysis and later haemodialysis. The patient eventually made a complete recovery in all respects. Ten days after his transfer to the Manchester Royal Infirmary, a chest x-ray showed normal appearances.

DISCUSSION

In view of the present traffic conditions and the ever-increasing rate of serious accidents, it seems likely that inhalation of windscreen glass will occur more frequently in future. At present it may be occurring more often than is recognized. The relative translucency of glass may be a factor in its delayed recognition, particularly when, as a result of associated chest trauma, there are areas of diffuse shadow in a chest radiograph.

A review of present and past cases (table I) shows that there is often a delay in reaching a correct diagnosis, particularly when there are multiple injuries present, including head injury. Delay in diagnosis increases the problems of removal of the foreign bodies. This was obvious in the present case and that reported by Worsam (1968). In the latter case, although the foreign bodies were seen, they could not be removed and thoracotomy and bronchotomy were necessary. When the diagnosis is prompt, as in the case reported by Bishop and Grant (1968), removal may present no special problems even when the foreign bodies are multiple.

One way of avoiding delay in diagnosis is to perform bronchoscopy on patients with head and facial injuries, who have been involved in serious motor vehicle accidents with shattered windscreen. As most of these patients require ventilatory assistance, a clear tracheobronchial tree at the outset would be an added advantage.

ACKNOWLEDGEMENTS

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REFERENCES


PRESENCE D'UN CORPS ETRANGER FACILEMENT IGNORE DANS LES PASSAGES RESPIRATOIRES

RESUME

On décrit le cas d'un homme âgé de 22 ans qui avait inspiré un fragment de pare-brise brisé à la suite d'un accident de la circulation. On discute des indications de la bronchoscopie et on considère la documentation existante.

EIN LEICHT ZU ÜBERSEHENDER FREMDKÖRPER IN DEN ATMUNGSWEGEN

ZUSAMMENFASSUNG

Beschrieben wird der Fall eines 22jährigen Mannes, der nach einem Verkehrsunfall einen Glassplitter der zertrümmerten Windschutzscheibe eingeatmet hatte. Die Anwendung von Bronchoskopie wird diskutiert und die einschlägige Literatur wird überprüft.

CUERPO EXTRANO QUE SE PIERDE FACILMENTE EN LOS CONDUCTOS RESPIRATORIOS

SUMARIO

Se describe el caso de un hombre de 22 años que tragó una pieza del vidrio del parabrisas roto a causa de un accidente de tráfico. Se discuten las indicaciones de broncoscopia y se revisa la información.

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