Three part question
In [adults who have experienced severe blunt trauma who are fully conscious and asymptomatic] is [pelvic x-ray] necessary to exclude [significant bony pelvic damage]?

Search strategy
Medline 1966 to 10/98 using the OVID interface. (([exp pelvis OR pelvic*.ti,ab,sw] AND [exp x-rays OR x-ray$.ti,ab,sw OR radiograph$.ti,ab,sw] AND [exp "wounds and injuries" OR injur$.ti,ab,sw OR trauma-.ti,ab,sw] AND blunt$.ti,ab,sw)) LIMIT to human and english).

Search outcome
Thirty two papers found of which 27 were irrelevant; the remaining papers are shown in table 1.

Comment
The studies above include 1699 awake patients. Aggregated figures show that clinical symptoms and signs predict pelvic fracture with a sensitivity of 95.45% and a specificity of 95.53%. Furthermore the absence of clinical symptoms and signs has a negative predictive value of 99.6% in this group of patients.

Clinical bottom line
Adult trauma patients who are awake with normal sensation and who have no pelvic symptoms or signs do not need a pelvic x-ray.


The management of anterior epistaxis
Report by Kevin Mackway-Jones, Consultant
Search checked by Rosemary Morton, Consultant

Clinical scenario
An adult patient presents to the emergency department with a nosebleed that came on spontaneously and which has not responded to simple first aid measures. The bleed appears to be from the front of the nose and the patient has no underlying disease. You wonder whether packing or cautery is the best method of obtaining haemostasis.

Table 2

<table>
<thead>
<tr>
<th>Author, date, and country</th>
<th>Patient group</th>
<th>Study type (level of evidence)</th>
<th>Outcomes</th>
<th>Key results</th>
<th>Study weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toner and Walby, 1990, UK</td>
<td>97 consecutive patients with anterior epistaxis attending the emergency department Randomised to either electrocautery or cautery with silver nitrate</td>
<td>PRCT</td>
<td>Number having further epistaxis</td>
<td>No statistical difference</td>
<td>Low power study</td>
</tr>
<tr>
<td>Nicolaides et al, 1991, UK</td>
<td>30 consecutive patients with acute epistaxis in the control v 33 consecutive patients in the intervention group Intervention group had visualisation using the operating microscope and hot wire cautery</td>
<td>Controlled clinical trial</td>
<td>Complete control of bleeding by cautery</td>
<td>82% v 23% (p &lt; 0.001)</td>
<td>Not randomised</td>
</tr>
<tr>
<td>McGlashan et al, 1992, UK</td>
<td>40 consecutive adult (&gt;16 years) patients with significant epistaxis of at least 2 hours' duration Kalostat v xeroform packs</td>
<td>PRCT</td>
<td>Discomfort of insertion</td>
<td>NS</td>
<td>No power calculation</td>
</tr>
<tr>
<td>Quine et al, 1994, UK</td>
<td>100 consecutive adult (&gt;16y) patients with acute epistaxis All hot wire cauterised</td>
<td>Observational</td>
<td>Patients sent home immediately</td>
<td>80%</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>Pringle et al, 1996, UK</td>
<td>83 patients packed with merocel out of 149 patients with epistaxis presenting over 1 year</td>
<td>Observational</td>
<td>Control of epistaxis</td>
<td>91.5%</td>
<td>Uncontrolled</td>
</tr>
</tbody>
</table>

PRCT=prospective randomised controlled trial; VAS=visual analogue scale.
Search strategy
Medline 1966 to 10/98 using the OVID interface. [(exp epistaxis OR epistaxis.ti,ab,rv,sh OR nose bleed$.ti,ab,rv,sh) OR [(exp hemorrhage OR hemorrhage$.ti,ab,rv,sh OR hem-orrhage$.ti,ab,rv,sh OR bleed$.ti,ab,rv,sh) AND [exp nose OR exp nasal mucosa OR nose$.ti,ab,rv,sh OR nasal$.ti,ab,rv,sh OR nar-ces$.ti,ab,rv,sh])] AND [pack$.ti,ab,rv,sh OR exp cautery OR cautery$.ti,ab,rv,sh] AND maximally sensitive RCT filter LIMIT to human and english language.

Search outcome
Altogether 103 papers found of which 82 were irrelevant and 16 of insufficient quality for inclusion; the remaining papers are shown in Table 2.

Comment
There is a paucity of good evidence in this area. No head to head trials have been carried out. Hot wire cautery using an operating micro-scope requires skills unlikely to be found in the emergency department, while nasal packing is easier for the relatively unskilled to perform but is less comfortable for patients.

Clinical bottom line
Both cautery and packing can be effective. In the absence of better comparative studies the operator should use the technique with which they are most familiar.

Topical analgesia in corneal abrasions
Report by Simon Carley, Clinical Fellow
Search checked by Bruce Martin, Clinical Fellow

Clinical scenario
A 25 year old man presents to the emergency department complaining of a four hour history of painful right eye after it was scratched by his 3 month old daughter. You recall being told that topical non-steroidal may be of help but wonder if they are any better than lubrication on its own. You also wonder if the non-steroidal may affect the eventual outcome and time to healing.

Table 3

<table>
<thead>
<tr>
<th>Author, date, and country</th>
<th>Patient group</th>
<th>Study type (level of evidence)</th>
<th>Outcomes</th>
<th>Key results</th>
<th>Study weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brahma et al, 1996, UK†</td>
<td>401 patients with corneal abrasions in an eye emergency department</td>
<td>PRCT</td>
<td>Ocular pain 6 hourly</td>
<td>Both patient groups receiving flurbiprofen had significantly less pain</td>
<td>Very low response rate, only 55.8% of patients enrolled in the study completed it</td>
</tr>
<tr>
<td>All patients received chloramphenicol ointment +/- study drops: polyvinyl alcohol alone, homatropine 2%, flurbiprofen 0.03% or homatropine 2% + flurbiprofen 0.03%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Jayama et al, 1997, UK†</td>
<td>40 patients with unilateral traumatic corneal abrasions</td>
<td>PRCT</td>
<td>Ocular pain</td>
<td>Day 1 Less in diclofenac group (p&lt; 0.02)</td>
<td></td>
</tr>
<tr>
<td>All patients received chloramphenicol ointment +/- study drops: diclofenac sodium 0.1% or normal saline</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaiser and Pineda, 1997, USA†</td>
<td>100 patients with traumatic or foreign body related corneal abrasions</td>
<td>PRCT</td>
<td>Ocular pain</td>
<td>Less in ketorolac group from day 1 (p&lt; 0.002)</td>
<td></td>
</tr>
<tr>
<td>All patients received a cycloplegic and polymyxin B +/- study drops: ketorolac tromethamine 0.5% or control vehicle drops</td>
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</tr>
</tbody>
</table>

Three part question
[In adults with acute corneal abrasions] are [non-steroidal eye drops better than simple lubrication] at [improving pain relief and improving time to healing]?

Search strategy
Medline 1966 to 10/98 using the OVID interface. [(exp cornea OR cornea$.ti,ab,rv,sh) AND abrasion$.ti,ab,rv,sh] AND [exp analgesia OR analgesi$.ti,ab,rv,sh OR exp anti-inflammatory agents, non-steroidal OR non-steroidal$.ti,ab,rv,sh)].