Injuries from road traffic accidents: is Asir region of Saudi Arabia any different?

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Objective: To report the pattern of injuries from high speed road traffic accidents in the Southern Region of Saudi Arabia.

Methods: In this prospective, criteria based study; data was collected to report the pattern of injuries due to road traffic accidents (RTA). The study duration was one year. Data collection forms were filled upon arrival of patients to the accident and emergency department. The patients were divided in two groups, those with fractures (Group-1) and those without (Group-2).

Results: A total of 1513 patients were included, 628 for Group-1 and 885 for Group-2. There were 1356 male and 157 female patients in total. Majority were in the younger age group of 20–30 years in both groups. Drivers and front seat passengers were the most commonly involved victims. Fewer patients were using restraints and more reported driving with speeds of 100 km per hour (KMH) and above in Group-1 compared to Group-2. Most accidents occurred during the time period of 12:00 h to 24:00 h in both groups. Common sites of injuries were the upper and the lower extremities in both groups.

Conclusion: We think that the pattern of injuries and some of the causative factors of RTA’s in the Asir region of Saudi Arabia are similar to the rest of the world, while some causative factors remain unique to the region.

Keywords: RTA; Injury pattern; Causation


Introduction of an electronic handover system at a district general hospital

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Introduction: The European Working Time Directive (EWTD) was introduced to protect the health and safety of workers and patients. Since August 2009 this has seen the maximum length of a working week for doctors reduced to 48 h. Consequently, almost all doctors have been forced to move away from the traditional on-call working pattern to a shift based system. This has inevitably resulted in the fragmentation of consultant-led teams and complete loss of continuity of patient care. A critical component for this system to work is a thorough and effective handover of patients between the doctors finishing and the doctors starting their shifts.

The problem: Our hospital is a large teaching district general hospital with a full shift system for all junior doctors. The standard practice of handover was a brief meeting of doctors between shifts to discuss admissions and problem patients. There was usually a paper-based list kept by each doctor which was often inconsistent, illegible, incomplete or completely absent. Patient admissions were discussed at the daily morning trauma meetings and it was obvious from the poor quality of patient case presentations and omitted patients that there was a problem with this system.

The solution: A standardised pro-forma such as an electronic handover, has been shown to help redistribute outstanding tasks, increase information transfer and reduce occurrences of missing data. This significantly reduces the risk of clinical error caused by shift changes.

Implementation: Junior doctors involved in the care of orthopaedic patients and their handover were surveyed for their ideas and opinions for a compulsory, electronic list of admissions, kept on the hospital intranet to be fully completed by the admitting doctor. It was then piloted using a spread sheet (Microsoft Excel 2003) with areas to input summarised patient histories, investigation results, management plans and outstanding tasks. The spread sheet could be updated daily with the previous sheet being saved on the hospital shared drive. Access was only allowed to the doctors directly involved with orthopaedic patient care and was controlled by their hospital e-mail address to ensure the protection of patient data.

Conclusion: It is already apparent from the improvement in the quality of case presentation at the daily trauma meetings that the new system is working well. The use of an electronic handover has led to a more efficient trauma meeting with more information being available to make important decisions on patient management. It has reduced the number of outstanding jobs, the risk of patients...
being missed from the post-take ward round and facilitated data collection for audit purposes.


Is it time to finally stop the ‘weighted’ view and start routine axial radiographs for ACJ dislocation?

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Suspected ACJ dislocation is routinely imaged using an AP radiograph and a “weighted” view radiograph. It has been shown that the weighted view can be painful, may expose patients to unnecessary radiation, and increases the cost of care, yet current guidelines still recommend it. Orthopaedic teaching is that all injuries should be imaged in two orthogonal planes. This is not achieved with AP and angled views of the ACJ.

To test the hypotheses that the “weighted view” did not alter the diagnosis and that the axial view did change the radiological diagnosis radiographs from 69 patients with suspected ACJ dislocation presenting to St George’s Hospital were randomised. Four separate radiographs were sought for each patient: A&E AP, A&E AP “weighted”, AP Delayed by 1 week, Axial.

Using a single blind methodology they were presented to two consultant orthopaedic shoulder surgeons and the injury graded.

Percentage concordance between injury grading was calculated using cross-tabulation. Correlation coefficient analysis using the Kendall’s tau test was conducted to obtain a P-value.

Results: There was no significant difference between the two surgeons analysis of the radiographs.

Acute AP v “weighted” view: no significant difference
Acute AP v delayed axial: significant difference.

Conclusions: These results suggest that we should abandon the routine use of the “weighted” AP in the A&E department as it does not alter the diagnosis and that we should replace it with the Axial view which would not only make a significant difference to the diagnosis but would also bring the imaging of this joint into line with the imaging of all other orthopaedic injuries.


Legs length discrepancy after cemented hip hemiarthroplasty

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Aim: Leg length discrepancy (LLD) is a well-known complication following hip arthroplasty. There are many papers looking at LLD after total hip replacement, however, there are none looking at LLD after hip hemiarthroplasty for fracture neck of femur. Our aim was to accurately assess leg length discrepancy following cemented hip hemiarthroplasty.

Method: Sixty consecutive patients who underwent cemented hip hemiarthroplasty for fracture neck of femur between 2008 and 2009 were selected for the study. Patient details including implant sizes, were collected from theatre records.

We used the trauma cad software to accurately calculate LLD after appropriate calibration. We measured pre- and post-operative femoral position to calculate the degree of LLD. The LLD’s were calculated by two observers to look for any inter-observer differences.

We excluded cases where the X-ray was too externally rotated, missed out the greater trochanter or no post-op X-rays were available.

Results: Sixteen cases were excluded for not meeting the inclusion criteria. In the remaining 44 patients, the mean leg length discrepancy was a 5.6 mm increase in length with a range of 5.3 mm shortening to 20.7 mm lengthening. The 95% confidence intervals was 1.8 mm above and below the mean.

Pearson’s correlation coefficient between pre- and post-operative leg length showed no significant length discrepancy with a coefficient of 0.42.

There was no significant inter-observer error.

Discussion: Many studies looking at LLD after total hip arthroplasty had a mean lengthening of 9 mm. Our study has shown that hip hemiarthroplasties have marginally better results.

However, some LLD still exists and we feel that this could have been due to the absence of pre-op templating, inaccurate femoral cut and the inability of the implant to accommodate variations in patient femoral neck angle.

We believe that correcting these issues could reduce LLD, accurately restore normal anatomy and reduce the potential complications of low back pain, nerve palsy and abnormal gait associated with LLD.

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Major trauma and transfusion in the north east of England

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Background: Haemorrhage is a common cause of death among trauma victims. Previous practice has focused on treating coagulopathy in these patients only when it has become evident from laboratory tests. This practice leads to delays in transfusion of blood components when they are indicated. In September 2007, as part of a major haemorrhage protocol, we introduced massive transfusion packs, which enable the immediate provision of packed red cells (RBCs), fresh frozen plasma and platelets in fixed proportions for the management of such patients. We report here an audit of transfusion, coagulopathy and outcome, before and after this protocol came into place.

Methods: Our hospital is one of two major trauma centres receiving cases from a population of 2.9 million. We performed a retrospective case-note study of trauma patients requiring massive transfusion between January 2004 and September 2007. From September 2007 to June 2008 the protocol was introduced with training. Once fully integrated, the same data was collected for patients admitted from July 2008 to July 2009. Massive transfusion was defined as receiving ≥4 units of RBCs in 1 h or replacing ≥50% circulating blood volume in 3 h or ≥10 units of RBCs in 24 h. Patients were divided into either adequately or inadequately transfused based on predetermined laboratory parameters. The primary endpoint was survival.

Results: 66 patients were identified and included in the study, 54 before and 12 after the introduction of the protocol. The commonest mechanism of injury was a road traffic collision (61%). Mortality in the first cohort was 33% (18/54 patients) and 25% (3/12 patients) in the second (p-value 0.575). Median length of stay in hospital in the first cohort was 18.5 days (range 4–46), and 16 (range 3–3.4) in the second cohort (p-value 0.549). 19 of the 54 patients (35%) in the first cohort were deemed inadequately transfused compared with 3 of the 12 patients (25%) in the second cohort (p-value 0.498). In the first cohort, being adequately transfused was associated with a significantly lower mortality (p-value 0.027), the same was not true for the second cohort (p-value 0.618). Patients in the second cohort...