DUMPING OF ORTHOPAEDIC TRAUMA PATIENTS AT KENYATTA NATIONAL HOSPITAL

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ABSTRACT

Objective: **The purpose of this study was to review trauma patients referred to Kenyatta National Hospital casualty to determine if characteristics outside the guidelines are being employed to present patients to the referral hospital.**
Design: **A cross-sectional survey of 202 consecutive trauma patients.**
Setting: **Trauma patients presenting to Kenyatta National Hospital accident and emergency department.**
Patients: **Clinical records of 202 consecutive trauma patients presenting to the accident and emergency unit of Kenyatta National Hospital in January 2006 were analyzed.**
Methods: **Data was collected on matters concerning referral, initial treatment given and the outcome analyzed using SPSS 17.0 windows.**
Results: **Two hundred and two patients were available for review, 69.2% were male belonging to the economic active age of between 20 and 45 years. The majority came in due to road traffic accidents followed by assaults. Most of the patients reported to the emergency unit of the referral hospital primarily without having been seen elsewhere to be referred. Though medical reasons were the main indications for referral, in 25% of non medical reasons were given as the reason for referral. Private clinics followed by private hospitals were the main sources of referral. Over 50% of the patients were discharged home from the accident and emergency department only third requiring admission at the referral centre and half the number referred to be followed up in out patient clinic.**
Conclusion: **The results support the notion of patient dumping at Kenyatta National Hospital, a national public referral hospital. Most of the patients reported to the emergency unit of the referral hospital primarily without having been seen elsewhere and referral hospital was therefore being used as a primary institution for management.**
Recommendations: **We support the policy that no patient in need of emergency hospitalization should be denied admission or transferred by the primary institution at presentation for economic reasons.**

INTRODUCTION

Patient transfer to a higher level health facility i.e. referral needs to occur only if the care or specialty needed to treat cannot be offered at the lower level facility. In any case hospitals are required to give emergency aid in order to "stabilize" a patient suffering from an "emergency medical condition" before discharging or transferring that patient to another facility. It is also not right for a hospital to refuse to accept an appropriately transferred patient who requires the specialized treatment it can provide. Non-discrimination violations can occur when a hospital that can provide specialty care refuses to and instead transfers the patient to still another care centre, a third stop on what can be a life-threatening run-around.

At many referral centers including Kenyatta National Hospital there is a sentiment that other factors, especially inability to pay, rather than the need to access specialised care may promote referral to public institutions. Patient dumping is the practice of a hospital that despite being capable of providing the needed medical care transfers a patient to another institution or refuses to treat a patient for non medical reasons such as being unable to pay (1-3). Dumping can also take the form of patients heading straight to referral facilities without going through lower facilities due to perceived real or apparent lack of services.

Dumping at Kenyatta National Hospital accident and emergency department was evident. We make some recommendations to reduce the trend. Practice demands that patient transfer to a referral centre occurs only if the care or specialty needed to treat cannot be offered at the lower level center (2-4). At many referral centers there is a sentiment that other factors may also promote transfer or self referral (4, 5). The purpose of the study was to look at patients who were referred to Kenyatta National Hospital and confirm whether the reasons for referral were justified.

MATERIALS AND METHODS

Clinical records of 202 consecutive trauma patients presenting to the accident and emergency unit of Kenyatta National Hospital in January 2008 were analyzed.

Data was collected on matters concerning referral. Initial treatment given and the outcome was analyzed using SPSS 17.0 windows.

RESULTS

Two hundred and two patients were available for review, majority 69.2% of whom were male who also belonged to the economic active age of between 20 and 45 years. The majority came in due to road traffic accidents followed by assaults. Most of the patients reported to the emergency unit of the referral hospital primarily without having been seen elsewhere to be referred. Though medical reasons were the main indications for referral in 25% of the situations, non medical reasons were given as the reason for referral. Private clinics followed by private hospitals were the main sources of referral.

Figure 1

Gender; The majority of the patients seen were male reflecting the expected pattern (6-9) in trauma patients

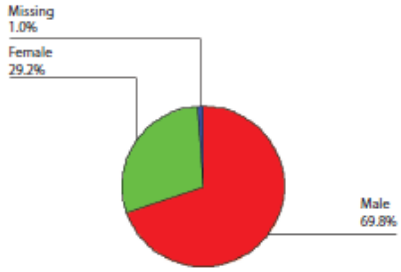

Figure 2

Age distribution; the majority of the patients were in the economic active age of between 20 and 45 years. This is the expected pattern (6-8) in trauma

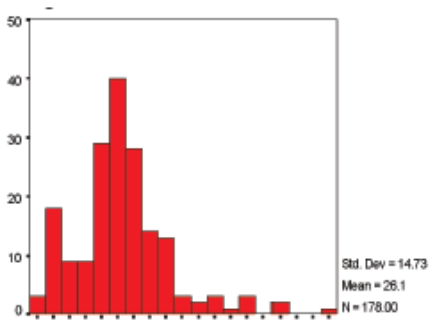

Figure 3

The cause of trauma; majority were due to road traffic accidents followed by assaults Previous local researchers reported similar findings (9-14).

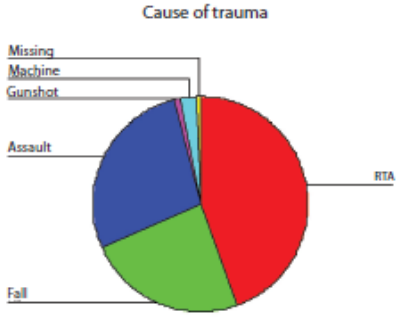

Figure 4

Medical reasons were the main indications for referral as shown on the referral notes however in 25 % of situation non medical reasons were given.

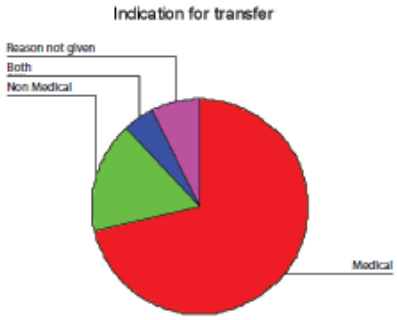

Table 1

Most of the patients reported to the emergency unit of the referral hospital primarily without having been seen elsewhere to be referred

		Referral			
		Frequency	Percent	Valid percent	Cumulative percent
Valid					
	Non-referral	153	75.7	78.1	78.1
	Referral	43	21.3	21.9	100
	Total	196	97	100	
Missing	System	6	3		
Total		202	100		

Table 2

Private clinics followed by private hospitals were the main sources of referral

		Category of transferring institution			
		Frequency	Percent	Valid percent	Cumulative percent
Valid	Private clinic	20	9.9	46.5	46.5
	Health centre	1	0.5	2.3	48.8
	Dispensary	5	2.5	11.6	60.5
	District hospital	6	3	14	74.4
	Provincial hospital	1	0.5	2.3	76.7
	Private hospital	9	45	20.9	97.7
	Dispensary + Pharmacy	1	0.5	2.3	100
	Total	43	213	100	
Missing	system	159	78.7		
Total		202	100		

Table 3

Over 50% of the patients were discharged home from the accident and emergency department, only one third requiring admission at the referral centre and half the number referred to be followed up in out patient clinic

		Progress from A&E			
		Frequency	Percent	Valid percent	Cumulative percent
Valid	Discharge home	101	50.0	50.5	50.5
	Admitted	66	32.7	33.0	83.5
	Referred to clinic	33	16.3	16.5	100
	Total	200	99.0	100	
Missing	System	2	1.0		
Total		202	100		

DISCUSSION

The majority of the patients seen were male reflecting the expected pattern (6-9) in trauma patients. The majority of patients seen were due to road traffic accidents followed by assaults. Previous local researchers report similar findings (9-14). Most of the patients reported to the emergency unit of the referral hospital primarily without having been seen elsewhere to be referred. Medical reasons were the main indications for referral as shown on the referral notes however in 25% of situation non medical reasons were given. Over 50% of the patients were discharged home from the accident and emergency department, only one third requiring admission at the referral centre and half the number referred to be followed up in out patient clinic.

The results support the notion of patient dumping at Kenyatta National Hospital, a national public referral hospital. Dumping took several forms;

1. Referral from private health facilities on financial grounds.
2. Self referral by patients by passing local facilities due to perceived or real lack of services.
3. Referral of elective non emergency cases.

All hospitals with emergency rooms (ER) should medically screen everyone who "comes to" the (ER) and has a request for examination or treatment made on his or her behalf (14-16). Violations include: outright denials, "referrals" to other facilities, and requests for payment (1,2,17). In some cases patients are not told that they have a right to an exam regardless of their ability to pay, and thus "refuse" the exam when they are asked for payment (1,3,17). In some cases, a hospital's screening standard can be so low that it amounts to no screening at all (2-5).

Emergency room personnel may delay screening or treatment to ask whether a patient has insurance or is able to pay (3-5,15,16). Further, some Health Management Organizations (HMOs) require pre-authorization for exams or treatment, and some HMOs refuse to pay for emergency room treatment later if the patient is found not to have a condition that constitutes an emergency(2,3,17). This often means the hospital gets stuck with the bill, providing hospitals with a deadly incentive to dump uninsured or poor patients (2, 3, 18,19). Patients may end up in tertiary institutions because of apparent or real lack of services at lower institutions

In the USA several states have enacted rules requiring hospitals to provide emergency care regardless of ability to pay and requiring that patients be stabilized before transfer to another hospital. The conclusion is that even the best of these laws are deficient in defining such terms as "emergency" and "patient stability (2,4,15,17). Monitoring and enforcement of existing laws and the guidelines are inadequate (2,4,17).

CONCLUSION

We support the categorization, development and equity distribution of health facilities as a basis for a proper referral system (18).We support the policy that no patient in need of emergency hospitalization should be denied admission or transferred for economic reasons (1, 3, 4, 18 ,19). We propose that a compensatory system to emergency services provider institutions, whether private or public be put in place to cater for patients who are otherwise not able to pay for the emergency services (20, 21).

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Classification allows uniformity in reportage and research. Classification gives a guideline to the best treatment option. The four part Neer classification is the most widely used by orthopaedic surgeons today (19). Neer in 1975 modified and improved on Codman's observation of four major fracture fragments when proximal humerus fracture occurs. The classification takes into consideration the pattern and degree of displacement, other than the location of fracture lines (displacement of > 5 mm or angulation of > 45°). The main fragments are the articular head through the surgical neck (SN) or anatomical neck (AN), the greater tuberosity (GT), the lesser tuberosity (LT) and the humeral shaft. Neer's classic four part classification scheme is as follows:

1. 1-Part - Impacted fracture (through SN or AN)
2. 2-Part - angulated or displaced fracture separately involving the SN, AN, GT or LT
3. 3-Part - GT +SN or LT +SN
4. 4-Part - GT+SN+LT

Neer (19) also emphasized the prognostic importance of fracture dislocation, which has a higher propensity to osteonecrosis and subsequent demand for arthroplasty.

Using this classification most of our fractures in this study had a Neer 2-part fracture. The next commonest was the 3-part fracture. Impacted fractures were noted.

The aim of treatment is to restore the articular anatomy and its relationship to the tuberosities. The secondary aim is to address work and recreational demands in the younger individual.

The method of treatment will depend on fracture fragmentation, displacement bone quality and patients age. Minimally displaced fractures, impacted fractures and fractures in debilitated, elderly and those with severe osteopenia are managed non-operatively. A sling or body bandage is applied for two weeks. This is followed by pendulum shoulder exercises which gradually graduate to active shoulder motion in 4-6 weeks. Close follow up with weekly X-rays for the first three weeks is essential.

In this study only eight of our patients were treated in this manner, the rest were in the working age group, who sustained high energy fractures that required open reduction. The indications for surgical intervention are as follows:

The common two-part fractures are through the surgical neck or greater tuberosity. A displaced fracture of the greater tuberosity (usually associated with anterior dislocation), should be reduced and fixed to avoid malunion (20). Forty five percent of our patients had a 2-part fracture mainly involving the surgical neck. They all had open reduction and internal fixation (Figure 5).

The commonest 3-part fracture involves the SN and GT (Figure 6). When the quality of bone and the pattern of fracture allow open reduction and internal fixation with a proximal humeral locking plate is done. Thirty six percent of our patients were in this category and all had open reduction and internal fixation. However, elderly, osteopenic patients with fragmented fractures require primary arthroplasty where the facility is available (21).

In the typical 4-part fracture the articular segment is usually dislocated anteriorly with the shaft sitting laterally and the tuberosities displaced. In a young patient, open reduction and fixation with a combination of plates, screws, heavy sutures etc is used while in the elderly, immediate hemiarthroplasty will be preferable (22). Only 14% of our patients were in this category, again they were treated with osteosynthesis. We had no ability for shoulder arthroplasty.

The associated injuries and long-term sequelae of fracture healing and joint injury can have a significant impact on outcome. Loss of humeral length with secondary deltoid weakening, traumatic arthritis, acute or chronic dislocations, rotator cuff tears with tuberosity displacement, nerve injuries, and vascular injuries add to the fracture complications.

The recorded complications after surgical management of proximal humeral fractures are nonunion, neurovascular damage, osteonecrosis, stiffness, arthritis and infection. This usually follows injury to the ascending branch of the anterior circumflex artery. Other complications are nonunion with implant failure and shoulder stiffness. The main complication of the operative approach is osteonecrosis (23). In this study the commonest complication was joint stiffness which constituted 16% of all operated patients. We suspect that we missed a few rotator cuff injuries that were not dressed during surgery. We had one case of osteonecrosis and one case of nonunion. One patient who had a pre-existing renal disease died of renal failure.

CONCLUSION

Fractures of the proximal humerus are uncommon but demanding in treatment. We have a different patient population from that described in the developed world. Whereas the majority of patients in those countries are elderly females, our patients were young and in their productive life. Motor vehicle accidents and occupational hazards are the common causes of injury in our population. The injury pattern is high energy requiring open reduction and internal fixation. Plate osteosynthesis is a reasonable approach with good results. Locking plates are a useful part of the orthopaedic armamentarium. There is also a small population of elderly people that will benefit from primary arthroplasty.

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