Chapter one

1.1 **Introduction**:

An emergency department (ED), also known as accident & emergency (A&E), emergency room (ER), or casualty department, is a medical treatment facility specializing in emergency medicine, that is, acute care of patients who present without prior appointment, either by their own means or by ambulance. The emergency department is usually found in a hospital or other primary care center.

Due to the unplanned nature of patient attendance, the department must provide initial treatment for a broad spectrum of illnesses and injuries, some of which may be life-threatening and require immediate attention. In some countries, emergency departments have become important entry points for those without other means of access to medical care.

The emergency departments of most hospitals operate 24 hours a day, although staffing levels may be varied in an attempt to reflect patient volume. (*http://en.wikipedia.org/wiki/Emergency_department).*

The early clinical management of patients with major trauma still represent a challenge . to clinically evaluate the full extent of patient injuries is difficult ,especially when the patient is unconscious.
(Weninger 2007 Department of Trauma Surgery, Trauma Hospital Lorenz Boehler, Austria).

CT with its technical advances in the past decade as become increasingly valuable in the early clinical management of patient with multiple trauma .Its a sensitive and specific diagnose tool in early clinical process. A wide range of

injuries can be diagnosed accurately with spiral CT. It is main advantage are speed ,scanning of large body volume and fast image calculation ,which result in lower risks for patients.

CT in the management of poly trauma ,particularly in metastable patients ,has been shown to be beneficial. (Linsenmaier 2002) (Whole- body CT in poly trauma technique and management(.

Conventional radiography involves the use of x-rays; the term "plain x-rays" is sometimes used to distinguish x-rays used alone from x-rays combined with other techniques (e.g. CT).

For conventional radiography, an x-ray beam is generated and passed through a patient to a piece of film or a radiation detector, producing an image. Different soft tissues attenuate x-ray photons differently, depending on tissue density; the denser the tissue, the whiter (more radiopaque) the image. The range of densities, from most to least dense, is represented by metal (white, or radiopaque), bone cortex (less white), muscle and fluid (gray), fat (darker gray), and air or gas (black, or radiolucent).(Hakan\ Allaslan,1999).

In this study , the researcher assesses the role of radiology department in traumatic patient.   The CT Scan and Conventional x-ray were used to diagnose traumatic disorders (bleeding, fractures) in all cases in ER department.

1.2 Problem of the study :

There many causes for this study due to importance of emergency radiology in the evaluation of emergency cases situations to get a proper diagnosis for each case and determine the appropriate treatment for them.

1.3   Objectives:

1.3.1 General objective:

To assess accuracy of emergency conventional performing beside the CT scan in traumatic patients.

1.3.2 Specific objectives:

1. To compare diagnostic accuracy of CT and conventional x-ray imaging in patients present to ER department.

2. To clacify type of trauma.

3. To determine highly sensitive of ct usage in traumatic Head injury

4. To determine chest injury , abdominal injury and pelvis injury.

5. To evaluate The CT protocols used in all traumatic cases.

6. To calculate the most frequent cases according to gender n the radiology department.

7. To calculate most frequent ages coming to radiology department.

8. To evaluate the patients according to clinical status in ED.

9. To calculate the patients according to radiological examination and applied technique.

10. To correlate the applied technique into patients technique selection.

1.4   Significance of the study:

This study done to assess accuracy of emergency conventional performed beside the CT scan in traumatic patients.

1.5   Over view of the study:

This study consisted of five chapters. Chapter one is an introduction which includes; problem and objective of the study. Chapter two is a literature review which includes; Anatomy, Pathology and previous studies. Chapter three is about research methodology. In Chapter four the results are presented and Chapter five includes;   discussion,   conclusions   and recommendations.

Chapter Two

Theoretical Background

2.1   Anatomy and traumatic injuries:

Anatomy and traumatic injuries of the brain:

The brain is a hub of the central nervous system and controls all bodily functions and processes. It weighs about three pounds and is surrounded by protective bone called the skull or cranium. The brain, which has the texture of gelatin, is held together by three layers of membranes called the Dura, pia, and arachnoids

.Between the Pia and arachnoids membranes is the subarachnoid space, through which a network of arteries and veins carries blood to and from the heart.: The brain is surrounded by   a cushioning reservoir of cerebrospinal fluid (CSF). The lower part of the brain (called the brain stem) passes through a hole at the base of the skull and merges with the spinal cord and the rest of the nervous system.

Behind the brain stem is the cerebellum, a curved mass of nerve tissues that regulates balance and coordinates fine motor skills. The cerebral cortex is the largest part of the brain and is shaped like a large, wrinkled, walnut divided in half (the right and left cerebral hemispheres) and joined at the center. - The cerebral cortex is further divided into several areas called lobes. Of these: frontal lobe ,temporal lobe, parietal lobe and occipital lobe. (Stanley J. Swierzewski, M.D. 2001).

figure 2.1 CT brain show fracture of the skull

Figure 2.1.1 CT brain show extradural hematoma

2.2   Anatomy and traumatic injuries of the chest:

The thorax or chest   is   a part of the anatomy of humans located between the neck and the abdomen. The thorax includes the thoracic cavity and the thoracic wall. It contains organs including the heart, lungs and thymus gland, as well as   muscles   and   various   other   internal   structures.(*http://en.wikipedia.org/wiki/Thorax)*
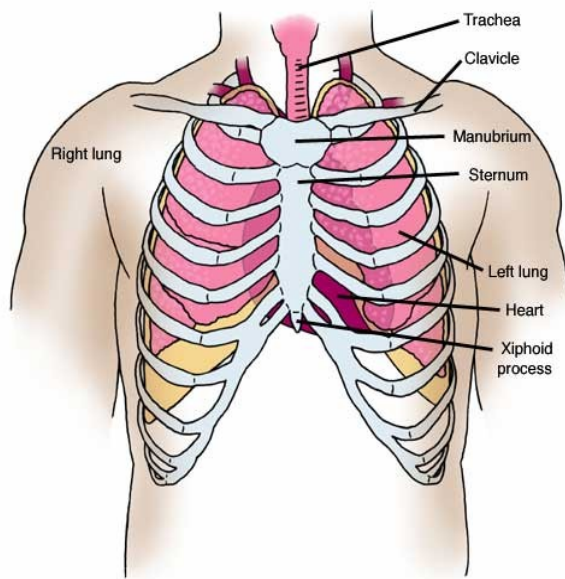
Figure 2.2   show main thoracic parts

(Ronald Bergman Ph.D.2014)

A chest injury is any form of physical injury to the chest including the ribs , heart and lungs. Chest injuries account for 25% of all deaths from traumatic injury typically chest injuries are caused by blunt mechanisms such as motor vehicle   collisions or   penetrating   mechanisms   such as stabbings.

Chest injuries can be classified as blunt or penetrating. Blunt and penetrating injuries have different path physiologies and clinical courses.
Specific types of injuries include:

2.2.1   Injuries to the chest wall

   Chest wall contusions or hematomas.
- Rib fractures
- Flail chest
- Sternal fractures
- Fractures of the shoulder girdle

2.2.2   Pulmonary injury (injury to the lung) and injuries involving   the pleural space

2.2.3   Injury to the airways

   Tracheobronchial tear

2.2.4   Cardiac injury

2.2.5   Blood vessel injuries

2.2.6   Injuries to other structures within the torso

 (chest injury From Wikipedia, the free encyclopedia)

) Peitzman 2002, p 203   ,   Moore 2012, p. 468)

2.3   Anatomy and traumatic injuries of the abdomen:

The surface anatomy of the abdomen extends from the nipple line to the groin crease anteriorly and from the tips of the scapulae to the gluteal skin crease posteriorly. The

specific anatomical boundaries of the abdomen are the diaphragm, abdominal wall musculature, pelvic

skeletal structures, and vertebral column. There are 3 basic regions of the abdomen: the peritoneal cavity with its intrathoracic component, the retro peritoneum, and the pelvic portion. As the diaphragm rises as high as the fourth inter costal space, trauma to the lower chest may involve abdominal organs.

(assessment of abdominal trauma ,bestpractice.bmj.com)

Abdominal trauma can divided into:

2.3.1   Blunt abdominal trauma the most common causes are (motor vehicle accidents , motorcycle crashes , pedestrian-automobile impacts, falls, and assaults).

2.3.2   Penetrating abdominal trauma   occur when a foreign object pierces the skin, and these may be accidental or intentional. The most common penetrating injuries are gunshot wounds and stab wounds. (www.bestpractice.bmj.com)

figure 2.3 CT abdomen show   Splenic laceration

figure 2.3. 1 CT abdomen show liver laceration

2.4   Anatomy and traumatic injuries of the pelvis:

- The five bones that comprise the pelvis are the ilium , ischium, pubis, sacrum and coccyx. Most trauma to the pelvis to pelvis and hips can be evaluated with an AP projection of the Pelvis and hips.

- CT of the pelvis is the technique of choice for evaluating complex fracture pattern, Degree of displacement and soft tissue injury.

- Significant pelvic ring disruption (PRD) leads to rupture of the bladder or urethral injury in approximately 20% of cases. Evaluation of the urethra with retrograde urethrogram should be performed in all male patients

with PRD prior to Foley catheter placement University of Virginia 2013.(www.med-ed.virginia.edu)
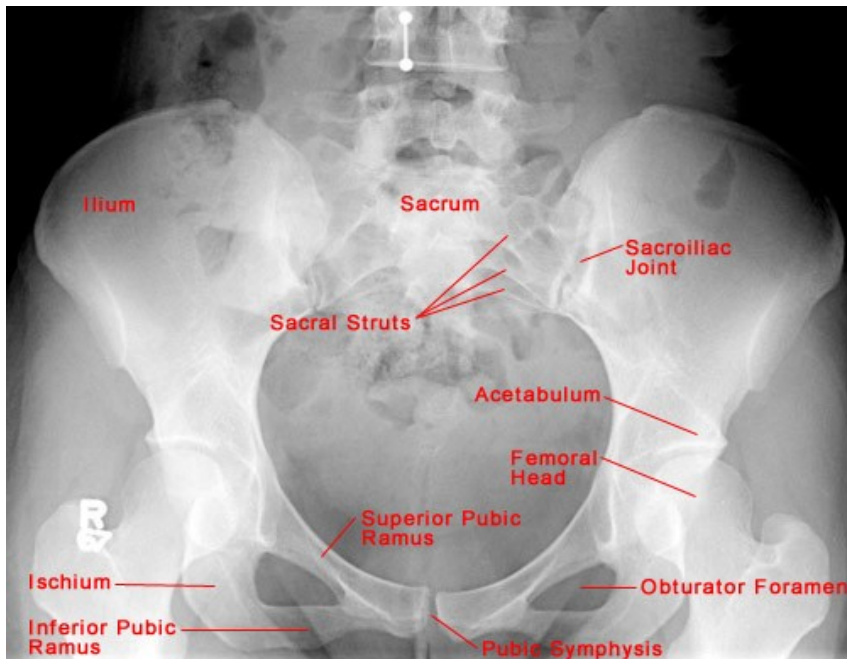

Figure 2.4 AP view of normal pelvis

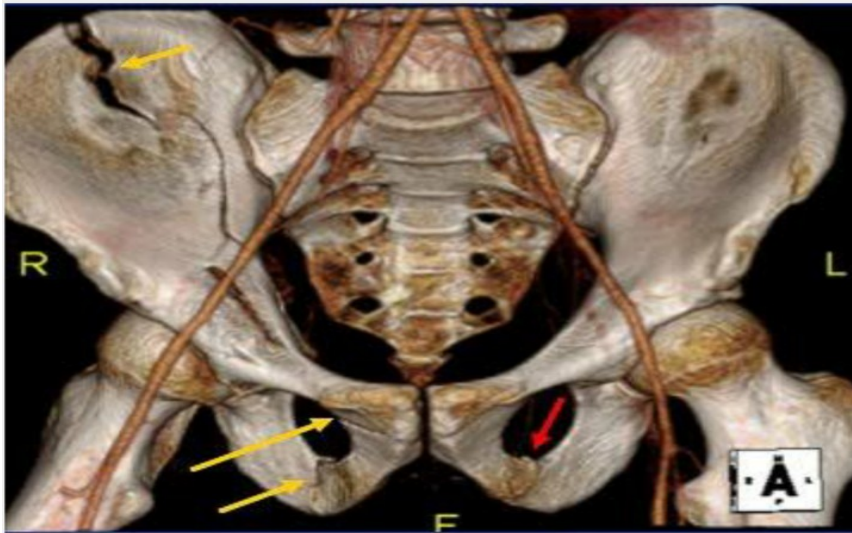Figure 2.4.1 CT pelvis show multiple fractures

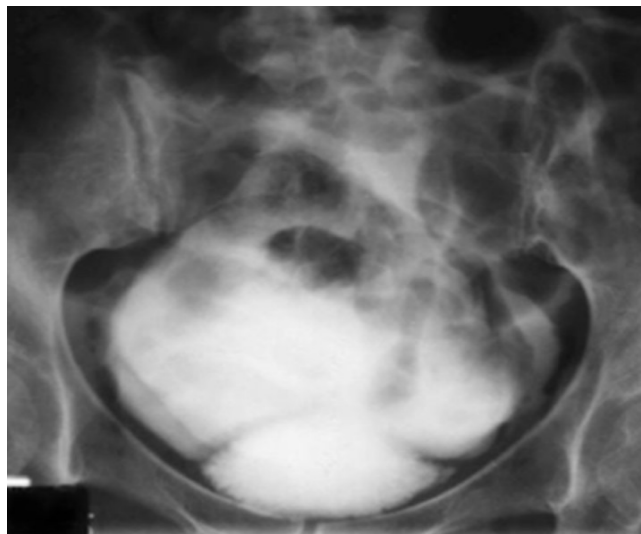Figure 2.4.2   CT pelvis show multiple fractures of pelvis

Figure 2.4.3 Conventional cystogram demonstrating intraperitoneal bladder rupture

Figure 2.4.2   CT pelvis demonstrating bladder rupture

Previous study:

- Poly trauma with multisystem injuries is a major cause of morbidity and mortality in both developed and developing countries. For example, in the United States approximately 60 million people are injured annually accounting for approximately one in six hospital admissions. By 2020, bodily injuries are predicted to outpace infectious diseases worldwide in terms of years of productive life lost.
- In the United States, trauma is the leading cause of death in children and adults up to an age of 44 years and kills more Americans of an age of 1-34 years than all

diseases combined**. (** Zafer Said Matar 2007),

Previous study done in southwestern Nigeria ,130 head injury patients were evaluated. They comprised of 103 males and 27 females . Their ages ranged between 7 months and 81 years.

In this study population head injury (HI) occurred most frequently in the first four decades of life . The most common cause of HI was motor bike road traffic accidents (MBRTA) accounting for more than two-fifths (40.8%) of the injuries (25.4%); motor vehicular traffic accident (MVRTA) (29.2%), and fall from height (20.8%). Assault, gunshot, and occupational hazard were the other infrequent causes of head injury. More specifically, fall from height was the commonest cause of injury in the < 21 year age-group while MBRTA and MVRTA were most common in the 21-30 year category. The most common cause of injury among patients with basal skull fracture (BSF) was MBRTA. Of the 130 patients, 59 (45.4%) had BSF at CT examination while 71 (54.6%) had no CT evidence of BSF. Forty-two (71.2%) of the 59 patients were clinically suspected to have BSF , while 17 (28.8%) were clinically unsuspected but discovered on CT. There was clinical suspicion of BSF in 7 (1%) of the 71 patients for whom CT revealed no evidence of BSF. The clinical predictors in the 59 patients with confirmed BSF at CT scan, 17 patients with BSF confirmed only at CT, 3 had clinical signs that could have suggested a BSF, Thirteen (76.5%) of these patients had cranio-facial injuries which may explain why the BSF were clinically missed.

Evaluation for basal skull fractures, is comparatively reliable as are
high resolution multi-detector CT scanners. (Olabinri 2013)

• 	Another study done on 103 consecutive patients with clinical or radiologic signs of chest trauma (94 multiple injured patients with chest trauma, nine patients with

isolated chest trauma). The result showed : In 67 patients (65%) CT detected major chest trauma complications that have been missed on CXR. In 11 patients only minor additional pathologic findings (small pleural effusion) were visualized on CT, and in 14 patients CXR and CT showed the same pathologic results. Eleven patients underwent both CXR and CT without pathologic findings. The CT scan was significantly more effective than routine CXR. (Trupka 1997).

This study consistent with previous studies in that the CT scan more accurate than conventional x-ray in assessing of traumatic the cases in emergency departments because the CT images are greatly improve the detection of injuries and enhance the understanding of mechanisms of trauma-related abnormalities.

Chapter Three

Material and methods

Descriptive study ,cross section survey study for human body (traumatic cases) , the study done in different hospitals in Khartoum state (Khartoum Hospital , Antalya Centre and Royal care Hospital , diagnostic department , in period from May 2014 to December 2014.

3.1   Material:

The equipment include:

Toshiba 16 slice   (Antalya centre)

64-slice Toshiba Aquillion CT scanner   *(Royal Care hospital)*

Figure 3.1 CT unit in Royal Care Hospital

3.2   Method:

This descriptive study deal with traumatic patients in emergency department in different hospitals in Khartoum state with normal routine procedures and final diagnoses from radiologist report.

3.2.1   Population of the study:

The study population was composed of traumatic patients (male, female an children) presenting to emergency department in different hospitals in   Khartoum during the period from May 2014 to December 2014.

3.2.2   Data collection:

The data was collected by master data sheets using the variables of age, gender, study ,protocol and patients status(conscious & un conscious).

3.3   Data analysis:

Data were analyzed by using SPSS program . It gives more specific and accurate data analysis . The results were presented in form of graphs and tables.

Chapter Four

Results

The following tables and figures presented the data obtained from 102 patients who were examined for different CT examinations after referring to the emergency Radiology Department .The data were analyzed using SPSS version 16 . Frequency tables mean and standard deviations were presented.

Table 4.1 Classification of Sample according to Gender, Frequency and Percentages

Gender frequency and Percentages

	Frequency	Percentages
Female	45	44.1%
Male	57	55.9%
Total	102	100.0%

Gender

Female
Male
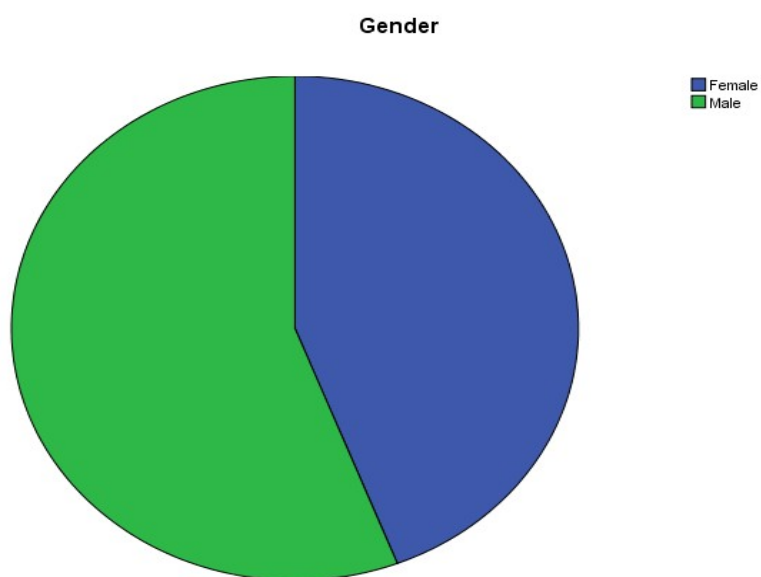
Figure4.1 Pie shart shows the gender distribution
Table 4.1 Sample Age Characteristics

Sample Demographic Data	
Age	
Mean	36.42
Median	34.50
Std. Deviation	1.37
Minimum	6.00
Maximum	80.00
Total	102

Table 4.2 Age Classes, frequency and percentages

		Frequency	Percentages
Age Classes	6-21	12	11.8
	22-37	51	50.0
	38-53	24	23.5
	54-69	13	12.8
	>70	2	1.9
	Total	102	100.0

Age

Mean =36.42
Std. Dev. =13.764
N =102
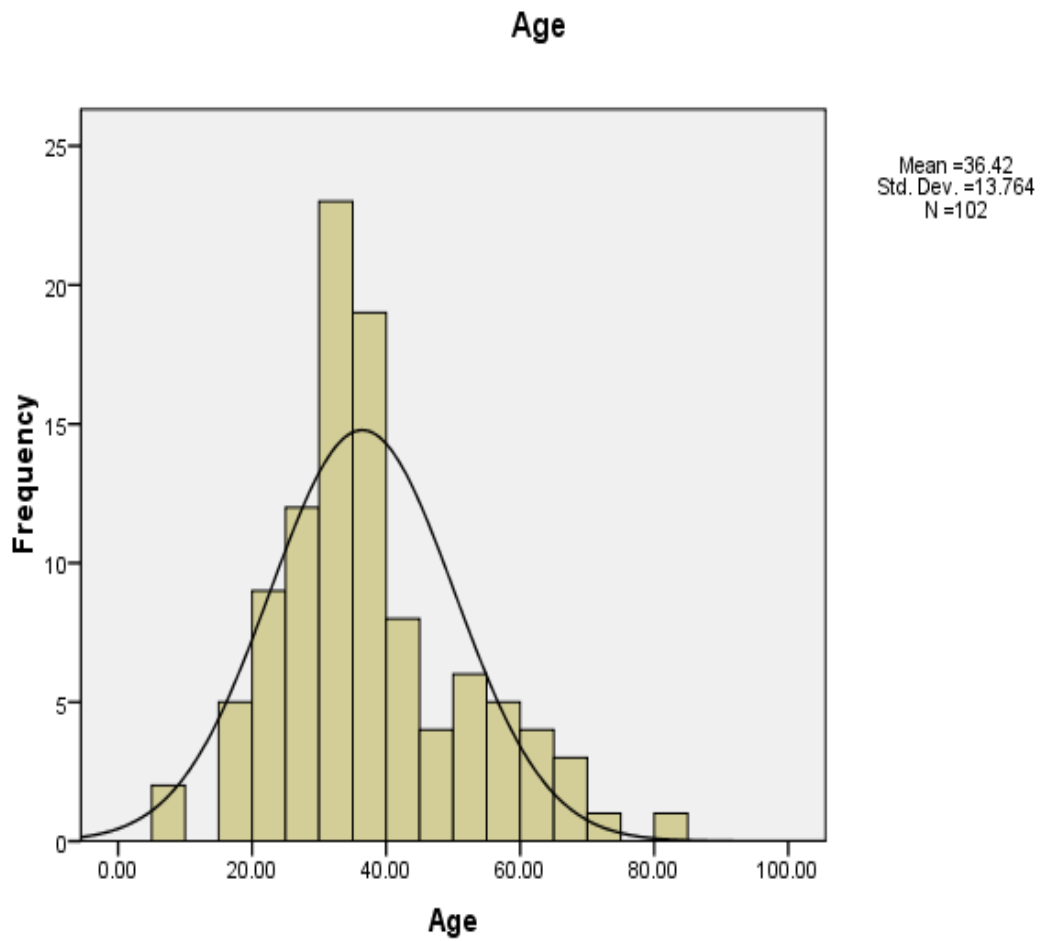
Figure4.2 Histogram shows age distribution

Table 4.3 Shows Patients Clinical Status

PT Status

	Frequency	Percentages
Conscious	86	84.3%
Unconscious	16	15.7%
Total	102	100.0%
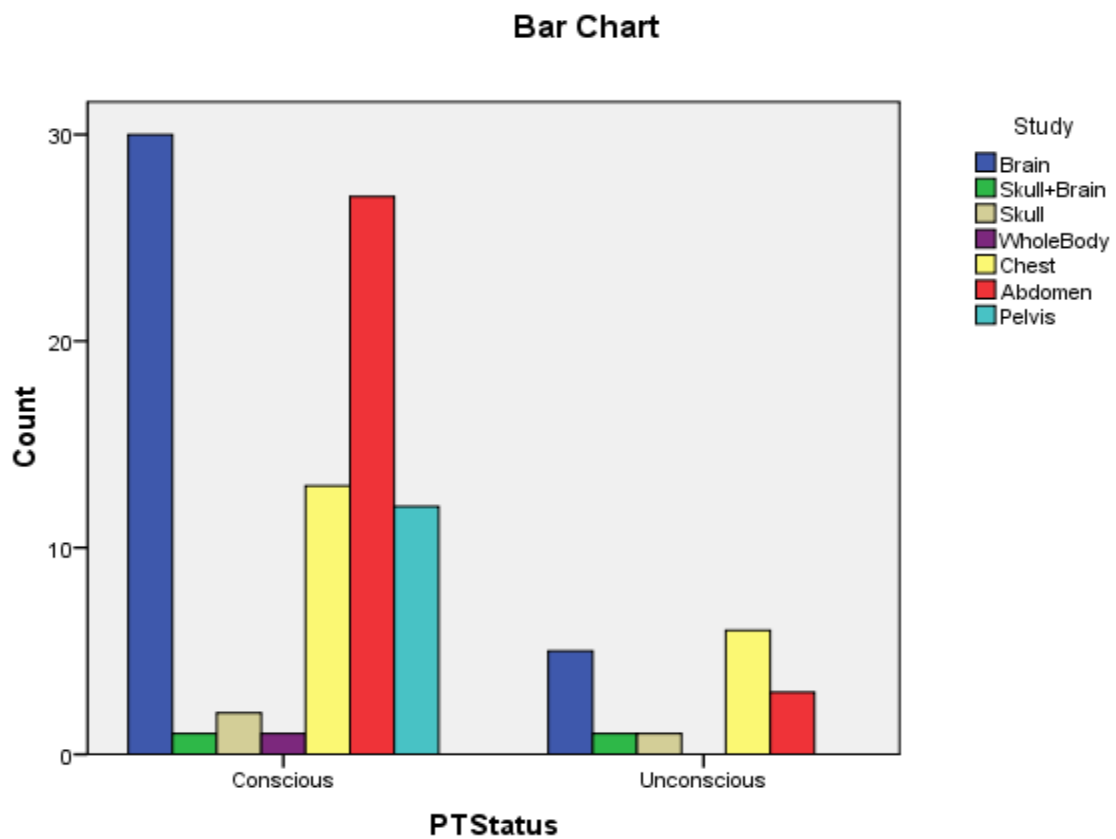
Bar Chart

Figure4.3 Bar chart shows Patients Clinical Status and Examinations Obtained.

Table 4.4 Shows Applied Radiological Examinations in the Emergency Radiology Department

Study/Examination

	Frequency	Percentages
CT Brain	35	34.3%
Skull+ CT Brain	2	2.0%
Skull	3	2.9%
Whole Body Survey	1	1.0%
CT Chest	19	18.6%
CT Abdomen	30	29.4%
CT Pelvis	12	11.8%
Total	102	100.0%

Study

Legend: Brain, Skull+Brain, Skull, WholeBody, Chest, Abdomen, Pelvis
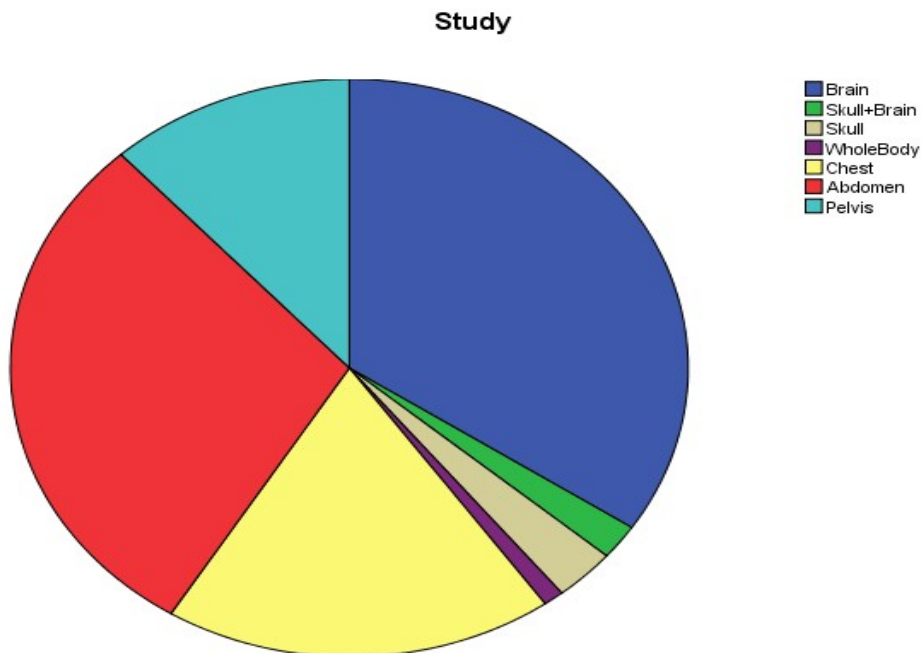
Figure4.4 Pie chart shows Radiographic   Examinations Obtained

Table 4.5 Shows Applied Radiological Technique in the Emergency Department

Applied Technique

	Frequency	Percentages
Standard CT Protocol	81	79.4%
Standard Conventional X-Ray Technique	3	2.9%
Modified CT Technique	8	7.8%
Traumatic CT Technique	10	9.8%
Total	102	100.0
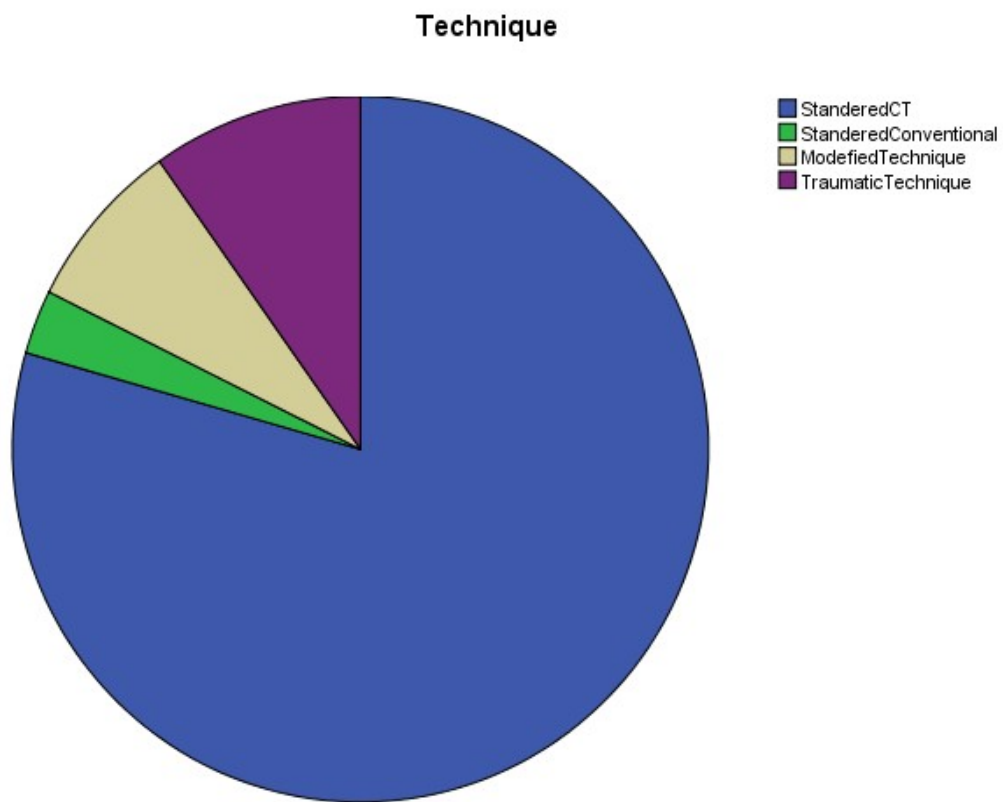
Technique

Figure4.5 Pie chart shows Radiographic Technique Obtained.
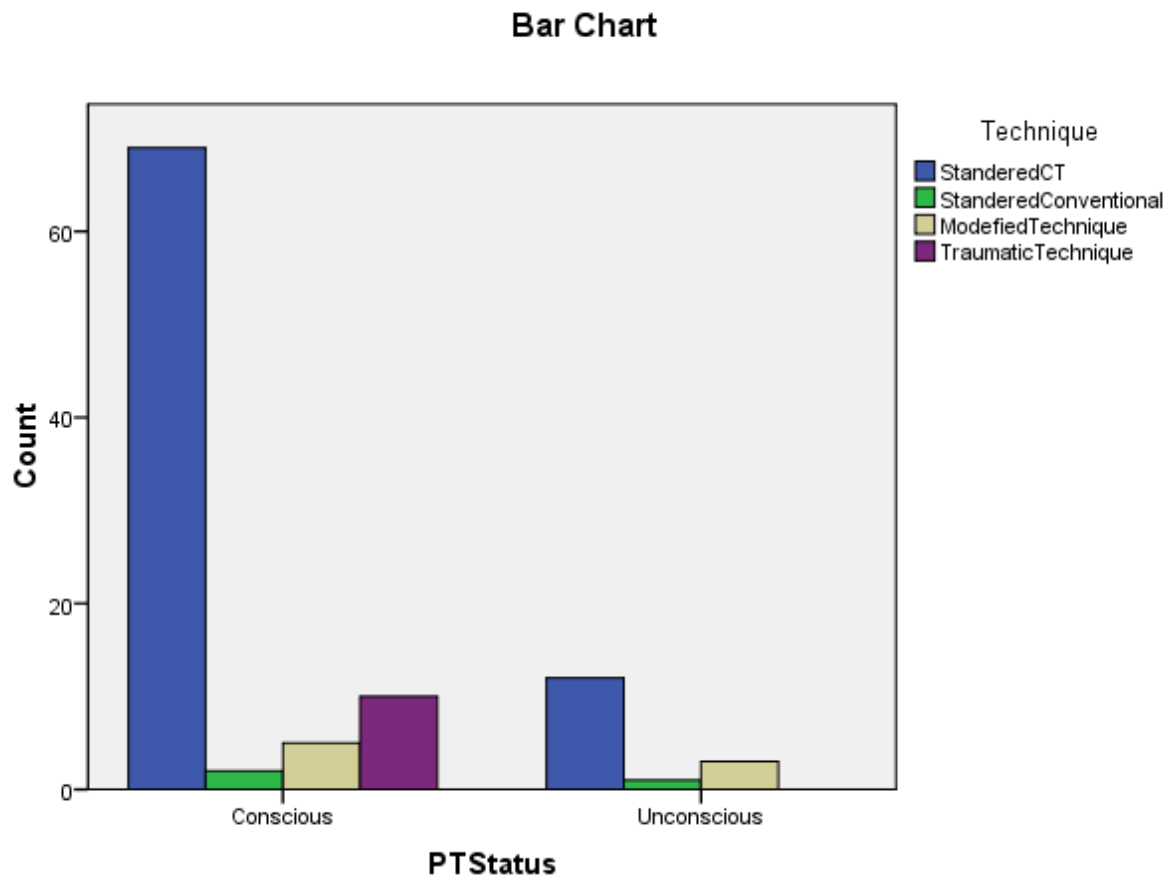
Bar Chart

Figure4.6 Bar chart shows the applied Radiographic Technique according to the patient status

Table 4.6 Shows Correlations between the variables with the applied Techniques in the Emergency Department

Correlations

		Gender	Age	PT Status	Study	Technique
Gender	Pearson Correlation	1	-.101-	-.105-	.036	-.107-
	Sig. (2-tailed)		.313	.292	.719	.286
	N	102	102	102	102	102
Age	Pearson Correlation	-.101-	1	-.001-	-.212*	.130
	Sig. (2-tailed)	.313		.988	.032	.192
	N	102	102	102	102	102
PT Status	Pearson Correlation	-.105-	-.001-	1	-.074-	-.019-
	Sig. (2-tailed)	.292	.988		.462	.853
	N	102	102	102	102	102

Stu dy	Pearson Correlation	.036	-.212*	-.074-	1	-.591**
	Sig. (2-tailed)	.719	.032	.462		.000
	N	102	102	102	102	102
Techniq ue	Pearson Correlation	-.107-	.130	-.019-	-.591**	1
	Sig. (2-tailed)	.286	.192	.853	.000	
	N	102	102	102	102	102

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Chapter Five

5.1 Discussion

This study done to assess accuracy of emergency conventional x-ray performed beside the CT scan in traumatic patients.

This study aim to investigate which one is affected (males or females).the most affected patients are males, the result

showed males were affected significantly more often than females (55.9% to 44.1%). table 4.1

Most traumatic patient under certain age group 22 – 37 because of more active age of population in that area the study exited that more than 50% of traumatic patients the age group of 22 to 37, Followed by age groups (38 to53 years) with percentage (23.5 %), then age groups from (54 to 69 years) by 12.8 % ,after that the age groups of (6 to 21 years) by(11.8 %) and more than 70 years by(1.9 %) respectively .{ table 4.2}.
The conscious patients with high frequency of (86 patients) related to unconscious one (16 patients) only. {table 4.3}

Different radiological examination applied in ERD the study showed that most of the injuries were to the head at a rate of (35patients) by (34.3%) CT brain done for them, So it was a CT scan of the head of the highest compared to other examination   ,followed by CT abdomen (30 patients) by (29%), then CT chest (19 patients) by(18.6%) and the lowest one is CT pelvis (12 patients) by (11.8%) respectively .
skull x-ray was Conducted on an average of (3 patients) with
(2.9%) and the skull plus CT brain were an average of(2 patients) with (2.0%). {table 4.4}

In this study, that most cases have tests conducted in the right way appropriate to the situation of each patient because the standard CT

protocol done for(81patients)and the proportion is (79.4%) followed by the traumatic CT technique done for 10 patients with (9.5%) ,the modified CT technique were done for (8 patients) with proportion of (7.8%) and the standard conventional x-ray for (3patients) were (2.9%) respectively. {table 4.5}.

The mean of standard protocol is proper and exact exam for every case , so more than 91 patient have proper examination.

Two cases skull x-ray (males) they have no proper exam (not standard technique due to miss diagnose) Patients died after that.

Two females (CT brain without contrast) have no proper exam   (not standard technique due to miss diagnose- (cavernous sinus thrombosis)

(brain death) patients died after examination.

As shown in table 4.6 the study is correlated significantly with technique .

There is no significance between study and other variables(gender, age and patient status).

5.2 Conclusion :

From these result the study concluded the following :

- CT scan more accurate than conventional x-ray in

- assessing of traumatic the cases.

- Males were affected significantly more often than females.

- Most cases have tests conducted in the right way appropriate to the situation of each patient.

- The study is correlated significantly with technique .

- There is highly knowledge of the standard protocol that should be applied in traumatic patients.

- Many CT examination that done in ERD including head, chest, abdomen and pelvis.

- Any delay in the proper examination may lead to patients death.

- CT is highly sensitive in detecting human body injures and is superior to routine x-ray.

- Early CT can influences therapeutic management in a significant number of patients with multiple injuries due to trauma .

- Early and exact diagnosis of traumatic injuries with sufficient therapeutic consequences may reduce complication and improve out come of severely injured patients with traumatic injuries.

Recommendation:

- All emergency radiology department should equipped with full equipment and devices that serve the emergency cases.

- Supervisors should be interested in these departments due to their importance in the provision of health services for emergency cases.

- Another research conducted in these departments for errors that occur to avoid them in order to preserve patients lives.

- Try to do the best and proper examination for every patient as soon as possible to save their lives.

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Appendix

The Table Of Data Collected of This Study

No.	gender	age	Study	Protocol	Pt status
1	M	30yrs	ct brain	bone+soft tissue	conscious
2	M	38yrs	ct brain	bone+soft tissue	conscious
3	M	33yrs	ct brain	bone+soft tissue	conscious
4	M	40yrs	ct brain	bone+soft tissue	conscious
5	M	35yrs	ct brain	bone+soft tissue	conscious
6	M	36yrs	ct brain	bone+soft tissue	conscious
7	M	25yrs	skull-ct brain	bone+soft tissue	unconscious
8	M	17yrs	skullx-ray		conscious
9	M	37yrs	skullx-ray		unconscious
10	M	65yrs	skull x-ray+ct brain	bone+soft tissue	conscious
11	M	38yrs	ct brain	bone+soft tissue	conscious

12	M	68yrs	ct brain	bone+soft tissue	conscious
13	F	55yrs	ct brain	bone+soft tissue	comma
14	F	30yrs	ct brain	bone window	unconscious
15	M	66yrs	ct brain	bone+soft tissue	conscious
16	M	32yrs	ct brain	bone+soft tissue	conscious
17	M	7 yrs	skull x-ray		conscious
18	M	60yrs	ct brain	trumatic protocol	conscious
19	M	32yrs	ct brain	trumatic protocol	conscious
20	F	18yrs	ct brain	bone+soft tissue	unconscious
21	F	35yrs	ct brain	bone+soft tissue	conscious
22	F	40yrs	ct brain	bone+soft tissue	conscious
23	F	54yrs	ct brain	bone+soft tissue	conscious
24	F	18yrs	ct brain	soft tissue	conscious

25	F	20yrs	ct brain	bone+soft tissue	conscious
26	M	40yrs	ct brain	trumatic protocol	conscious
27	M	36yrs	ct brain	trumatic protocol	conscious
28	F	25yrs	ct brain	trumatic protocol	Conscious
29	F	35yrs	ct brain	trumatic protocol	Conscious
30	F	30yrs	ct brain	trumatic protocol	Conscious
31	F	45yrs	ct brain	trumatic protocol	Conscious
32	F	60yrs	ct brain	trumatic protocol	Conscious
33	M	50yrs	ct brain	trumatic protocol	Conscious
34	M	60yrs	ct brain	soft tissue	Conscious
35	F	52yrs	ct brain	soft tissue	Conscious
36	F	22yrs	ct brain	bone+soft tissue	Conscious
37	F	55yrs	ct brain with contrast	soft tissue	Unconscious

38	F	58yrs	ct brain	soft tissue	Conscious
39	M	38yrs	ct brain with contrast	soft tissue	Unconscious
40	F	22yrs	ct brain	soft tissue	Conscious
41	M	6 yrs	skeletonx-ray+(ct chest&abd)		Conscious
42	M	60 yrs	ct chest(plain)		Conscious
43	F	43yrs	ct chest(plain +with contrast)		Conscious
44	F	80yrs	ct chest with contrast		Conscious
45	M	70 yrs	ct chest with contrast		Conscious
46	M	32 yrs	ct chest (plain)		Unconscious
47	M	50yrs	ct chest (plain)		Unconscious
48	F	45 yrs	ct chest with contrast		Conscious
49	F	38 yrs	ct chest (plain)		Unconscious
50	F	40yr	ct chest		Unconsciou

		s	(plain)	s
51	F	35 yrs	ct chest (plain)	Conscious
52	F	55 yrs	HRCT	Conscious
53	M	27 YRS	ct chest(plain)	Unconscious
54	F	30 yrs	ct chest with contrast	Conscious
55	M	25 yrs	ct chest (plain)	Conscious
56	M	44 yrs	ct chest (plain)	Conscious
57	M	34 yrs	ct chest (plain)	Conscious
58	M	38 yrs	ct chest (plain)	Conscious
59	M	26 yrs	ct chest (plain)	Conscious
60	F	29 yrs	ct chest (plain)	Unconscious
61	M	25 yrs	ct abdomen(plain)	Conscious
62	M	30 yrs	ct abdomen(plain)	Conscious
63	M	32 yrs	ct abdomen(p	Conscious

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64	F	31 yrs	ct abdomen(plain)	Conscious
65	M	50 yrs	ct abd with con tras t	Conscious
66	F	38 yrs	ct abd om en(plai n)	Conscious
67	F	40 yrs	ct abd with con tras t	Conscious
68	F	56 yrs	ct abd with con tras	Conscious

			t	
69	M	40 yrs	ct abd with con tras t	Conscious
70	F	25 yrs	ct abd with con tras t	Conscious
71	F	50 yrs	ct abd (pla in)	Unconscious
72	M	32 yrs	ct abd with con tras t	Conscious
73	F	36 yrs	ct abd (pla in)	Conscious
74	M	17 yrs	ct abd (pla	Conscious

			in)	
75	M	21 yrs	ct abd (pla in)	Conscious
76	M	32 yrs	ct abd with con tras t	Conscious
77	M	37 yrs	ct abd (pla in)	Conscious
78	F	35 yrs	ct abd (pla in)	Conscious
79	M	18 yrs	ct abd (pla in)	Conscious
80	M	20 yrs	ct abd (pla in)	Conscious
81	F	38 yrs	ct abd (pla in)	Conscious

82	F	34 yrs	ct abd (pla in)		Conscious
83	F	27 yrs	ct abd (pla in)		Conscious
84	M	30 yrs	ct abd (pla in)		Conscious
85	M	28 yrs	ct abd (pla in)		Unconscious
86	M	31 yrs	ct abd (pla in)		Conscious
87	M	23 yrs	ct abd (pla in)		Conscious
88	M	34 yrs	ct abd (pla in)		Conscious
89	M	48 yrs	ct abd (pla		Conscious

			in)	
90	F	30 yrs	ct abd (plain)	Unconscious
91	F	21 yrs	ct pelvis(plain)	Conscious
92	F	34 yrs	ct pelvis(plain)	Conscious
93	F	31 yrs	ct pelvis(plain)	Conscious
94	F	45 yrs	ct pelvis with contrast	Conscious
95	F	32 yrs	ct pelvis with contrast	Conscious

96	F	37 yrs	ct pelvis(plain)	Conscious
97	M	26 yrs	ct pelvis(plain)	Conscious
98	M	20 yrs	ct pelvis(plain)	Conscious
99	M	30 yrs	ct pelvis with contrast	Conscious
100	M	28 yrs	ct pelvis(plain)	Conscious
101	M	36 yrs	ct pelvis with contrast	Conscious

| 102 | M | 23 yrs | ct pelvis(plain) | Conscious |